SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD.
(A Wholly Owned Subsidiary of SBI)

CIRCLE OFFICE
SBI, 3rd Floor, LHO, Bhadra, Laldarwaja, Ahmedabad-1

Part – I
(Technical Bid)

TENDERS ARE INVITED FOR C.I. PIPING WORK AND REPAIR IN DUCT AREA OF SBI, LHO BUILDING AT LAL DARWAJA, AHMEDABAD

Name of The Tenderer : …….

Address : …….
…….
…….

GSTIN : …….

REPAIR IN DUCT AREA OF LHO BUILDING

NOTICE INVITING TENDERS

SBIIMS on behalf of SBI invites online item rate e-tender for the **PROPOSED CONSTRUCTION/ RENOVATION OF C.I. PIPING WORK AND REPAIR IN DUCT AREA OF SBI, LHO BUILDING AT LAL DARWAJA, AHMEDABAD. (open to all bidders)**
Details of tenders are as under:

1	Name of Work	**PROPOSED CONSTRUCTION/ RENOVATION OF C.I. PIPING WORK IN DUCT AREA OF SBI, LHO BUILDING AT LAL DARWAJA, AHMEDABAD**
2	Time allowed for completion	3 months (90 Days)
3	Application Fees	Rs. **1,500/-** (To be deposited along with Tender Part-I by way of Demand Draft/ Banker's Cheque/ SBI Cheque drawn in favour of **SBI Infra Management Solutions Pvt. Ltd. and payable at Ahmedabad)**
4	Earnest Money Deposit	Rs. 19,000/- (Rupees Nineteen Thousand Only) by way of D.D./ Banker's Cheque only drawn in favour of **State Bank of India** and payable at **SBI, Ahmedabad**
5	Total Security Deposit	5% of contract value
6	Start and end date for downloading of tender documents from Bank's website	09-08-2018 to 29-08-2018 at www.sbi.co.in under<Link>procurement news.
7	Last date & time of receipt of completed & filled technical bid	30/08/2018 by 15:00 Hrs
8	Address at which the technical bid, EMD and Tender fee are to be submitted	Circle Head & Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd. 3rd Floor, SBI, LHO, Bhadra, Laldarwaja Ahmedabad-380001
9	Date and time of opening technical bid	30/08/2018 at 15:30 Hrs
10	Place of Opening technical bid	Circle Head & Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd. Third Floor, SBI, LHO, Bhadra, Laldarwaja

		Ahmedabad-380001
11	Date & time for submission of online indicative price bid.	Date and time for submission of indicative price bid will be informed to the qualified contractor separately after scrutiny of their Technical bid.
12	Date & time for opening of online indicative price bid.	Date and time will be informed to the qualified contractor separately.
13	Date & time for e-reverse auction	Date and time for e-reverse auction will be informed to the qualified contractor separately.
14	Defects liability period	1 Year
15	Validity of offer	4 months from the date of opening of price bid.
16	Liquidated Damages:	0.5% per week subject to maximum of 5% of contract value
17	Rates:	Rates quoted by the tenderer shall remain firm throughout the Contract period (including authorized extension). Rates quoted shall be inclusive of all taxes, duties, levies, royalties, other incidental charges etc. PVA & PVA clause shall not be applicable. (GST Will be paid extra)
18	Payment Terms	Minimum amount of running bill shall be Rs. 5.00 Lacs and minimum interval between 2 running bill shall be one month. The Architect shall check the bill and issue the payment certificate within 07 days from the date of submission of the bill to them
19	Duties of Architect	Overall supervision, Issuing of Drawings, Specifications, Details etc. Approval of sample makes, finishing items etc. Acceptable / Rejection of quality of work, checking of measurement / bills, Issuing of Payment Certificate (Submitting recommendations to the Bank to release the payment to contractor)
20	Insurance	The contractor shall obtain all necessary insurance policies as per the law applicable at the centre & shall be required to produce the original policies and receipt of the premium applicable in the matter to the Architect/Bank.

21. Tenders can be obtained in person from the office of the Circle Head & Vice President, SBI Infra Management Solutions Pvt. Ltd., Third Floor, SBI, LHO, Bhadra, Laldarwaja Ahmedabad in working hours (11 am to 06 pm) or downloaded from the bank's website **www.sbi.co.in** (link) <Procurement News> from 09-08-2018 to 29-08-2018. It shall be responsibility of the contractor to arrange and ensure that all pages of technical bid are bound properly. Tenders in loose pages may be disqualified.

22. The contractor shall sign and stamp each page of the tender document thereby ensuring the number and sequence of all pages.

23. No conditions other than mentioned in the tender will be considered, and if given they will have to be withdrawn before opening of the price-bid.

24. Bidders have to submit price bid in the online mode called as 'Online sealed price bid'. Technically qualified bidders will be intimated the date and time of the 'Online Sealed Price bid submission'. Reverse auction will be carried out after this procedure. Agency for arranging online bidding (online sealed price bid and e reverse auction):
    Mr. Yashraj
    yashrajsinh@auctiontiger.net
    e- procurement technologies Limited,
    Ahmedabad, Ph. No. 079- 40016815.

25. Applicants are requested to contact the agency for digital signature and completion of all the business formalities at the earliest.

26. The SBIIMS reserve their rights to accept or reject any or all the tenders, either in whole or in part without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.

27. Tenders received without EMD and Application Fees shall be summarily rejected and such tenders shall not be allowed to participate in the online price bidding process.

28. In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.

29. SBIIMS has the right to accept / reject any / all tenders without assigning any reasons and no correspondence shall be entertained in this regard.

Yours Faithfully,

Circle Head & Vice President,
SBI Infra Management Solutions Pvt. Ltd.
Third Floor, SBI, LHO, Bhadra, Laldarwaja
Ahmedabad-380001

FORM OF TENDER

To,
Circle Head & Vice President (Civil),
SBI Infra Management Solutions Pvt. Ltd.
Third Floor, SBI, LHO, Bhadra, Laldarwaja
Ahmedabad-380001

Dear Sir,

PROPOSED CONSTRUCTION/ RENOVATION OF C.I. PIPING WORK AND REPAIR IN DUCT AREA OF SBI, LHO BUILDING AT LAL DARWAJA, AHMEDABAD

1. I/ We refer to the Notice Inviting Tender issued by you for the captioned work.

2. I/ We do hereby offer to perform, provide, execute, complete and maintain the works in conformity with Bill of Quantities, Drawings, Specification, Design, General and Special conditions of Contract, Instruction to tenderers, etc. as contained in the tender documents for the sum as arrived and filled, at the respective rates quoted by me/us in the Schedule of Quantities and/or at any other sum and rate subsequently negotiated and accepted / agreed by the Bank and me/us.

3. I/We have satisfied myself / our self as to the site conditions, examined site and drawings, and all aspects of tender documents / conditions and are acceptable to us. I/We do hereby agree, should this tender be accepted in whole or in part, to ,

(A) Abide by and full-fill the terms, conditions and provisions of tender documents annexed hereto.
(B) Complete the work within stipulated completion time at no extra cost to the Bank.

4. I/We are enclosing herewith the Earnest Money Amount of Rs. Rs. 19,000/- in the form of Bank Draft / Pay order / Banks cheques no. _____ dt _____ drawn by _____ in favour of **State Bank of India** payable at **Ahmedabad.**

5. If I/ we fail to execute the contract when called upon to do so , I/ we do hereby agree that this sum shall be forfeited by me/ us to SBI Infra Management Solutions.

Our Bankers are: (i)

(ii)

The names of partners of our firm are: (i)

(ii)

Name of the Partner of the firm authorized to sign

Or

(Name of person having power of Attorney to sign the Contract)

(Certified true copy of the Power of Attorney should be attached)

Yours faithfully,

Signature of Contractors

Signature and addresses of Witnesses

(i)

(ii)

SAMPLE BUISNESS RULE DOCUMENT

PROPOSED CONSTRUCTION/ RENOVATION OF C.I. PIPING WORK AND REPAIR IN DUCT AREA OF SBI, LHO BUILDING AT LAL DARWAJA, AHMEDABAD

(A) Business rules for E-tendering:

1. Only empanelled electrical contractors with SBI under appropriate category who are invited by the project Architect/SBIIMS shall only be eligible to participate.
2. SBIIMS will engage the services of an E-tendering service provider who will provide necessary training and assistance before commencement of online bidding on Internet.
3. In case of e-tendering, SBIIMS will inform the vendor in writing, the details of service provider to enable them to contact and get trained.
4. Business rules like event date, closing and opening time etc. also will be communicated through service provider for compliance.
5. Contractors have to send by email, the compliance form in the prescribed format (provided by service provider), before start of E-tendering. Without this the vendor will not be eligible to participate in the event.
6. The Contractors will be required to submit the various documents in sealed Envelope to the office of SBI Infra Solutions Pvt Ltd. at the address mentioned hereinbefore by the stipulated date i.e. (1) Hard Copy of Technical Bid duly signed and stamped on each page (2) Demand Draft of specified amount of EMD (3) Demand Draft / Cheque of Application Fees (4) Certified copy of Work Licenses). Contractors not submitting any one or more documents shall not be eligible to participate in the on-line price bidding.
7. E-tendering will be conducted on schedule date &time.
8. **The e-tendering will be treated as closed only when the bidding process gets closed in all respects for the item listed in the tender.**

(B) Terms & conditions of E-tendering:

SBIIMS shall finalize the Tender through e-tendering mode for which **M/s. e-Procurement Technology, Ahmedabad** has been engaged by SBIIMS as an authorized service provider. Please go through the guidelines given below and submit your acceptance to the same along with your Commercial Bid.

1. E-tendering shall be conducted by SBIIMS through **M/s. e-Procurement Technology, Ahmedabad**, on pre-specified date. While the Contractors shall be quoting from their own offices/ place of their choice, Internet connectivity and other paraphernalia requirements shall have to be ensured by Contractors themselves. In the event of failure of their Internet connectivity,(due to any reason whatsoever it may be) it is the bidders' responsibility.

In order to ward-off such contingent situation bidders are requested to make all the necessary arrangements / alternatives such as back–up power supply whatever required so that they are able to circumvent such situation and still be able to participate in the E-tendering successfully. Failure of power at the premises of Contractors during the E-tendering cannot be the cause for not participating in the E-tendering. On account of this the time for the E-tendering cannot be extended and SBIIMS is not responsible for such eventualities.

2. M/s. **e-Procurement Technology, Ahmedabad**., shall arrange to train your nominated person(s), without any cost to you. They shall also explain you all the Rules related to the E- tendering. You are required to give your compliance on it before start of bid process.

3. **Bidding currency and unit of measurement:** Bidding will be conducted in Indian currency & Unit of Measurement will be displayed in Online E-tendering.

4. **Bid Price**: The Bidder has to quote the rate as per the Tender Document provided by SBIIMS their appointed Architects.

5. **Validity of Bids**: The Bid price shall be firm for a period specified in the tender document and shall not be subjected to any change whatsoever.

6. **Procedure of E-tendering**:

i. **Online E-tendering:**

(a) The hard copy of the Technical as well as Price Bid is available on the Bank's website during the period specified in the NIT.

(b) Online e-tendering is open to the empanelled bidders who receive NIT from the Architect and qualified for participating in the price bidding as provisions mentioned hereinabove through SBIIMS approved Service Provider.

(c) The Price-Bid shall be made available online by the Service Provider wherein the contractors will be required to fill-in their Item-wise rates for each item.

(d) The Contractors are advised not to wait till the last minute to submit their online item-wise quote in the price bid to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.

(e) It is mandatory to all the bidders participating in the price bid to quote their rates for

each and every item.

(f) In case, contractor fails to quote their rates for any one or more tender items, their tender shall be treated as "***Incomplete Tender***" and shall be liable for rejection.

7. **Log in Name and Password**: Each Bidder is assigned a Unique User Name & Password by M/s. **e-Procurement Technology, Ahmedabad**. The Bidders are requested to change the Password after the receipt of initial Password from M/s. **e-Procurement Technology, Ahmedabad**. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.

8. **Bids placed by bidder**: Bids will be taken as an offer to execute the work as specified. Bids once made, cannot be cancelled / withdrawn and the Bidder shall be bound to execute the work at the quoted bid price. In case the L-1 Bidder backs out or fail to complete the work as per the rates quoted, SBIIMS shall at liberty to take action as deemed necessary including de-paneling such contractors and forfeiting their EMD

9. At the end of the E-tendering, SBIIMS will decide upon the winner. SBIIMS decision on award of Contract shall be final and binding on all the Bidders.

10. SBIIMS shall be at liberty to cancel the E-tendering process/tender at any time, before ordering, without assigning any reason.

11. SBIIMS shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.

12. Other terms and conditions shall be as per your techno-commercial offers and other correspondences till date.

13. OTHER TERMS & CONDITIONS:

- The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.

- The Bidder shall not divulge either his Bids or any other exclusive details of SBIIMS to any other party.

- SBIIMS decision on award of Contract shall be final and binding on all the Bidders.

- SBIIMS reserve their rights to extend, reschedule or cancel any E-tendering within its sole discretion.

- SBIIMS or its authorized service provider M/s. **e-Procurement Technology, Ahmedabad** shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.

- SBIIMS or its authorized service provider M/s. **e-Procurement Technology, Ahmedabad** is not responsible for any damages, including damages that result from, but are not limited to negligence.

- SBIIMS or its authorized service M/s. **e-Procurement Technology, Ahmedabad** will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc.

N.B.

- All the Bidders are required to submit the Process Compliance Statement (Annexure-II) duly signed to M/s. **e-Procurement Technology, Ahmedabad**.

- **All the bidders are requested to ensure that they have a valid digital signature certificate well in advance to participate in the online event.**

PROCESS COMPLIANCE STATEMENT (ANNEXURE II)

(The bidders are required to print this on their company's letter head and sign, stamp before emailing)

To,

M/s. **e-Procurement Technology,**
B-705, Wall Street - II, Opp. Orient Club, Ellis bridge,
Ahmedabad – 380006,
State Gujarat, India

Email: yashrajsinh@auctiontiger.net

D: +91 79 40016815/6824

AGREEMENT TO THE PROCESS RELATED TERMS AND CONDITIONS FOR THE ONLINE E-TENDERING FOR PROPOSED CONSTRUCTION/ RENOVATION OF C.I. PIPING WORK AND REPAIR IN DUCT AREA OF SBI, LHO BUILDING AT LAL DARWAJA, AHMEDABAD

Dear Sir,

This has reference to the Terms & Conditions for the E-tendering mentioned in the tender document

This letter is to confirm that:

1) The undersigned is authorized representative of the company.
2) We have studied the Commercial Terms and the Business rules governing the E-tendering as mentioned in RFP of SBIIMS as well as this document and confirm our agreement to them.
3) We also confirm that we have taken the training on the E-tendering tool and have understood the functionality of the same thoroughly.
4) We confirm that SBIIMS and M/s. **e-Procurement Technology, Ahmedabad** shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the e-E-tendering platform due to loss of internet connectivity, electricity failure, virus attack, problems with the PC, any other unforeseen circumstances etc. before or during the E- tendering event.
5) We confirm that we have a valid digital signature certificate issued by a valid Certifying Authority.

6) We, hereby confirm that we will honor the Bids placed by us during the E-tendering process.

With regards, Date:

Signature with company seal Name:

Company / Organization:

Designation within Company / Organization: Address of Company / Organization:

Scan it and send to this Document on ----------

(On Non -Judicial Stamp paper of appropriate value)

ARTICLES OF AGREEMENT

Articles of Agreement made this_____ day of_____

between **State Bank Of India, a body, corporate constituted under the State Bank Of India Act and having its Local Head Office at Lal Darawaja,Ahmedabad-380 001**.hereinafter called the Bank which expressions shall include its successors and assigns of the one part and …… ……...(name & address of contractor) hereinafter called the "Contractor" which expression shall include the successors and assigns of the other part.

WHERE AS the Bank is desirous of executing the work, **PROPOSED CONSTRUCTION OF C.I. PIPING WORK (DUCT) FOR LHO SBI @ LAL DARWAJA, AHMEDABAD** and has caused drawings, specifications, and schedule of quantities etc. describing the works to be prepared by M/s. L.J. PURANI AND ASSOCIATES, the Architects.

AND WHERE AS for the said **PROPOSED CONSTRUCTION OF C.I. PIPING WORK (DUCT) FOR LHO SBI @ LAL DARWAJA, AHMEDABAD.** Terms & Conditions, Specifications and the Schedule of items quantities etc, have been signed by and on behalf of the parties hereto.

AND WHEREAS the Contractor has agreed to execute upon, subject to the conditions set forth here in and Schedule of Items and quantities, General & Special Conditions of Contract, specifications etc contained in the tendered documents including all correspondences exchanged by or between the parties from the submission of tender till the award of work, both letters inclusive, (all of which are collectively here in after referred to as "the said conditions" , details of which are described in the schedule attached hereto, the works shown upon the said drawings and/or described in the said specification and included in the schedule of items and quantities at the respective rates therein set forth amounting to the sum as therein arrived at or such other sum shall become payable there under arrived at or such other sum as shall become payable thereunder (hereinafter referred to as "the said contract amount")

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of the said contract amount to be paid at the time and in the manner set forth in the said conditions, the contractor shall upon and subject to the said conditions execute and complete the work shown in the said drawings and

described in the said specifications and the schedule of items and quantities, as per the terms and conditions contained in the said conditions.

2. The Bank shall pay the Contractor the said contract amount, or such other sum as shall become payable, at the time and in the manner specified in the said conditions.

3. The Architects in the said condition shall mean the said M/s. L.J. PURANI AND ASSOCIATES, In the event of their ceasing to be the Architects for the purpose of this contract for whatever reason, such other person or persons as shall be nominated for that purpose by the Bank, provided always that no person subsequently appointed as Architects under this contract shall be entitled to disregard or over rule any previous decisions or approvals or directions given or expressed in writing by the Architects for the time being.

4. The said general condition, Special condition, technical drawings, Notice Inviting Tender, specifications, Guarantee, Instruction to Tenderers Price Bid(Schedule of Quantities), Correspondences, Letter of Acceptance, Agreements and Appendices there to, contained in the tendered documents/said conditions shall be read and considered as forming part of this Agreement, and the parties hereto shall respectively abide by, submit themselves to the said conditions and perform the agreements on their part respectively in the said conditions contained therein.

The plans, agreements and documents mentioned here in shall form the basis of this contract. This contract is neither a fixed Lump Sum contract but is a contract to carry out the work in respect of **PROPOSED CONSTRUCTION OF C.I. PIPING WORK (DUCT) FOR LHO SBI @ LAL DARWAJA, AHMEDABAD.** as per the scope described and to be paid for according to actual measured quantities at the rates contained in the Schedule of Rates and /or negotiated rates and Probable quantities or as provided in the said conditions.

5. The Bank reserves to itself the rights of altering the specifications and nature of the work by adding to or omitting any items of work or having portions of the same carried out without prejudice to this contract.

6. (a) The Contractors represent that they have experience and competent staff which will enable them to ensure proper quality check on the materials, whether brought by the contractors or supplied by the Bank to the contractors, and which will ensure that the contractor will carry out proper tests as required by the specifications and will supervise the day to day working and execution of the contract work.

(b) If the contractors have any doubt about the quality of the materials or any difficulty in supervision of the day to day work it shall be duty of the contractors to report the matter in writing forthwith to the Bank and for the time being suspend that portion of the work about which difficulty is experienced, and the contractors will abide by the directions given by the Bank.

(c) The contractors are aware that the Bank will not give day to day supervision but will periodically supervise and the contractor has to perform their obligations under the instructions given to him periodically and under sub clauses (a) and (b) above.

(d) The contractors covenant and warrant that completed items of work as well as the entire work on completion will be in conformity with the specifications and the terms and conditions contained in the said conditions and will be of contract quality and description.

7. Time shall be considered as the essence of this contract and the contractor hereby agrees to commence the work on the day on which he is instructed to take possession of the site or from the fourteenth day after the day of issue of formal Work Order as provided for in the said conditions whichever is later and to complete the entire work within Four months subject nevertheless to the provisions for the extension of time.

8. All payments by the Bank under this contract will be made only at **Ahmedabad.**

9. Any dispute arising under this Agreement shall be referred to arbitration in accordance with the stipulation laid down in the general conditions of contract.

10. The contents of this agreement have been read by the contractor and fully understood by the contractor.

IN WITNESS WHERE OF the Bank and the Contractor have set their respective hands to these Presents and two duplicates hereof the day and year first herein above written (If the Contractor is a Partnership Firm or an Individual

IN WITNESS WHEREOF the Bank has set its hands to these presents through its duly authorized official and the contractor has caused its common seal to be affixed hereonto and the said duplicates have /has caused these presents and the said two duplicates

hereof to be executed on its behalf, the day and year first herein above written (If contractor is a Company).

Signature clause:

_____
SIGNED AND DELIVERED

By the hand of Shri _____ (Name and Designation)
In presence of _____

1. _____

Address _____

2. _____

Address _____
(Witness)

SIGNED AND DELIVERED by _____*(If the Contractor is a Partnership Firm or an individual , should be signed by all partners or by duly authorized person on behalf of all partners)*

(1) _____
Address _____

(2) _____
Address _____

(Witness)
THE COMMON SEAL OF _____was hereinto affixed pursuant to the resolution By Board of Directors at the Meeting held on _____ (If the Contractor signs under its common seal, the Signature Clause should tally with the sealing clause in the Articles of Association)_____

SIGNED AND DELIVERED by

(1) _____

(2) _____

1) _____
Address _____

(2) _____
Address _____

(Witness)

SIGNED AND DELIVERED by _____*(If the Contractor has signed by the hand of Power of Attorney , whether a Company or Individual)*

(1) _____
Address _____

(2) _____
Address _____
(Witness)

SCHEDULE

(i) Letter of Acceptance/Work Order No ……..
(ii) Your letter Nos. …….
(iii) Our Letter Nos. _____dt._____
(iv) Architect's Letter nos ……
(v) Minutes of Meeting dt_____
(vi) Form of Tender, Notice Inviting Tender, Instructions to Tenderers, General Conditions of Contract, Special Conditions of Contract, Additional Specifications, Technical Specifications, Bill/ Schedule of Quantities , Safety Code, List of approved makes, Guarantee Agreements, Mode of Measurements, Appendices, Drawings, Testing of Materials & there Frequency etc.
(vii) _____
(viii) _____

3. ELIGIBILITY CRITERIA FOR PRE-QUALFICATION

The Firms / Contractors applying must fulfill each of the following criteria individually as a firm. The applications of the firms/contractors not fulfilling the following criterion will not be considered for further process.

a) Must have a working office in Gujarat.
b) Must have a valid PAN of Income Tax Department.
c) Must have GST registration, as applicable.
d) Average Annual Financial Turnover during the last **3 (three) years** ending 31st March, 2018 should be at least **5.70 Lacs**.
e) Experience of having successfully completed similar works during last 5 years ending 31st day of **Mar-2018** should be either of the following

   i) Three similar completed works each costing not less than the amount equal to **7.60 lacs**.

   Or

   ii) Two similar completed works each costing not less than the amount equal to **9.50 lacs**.

   Or

   iii) One similar completed work costing not less than the amount equal to **15.20 lacs**.

Definition of similar works: Supply and fixing of drainage pipelines (new/ renovation) in a high rise building projects (G+4 and above) including related civil work, for reputed private/ Govt. firms.

4. INSTRUCTION TO APPLICANTS

i) Duly completed application Form with **Annexure- 'AA'** along with enclosures/documentary proofs as defined in the said application form signed on each page by the authorized signatory should be collectively kept in a sealed envelope and must reach the undersigned on scheduled date and time. Please super scribe/write on the top of the envelope as **"APPLICATION FOR CONSTRUCTION OF C.I. PIPING WORK (DUCT) FOR LHO SBI @ LAL DARWAJA, AHMEDABAD".**

ii) Any & all cost/expenditure incurred by the applicants in relation to making the application shall be borne by the applicant. No payment by way of compensation or whatsoever shall be made by the Bank/ SBIIMS.

iii) The applicants should strictly furnish all the information only on the formats furnished/provided/ made available here. The applications not complying with this

requirement are liable to be rejected outright without assigning any reason as the sole discretion of the Bank.

iv) All corrections and overwriting should be attested & countersigned by the authorized signatory.

v) In case applicant intends to give additional information for which specified space is not sufficient, they may furnish such information by adding extra sheets by specifying/indicating the same in the appropriate column.

vi) Applications received after the due date & time, incomplete/partly filled/unsigned applications, applications not accompanied with relevant annexure, enclosures, documents etc are liable to be rejected outright without assigning any reason at the sole discretion of the Bank/ SBIIMS.

vii) Please ensure that the applications, annexure, enclosures etc are signed by the Authorized Signatory only and proof of mode of authorization (such as Power of Attorney, partnership Deed indicating such authorization, resolution, authorization letter etc., as applicable) is enclosed as mentioned to the Application Form.

The SBIIMS reserves its right to accept or reject any or all the applications without assigning any reasons whatsoever there for.

Circle Head & Vice President (Civil),

I have read and understood above instructions.
(Signature & Seal of Contractor)

APPLICATION FORM

CONSTRUCTION OF C.I. PIPING WORK (DUCT) FOR LHO SBI AT LAL DARWAJA, AHMEDABAD

Please strike-off which is not applicable

1	a) Name of the applicant/organization	
	b) Full Postal Address of Firm	
	c) Main Activities of Firm	
	d) Contact Details (i) Phone No. (ii) Mobile No. (iii) Fax No. (iv) Email-ID	
2	Year of establishment **Please enclose documentary evidence (ANNEXURE A)**	
3	Constitution of Firm **(Enclose certified copies of documents as evidence**). **(ANNEXURE B)**	Sole proprietorship/ Partnership /Private Ltd. / Public Ltd. / Any other (Please specify)
4	Name of the Proprietor/Partners/Directors of the organization/firm **Enclose certified copies of document as evidence. (ANNEXURE C)**	
5	Name/s of authorized signatory with designation	

6	Mode of Authorization **Enclose certified copies of document as evidence (ANNEXURE D)**	Resolution / Partnership Deed / Registered Power of Attorney / Proprietor / Any Other (Please specify)
7	Yearly turnover of the organization during last 3 financial years (year wise) and furnish audited balance sheet and Profit & Loss A/c. (Audited) for the last 3 years (or) Certificate issued by CA. **(ANNEXURE E)**	2015-16 2016-17 2017-18 Average :
8	Banker's Details (i) Banker's Name (ii) Full Postal Address (iii) Telephone No. (iv) Account No. (v) Type of Account (please enclose photocopy of blank cheque)	
9	PAN No. (Income tax) **Enclose certified copies of document as evidence (ANNEXURE F)**	
10	Whether registered with sales tax department, if yes, CST No. State ST No. VAT / TAN No. **Please enclose documentary evidence (ANNEXURE G)**	
11	GST No. **Please enclose documentary evidence (ANNEXURE H)**	Yes/ No
12	Whether last three financial years IT returns filed (Pl. enclose certified copies of the I T return of financial years 2015-16, 2016-17, 2017-18) **(ANNEXURE I)**	Yes/ No
13	Details of similar works executed & completed **(ANNEXURE 'AA')**	Please fill up enclosed Annexure 'AA' & enclose copies of work completion certificates
15	Whether any Civil Suit/litigation arisen	Attach a separate sheet if required.

	in contracts executed during the last 10 years. If yes, please furnish the name of the project, employer, nature of work, contract value, work order and brief details of litigation. Give name of the Court, place and status of pending litigation.	

I/We have read and understood the Press notice, Pre-qualification Notice & this Application form along with Annexures and certify that my/our firm full fills the ELIGIBILITY CRITERIA for this work.

I/We hereby confirm and certify that the information given above is correct and true and the enclosures annexed herewith are genuine to the best of my / our knowledge.

I/We are authorized to sign and submit these documents for pre-qualification.

I /We understand that if at any stage it is found / noticed by the SBIIMS that any information thus provided by us is untrue / incorrect partly or fully and in case of receipt of adverse / unsatisfactory report from other clients / Bankers, the SBIIMS may not consider our application and / or may de-list us and / or may take any appropriate action against us.

I /We also understand that partly / wrongly filled application and / or applications not on prescribed pro-forma and / or applications not accompanying relevant documents / enclosures / annexure are liable to be summarily rejected by the SBIIMS.

I / We understand that this is merely an application & does not entitles us to be necessarily pre-qualified by the SBIIMS and SBIIMS reserves the right to reject all and / or any application without assigning any reason whatsoever.

SEAL OF THE FIRM (SIGNATURE OF AUTHORIZED SIGNATORY)

PLACE : NAME :

DATE:

Note : Please enclose all the Annexure with relevant supporting documents.

ANNEXURE – 'AA'

LIST OF SIMILAR WORKS EXECUTED DURING THE LAST 5 YEARS AS ON 31.03.2018

Sr. No	Name of work/project with address	Name & full postal address of the client with address & telephone No.	Nature of Work	Date of completion of work (Enclose client's certificate for satisfactory completion)	Work Completion Cost (Rs. in Lakh)	Name & Address of Architect/ Consultant with address & telephone No.	Remarks
1	2	3	4	5	6	7	8

Enclose additional sheets if required
The Bank will ascertain the confidential report from the previous clients and the applicant should not object the same. The name of the applicant should match with the experience certificate issued by the client.

Name of Authorized signatory

Sign & seal of the applicant

TERMS AND CONDITIONS

1. Duly filled, signed & completed technical bid in a sealed cover and addressed to Circle Head & Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd. Third Floor, SBI, LHO, Bhadra, Laldarwaja Ahmedabad must reach to Circle Head & Vice President (Civil) latest by **15:00 Hrs on 30.08.2018**. The technical bid shall be opened at **15:30 Hrs** on the same day in the cabin of the Circle Head & Vice President (Civil) at this office in the presence of the bidders who want to remain present for which no separate intimation will be sent.

2. The contractor shall submit the tender in sealed cover. Part A- Technical bid cover shall contain the following documents:

a. Forwarding letter.
b. Application for eligibility along with annexure 'AA' and other required enclosures.
c. Terms and conditions including bill of quantities.
d. Banker cheque/ DD of Firm of required amount as EMD (Refundable) favoring State Bank of India, payable at Ahmedabad.
e. Tender Fees in form of Banker cheque/ DD/ SBI cheque of required amount favoring SBI Infra Management Solutions Pvt. Ltd., payable at Ahmedabad.

Part B- Price bid

Online sealed Price Bid - Bidders have to submit price bid in the online mode called as 'Online sealed price bid'. Technically qualified bidders will be intimated the date and time of the 'Online Sealed Price bid submission'. Reverse auction will be carried out after this procedure.

3. Earnest Money Deposit (EMD)-

EMD shall be accepted only in the form of Banker's Cheque / DD issued by Scheduled Bank. As soon as the work is awarded or after scrutiny of the tenders and ascertaining the correct position of tenderers, the Earnest Money Deposit (EMD) of all unsuccessful contractors shall be returned without waiting for a claim for refund from the contractors. The EMD of the successful tenderer shall be forfeited in case the contractor refuses to accept the work order or if he fails to commence the work awarded to him within the prescribed or extended time limit or if he does not remit the initial security deposit within the prescribed time.

4. Initial Security Deposit (ISD)- The amount of initial security deposit shall be 2% of the accepted tender amount including the EMD in the same form as of EMD. The successful tenderer shall deposit the amount equal to 2% of the accepted tender amount minus the EMD to the Bank within 07 (Seven) days of intimation to him of the acceptance of his

tender. This initial security deposit will be refunded to the contractor without any interest after three months of completion of work.

5. The contractor may visit the site before quoting the rate so as to acquaint themselves with work involve and the site conditions in consultation with Bank's engineer/Architectural.

6. The rate quoted by the contractor shall be inclusive of all materials, labour, consumables, water, electricity, tools plants, lights, all taxes, levies, transportation charges & disposal of waste material outside the premises, cleaning of site etc. for compete items of work as per specifications, design, pattern and instructions by the Bank/ Architect. However, GST/ service tax as per applicable shall be paid extra on work amount.

7. Unit rate & amount for each item should be quoted against each item of work in the enclosed format.

8. Quotations/Offers not submitted on the enclosed Performa, incomplete/ unsigned quotations and offers received after the due date and time shall not be evaluated/ considered.

9. Bank/ SBIIMS reserves the right to reject all/any quotation without assigning any reason thereof.

10. The rate will remain valid for acceptance for a period of 04 months from the date of opening of the quotations and shall remains firm till the completion of work including extensions.

11. All materials to be use for the work is required to be got approved by the Bank/SBIIMS/ Architect well before using the same for the work.

12. The protection, security, safety and storage of all the materials of the work and that of executed item of work are to be arranged by the contractor at their own cost.

13. The responsibility of safety of laborers / supervisors etc. deployed by the contractor for the said work as well as Bank's staff within the premises etc. lies with contractor.

14. All necessary insurance for labour, materials, third party insurance etc. as required as per Labour Laws/Govt. norms from time to time or otherwise are to be arranged by the contractor at his cost. Any claim arising out of the above shall be settled and borne by the contractor. The SBIIMS shall not be responsible in any way for any mishap occurred/claim raised during the execution of work till its completion. In case of failure

of the contractor to settle any claim within a reasonable time, the SBIIMS may recover such amount from any of the bill of the contractor.

15. No advance against any materials or payment against running bill will be given by Bank.

16. Contractor has to complete the entire work within a period of 3 months after getting the work order, failing which liquidated damages will be levied as per banks norms.

17. The full and final payment will be made after acceptance of the test report by the APMCF & scrutiny by SBIIMS/ Bank's Engineer. The bidder has to submit soft copy as well as hard copy of the report.

18. The quantity of items mentioned in the enclosed bill of quantity is approximate and these may vary. The payment will be made on actual measurements basis.

19. In case the contractor withdraws his offer during the validity period, refuses to work, expresses his unwillingness or fails to start the work at site within 07 days from the receipt of the work order, the Bank at this sole discretion initiate action as deemed fit including cancellation of work order and forfeit of EMD money.

INSTRUCTION TO THE TENDERERS

1.0 Scope of Work

Sealed tenders are invited by **Circle Head & Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd., Third Floor, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-380001** for and on behalf of State Bank of India for the work of **PROPOSED CONSTRUCTION/ RENOVATION OF C.I. PIPING WORK (DUCT) FOR LHO SBI AT LAL DARWAJA, AHMEDABAD.**

1.1 Site and its location:

The proposed work is to be carried out at **PROPOSED CONSTRUCTION OF C.I. PIPING WORK (DUCT) AT SBI, LHO AT LAL DARWAJA, AHMEDABAD.**

Tender Documents

1.2 The work has to be carried out strictly according to the condition stipulated in the tender consisting the following documents and the most workmen like manner.

Instructions to tenderers
General Conditions of Contract
Special Condition of Contract
Additional Conditions
Technical Specifications
NIT

1.3 The above documents shall be taken as complementary and mutually explanatory of one another but in case of ambiguities or discrepancies, shall take precedence in the order given below :

(a) NIT
(b) Additional Conditions
(c) Technical Specifications
(d) Drawings
(e) Special Condition of Contract
(f) General Condition of Contract
(g) Instructions to Tenders

Complete set of tender documents can be obtained in person from the office of the **Circle Head & Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd.,**

Third Floor, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-380001 in working hours (11 am to 06 pm) or downloaded from Bank's website www.sbi.co.in under the link 'Procurement News', from 09-08-2018 to 29-08-2018.

1.4 The tender documents are not transferable.

2.0 Site Visit

2.1 The tenderer must obtain himself on his own responsibility and his own expenses all information and data which may be required for the purpose of filling this tender document and enter into a contract for the satisfactory performance of the work. The tenderer is requested to satisfy himself regarding the availability of water, power, transport and communication facilities, the character quality and quantity of the materials, labour, the law and order situations, climatic conditions, local authorities requirement, traffic regulations etc;

The tenderer will be fully responsible for considering the financial effect of any or all the factors and visit the site before submitting the tender.

3.0 Earnest Money Deposit (EMD)

3.1 The tenderer are requested to submit the Earnest Money as mentioned in NIT in the form of Demand Draft or Banker's Cheque in favour of State Bank of India, payable at Ahmedabad drawn on any Scheduled Bank in India.

3.2 EMD in any other form other than as specified above will not be accepted. Tender not accompanied by the EMD shall be rejected.

3.3 No interest will be paid on the EMD.

3.4 EMD of unsuccessful tenderer will be refunded within 30 days of award of contract.

3.5 EMD of successful tenderer will be retained as a part of Initial security deposit (ISD).

4.0 Initial Security Deposit (ISD)

4.1 The ISD amount shall be 2% of the contract value. The successful tenderer will have to submit a sum equivalent to 2% of contract value less EMD(which shall be adjusted as part of ISD) by means of D/D drawn in favour of State Bank of India payable at Ahemedabad within a period of 15 days of acceptance of tender.

5.0 Total Security Deposit (TSD)

5.1 Total Security Deposit shall be 5% of contract value. Out of this 2% of contract value is in form of initial security deposit which includes the EMD. The balance 3% shall be deducted from the running account bill of the work by way of retention amount at rate of 10% of the respective running account bill i.e., the deduction from each running account bill will be 10% till total 3% of contract value is reached. 50% of the total security deposit shall be paid to the contractors on the basis of Architect's certifying the virtual completion. The balance 50% would be paid to the contractors after the defects liability period as specified in the contract.

5.2 No interest shall be paid on the amount retained by the SBIIMS/Bank as Security Deposit. (TSD/ ISD/ Retention Amount)

6.0 Signing of contract documents

The successful tenderer shall be bound to implement the contract by signing agreement and conditions of contract attached herewith within 30 days from the receipt of intimation of acceptance of his tender by the SBIIMS. However, the written acceptance of the tender by the SBIIMS will constitute a binding agreement between the SBIIMS and successful tenderer whether such formal agreement is subsequently entered into or not.

7.0 Completion period

Time is essence of the contract. The work should be completed in all respects in accordance with the terms of contract within a period as mentioned in NIT, from the date of handing over site or 15 days from the date of receipt of letter of acceptance whichever is later.

8.0 **Validity of tender**

Tenders shall remain valid and open for acceptance for a period (validity of offer) as mentioned in NIT. If the tenderer withdraws his/ her offer during the validity period or makes modifications in his/her original offer which are not acceptable to the SBIIMS, without prejudice to any other right or remedy, the SBIIMS /Bank shall be at liberty to forfeit the EMD.

9.0 Liquidated Damages

The liquidated damages shall be as mentioned in NIT.

10.0 Rate and prices:

10.1 In case of item rate tender

10.1.1 The tenderers shall quote their rates for individual items both in words and figures. In case of discrepancy between the rate quoted in words and figures the unit rate quoted in words will prevail. If no rate is quoted for a particular item the contractor shall not be paid for that item when it is executed.

The amount of each item shall be calculated and the requisite total is given. In case of discrepancy between the unit rate and total amount calculated from multiplication of unit rate and the quantity, the unit rate quoted will govern and the amount will be corrected.

10.1.2 The tenderers need not quote their rates for which no quantities have been given. In case the tenderer quote their rates for such items those will be ignored and will not be considered during execution.

10.1.3 The tenderers should not change the units as specified in the tender. If any unit is changed the tenders would be evaluated as per the original unit and the contractor would be paid accordingly.

11.0 The tenderers should not change or modify or delete the description of the item. If any discrepancy is observed he should immediately bring to the knowledge of the Architect/ Bank.

12.0 The tenderers should not change or modify or delete the description of the item. If any discrepancy is observed he should immediately bring to the knowledge of the Architect/ SBIIMS.

12.1.1 Each page of the BOQ shall be signed by the authorized person and cutting or overwriting shall be duly attested by him. SBIIMS's terms and conditions not covered here in the technical bid shall be applicable for this work and are accepted by the tenderer.

12.1.2 Each page shall be totalled and the grand total shall be given.

12.1.3 The rate quoted shall be firm and shall include all costs, allowances, taxes, levies etc. GST will be paid extra.

GENERAL CONDITIONS OF CONTRACT

1.0 Definitions:-

"Contract means the documents forming the tender and the acceptance thereof and the formal agreement executed between SBI Infra Management Solutions Pvt. Ltd. (client) and the contractor, together with the documents referred there in including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Architects / Bank and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

In the contract the following expressions shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them.

1.0.1 'SBIIMS' shall mean SBI Infra Management Solutions Pvt. Ltd.(Project Management Services Provider-PMS) having its Circle Office at Third Floor, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-380001 and includes the client's representatives, successors and assigns.

1.0.2 'Architects/ Consultants' shall mean **M/s L. J. Purani Architects**, Architects & Interior Designers, Ahmedabad.

1.0.3 'Site Engineer' shall mean an Engineer appointed by the SBIIMS at site as their representative for day-to-day supervision of work and to give instructions to the contractors.

1.0.4 'The Contractor' shall mean the individual or firm or company whether incorporate not, undertaking the works and shall include legal personal representative of individual or the composing the firm or company and the permitted assignees of individual or firms of company.

The expression 'works' or 'work' shall mean the permanent or temporary work description in the "Scope of work" and/or to be executed in accordance with the contract includes materials, apparatus, equipment, temporary supports, fittings and things of kinds to be provided, the obligations of the contractor hereunder and work to be done by the contractor under the contract.

1.0.5 'Engineer' shall mean the representative of the Architect/consultant.

1.0.6 'Drawings' shall mean the drawings prepared by the Architects and issued by the Engineer and refer red to in the specifications and any modifications of such drawings as may be issued by the Engineer from time to time Contract value shall mean value of the entire work as stipulated in the letter of acceptance of tender subject such additions there to or deductions there from as may be made under the provide herein

after contained.

1.0.7 Specifications' shall mean the specifications referred to in the tender and modifications thereof as may time to time be furnished or approved by the Architect/Consultant.

1.0.8 "Month" means calendar month.
1.0.9 "Week" means seven consecutive days.
1.0.10 "Day" means a calendar day beginning and ending at 00 Hrs and 24 Hrs respectively.

1.1.11 "SBIIMS's Engineer" shall mean The Civil/Electrical Engineer in-charge of the Project, as nominated by the Circle Head and Vice President (Civil), SBIIMS, Ahmedabad

1.1.12 The following shall constitute the Joint Project Committee (herein under referred to as JPC) for assessing and reviewing the progress of the work on the project and to issue instructions or directions from time to time for being observed and followed by the Architects Site Engineer / PMC and other consultants / contractors engaged in the execution of the project.

i) Vice President – Circle Head of SBIIMS
ii) SBIIMS Engineer (Civil and Electrical) in-charge of the Project
iii) Concerned partner of the Architects and their Resident Architect…. Member.

CLAUSE

1a. Total Security Deposit

Total Security deposit comprise of Earnest Money Deposit, Initial security deposit and Retention Money

1 b. Earnest Money Deposit-

The tenderer shall furnish EMD of **Rs. 19000/- (Rupees Nineteen thousand only)** in the form of Demand draft or bankers cheque drawn in favour of SBI payable at Ahmedabad, on any Scheduled Bank. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful tenderer shall be refunded soon after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time the period when he is required to keep his tender open acceptance by the SBIIMS or after it is accepted by the SBIIMS, the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the commence the work within the stipulated time.

1 c. Initial Security Deposit (lSD)

The amount of ISD shall be 2% of accepted value of tender including the EMD in the form of DD/Fixed Deposit Receipt (FDR) drawn on any scheduled Bank and shall be deposited within 15 days from the date of acceptance of tender.

1 d. Retention Money:

Besides the SD as deposited by the contractor in the above said manner, the Retention money shall be deducted from the running account bill at the rate of 10% of the gross value of work done by the contractor and claimed in each bill provided the total security deposit i.e. ISD plus EMD plus Retention Money shall both together not exceed 5% of the contract value. The 50% of the total security deposit shall be refunded to the contractor without any interest on issue of Virtual Completion certificate by the Architect/consultant. The balance 50% of the total security deposit shall be refunded to the contractors without interest within fifteen days after the end of defects liability period provided the contractor has satisfactorily attended to all defects in accordance with the conditions of contract including site clearance.

2.0 **Language:**

The language in which the contract documents shall be drawn shall be in English.

3.0 **Errors, omissions and discrepancies:**

In case of errors, omissions and/ or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications etc., the following order shall apply.

i) Between scaled and written dimension (or description) on a drawing, the latter shall be adopted.

ii) Between the written or shown description or dimensions in the drawings and the corresponding one in the specification the former shall be taken as correct.

iii) Between written description of the item in the specifications and descriptions in bills of quantities of the same item, the former shall be adopted:

a) In case of difference between rates written in figures and words, the rate in words shall prevail.

b) Between the duplicate / subsequent copies of the tender, the original tender shall be taken as correct.

4.0 **Scope of Work:**

The contractor shall carryout complete and maintain the said work in every respect strictly accordance with this contract and with the directions of and to the satisfaction Bank to be communicated through the architect/consultant. The architect/consultant at the directions of the SBIIMS from time to time issue further drawings and / or write instructions, details directions and explanations which are here after collectively references to as Architect's / consultant's instructions in regard to the variation or modification of the design, quality or quantity of any work or the addition or omission or substitution work. Any discrepancy in the drawings or between BOQ and / or drawings and/or specifications. The removal from the site of any material brought thereon by the Contractor and any substitution of any other materials therefore the removal and/orre- executed of any work executed by him. The dismissal from the work of any person engaged the re upon.

5.0 i) **Letter of Acceptance:**

Within the validity period of the tender the SBIIMS shall issue a letter of acceptance directly or through the architect by registered post or otherwise depositing at the of the contractor as given in the tender to enter into a Contract for the execution of the work as per the terms of the tender. The letter of acceptance shall constitute a bind contract between the SBIIMS and the contractor.

ii) **Contract Agreement:**

On receipt of intimation of the acceptance of tender from the SBIIMS/Architect the successful tenderer shall be bound to implement the contract and within fifteen days there of shall sign an agreement in a non-judicial stamp paper of appropriate value.

6.0 **Ownership of drawings**:

All drawings, specifications and copies thereof furnished by the SBIIMS / SBI through its Architect / consultants are the properties of the SBIIMS They are not to be used on other work.

7.0 **Detailed drawings and instructions:**

The SBIIMS through its architects / consultants shall furnish with reasonable proper additional instructions by means of drawings or otherwise necessary for the execution of the work. All such drawings and instructions shall be consistent with contract documents, true developments thereof and reasonably inferable there.

The work shall be executed in conformity there with and the contractor prepare a detailed programme schedule indicating therein the date of start and completion of

various activities on receipt of the work order and submit the same to the SBIIMS through the architect/consultant

7.1 Copies of agreement:

Two copies of agreement duly signed by both the parties with the drawings shall be handed over to the contractors.

8.0 Liquidated damages:

If the contractor fails to maintain the required progress in terms of clause 6.0 of GOC or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion, without justification in support of the cause of delay, he may be called upon without prejudice to any other right of remedy available under the law to the SBIIMS on account of such breach to pay a liquidated damages at the rate of 0.50% of the contract value which subject to a maximum of 5% of the contract value.

9.0 Materials, Appliances and Employees:

Unless or otherwise specified the contractor shall provide and pay for all materials, labour, water, power, tools, equipment transportation and any other facilities that are required for the satisfactory execution and completion of the work. Unless or otherwise specified all materials shall be new and both workmanship and materials shall be best quality. The contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him. Workman whose work or behavior is found to be unsatisfactory by the SBIIMS /Architect/ consultant he shall be removed from the site immediately.

10.0 Permits, Laws and Regulations:

Permits and licenses required for the execution of the work shall be obtained by the contractor at his own expenses. The contractor shall give notices and comply with the regulations, laws, and ordinances rules, applicable to the contract. If the contractor observes any discrepancy between the drawings and specifications, he shall promptly notify the SBIIMS in writing under intimation of the Architect/ Consultant. If the contractor performs any act, which is against the law, rules and regulations he shall meet all the costs arising the reform and shall indemnify the SBIIMS any legal actions arising there from.

11.0 Setting out Work:

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the architect / consultant before

proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved by, the architect / consultant the contractor shall be responsible for the same ad shall his own expenses rectify such error, if so, required to satisfaction of the SBIIMS

12.0 Protection of works and property:

The contractor shall continuously maintain adequate protection. of all his work from damage and shall protect the SBI's properties from injury or loss arising in connection with contract. He shall make good any such damage, injury, loss, except due to causes beyond his control and due to his fault or negligence.

He shall take adequate care and steps for protection of the adjacent properties. The contractor shall take all precautions for safety and protections of his employees on the works and shall comply with all applicable provisions of Govt. and local bodies' safety laws and building codes to prevent accidents, or injuries to persons or property on about or adjacent to his place of work. The contractor shall take insurance covers as per clause at his own cost. The policy may be taken in joint names of the contractor and the SBIIMS and the original policy may be lodged with the SBIIMS

13.0 Inspection of work:

The SBIIMS / Architect / Consultant or their representatives shall at all reasonable times have free access to the work site and / or to the workshop, factories, or other places where materials are lying or from where they are obtained and the contractor shall give every facility to the SBIIMS/Architect/consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. No person unless authorized by the SBIIMS/ Architect /Consultant except the representative of Public authorities shall be allowed on the work at any time. The proposed work either during its construction stage or its completion can also be inspected by the Chief Technical Examiner's Organization a wing of Central Vigilance commission.

14.0 Assignment and subletting:

The whole of work included in the contract shall be executed the contractor and he shall not directly entrust and engage or indirectly transfer, assign or underlet the contract or any part or share there of or interest therein without the written consent of the SBIIMS through the Architect and no undertaking shall relieve the contractor from the responsibility of the contractor from active & superintendence of the work during its progress.

15.0 Quality of materials, workmanship &Test:

All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with Architect/consultant instructions and shall be subject from time to time to such tests as the architect/consultant may direct at the place of manufacture or fabrication or on the site or an approved testing laboratory. The contractor shall provide such assistance, instruments, machinery, labor, and materials as are normally required for examining measuring sampling and testing any material or part of work before in corporation in the work for testing as may be selected and required by the architect/consultant.

ii) Samples:

All samples of adequate numbers, size, shades & pattern as per specifications shall be supplied by the contractor without any extra charges. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site detailed literature / test certificate of the same shall be provided to the satisfaction of the Architect/consultant before submitting the sample/literature the contractor shall satisfy himself that the material / equipment for which he is submitting the sample / literature meet with the requirement of tender specification. Only when the samples are approved in writing by the architect/consultant the contractor shall proceed with the procurement and installation of the particular material / equipment. The approved samples shall by the signed by the Architect / Consultant for identification and shall be kept on record at site office until the completion of the work for inspection / comparison at any time. The Architect/Consultant shall take reasonable time to approve the sample. Any delay that might occur in approving the samples for reasons of its not meeting the specifications or other discrepancies inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials / equipment etc. shall be to the account of the contractor.

iii) Cost of tests:

The cost of making any test shall be borne by the contractor if such test is intended by or provided for in the specification or BOQ.

iv) Costs of tests not provided for:

If any test is ordered by the Architect/ Consultant which is either

a) If so intended by or provided for or (in the cases above mentioned) is not so particularized, or though so intended or provided for but ordered by the Architect / Consultant to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government / approved laboratory, then the cost of such test shall be borne by the contractor.

16.0 Obtaining information related to execution of work:

No claim by the contractor for additional payment shall be entertained which is consequent upon failure on his part to obtain correct information as to any matter affecting the execution of the work nor any misunderstanding or the obtaining incorrect information or the failure to obtain correct information relieve him from any risks or from the entire responsibility for the fulfillment of contract.

17.0 Contractor's superintendence:

The contractor shall give necessary personal superintendence during the execution the works and as long, thereafter, as the Architect/Consultant may consider necessary until the expiry of the defects liability period, stated hereto.

18.0 Quantities:

The bill of quantities (BOQ) unless or otherwise stated shall be deemed to have been prepared in accordance with the Indian Standard Method of Measurements and quantities. The rate quoted shall remain valid for variation of quantity against individual item to any extent. The entire amount paid under Clause 19, 20 hereof as well as amounts of prime cost and provision sums, if any, shall be excluded.

19.0 Works to be measured:

The Architect/Consultant may from time to time intimate to the contractor that he requires the work to be measured and the contractor shall forthwith attend or send a quantity representative to assist the Architect in taking such measurements and calculation and to furnish all particulars or to give all assistance required by any of them. Such measurements shall be taken in accordance with the Mode of measurements detail in the specifications. The representative of the Architect / Consultant shall take measurements with the contractor's representative and the measurements shall be entered in the measurement book. The contractor or his authorized representative shall sign all the pages of the measurement book in which the measurements have been recorded in token of his acceptance. All the corrections shall be duly attested by both representatives. No over writings shall be made in the M book should the contractor not attend or neglect or omit to depute his representative to take measurements the measurements recorded by the representative of the Architect/consultant shall be final. All authorized extra work, omissions and all variations made shall be included such measurement.

20.0 Variations:

No alteration, omission or variation ordered in writing by the Architect/consultant vitiates the contract. In case the SBIIMS/ Architect / Consultant thinks proper at any during the progress of works to make any alteration in, or additions to or omission from the works or any. Alteration in the kind or quality of the materials to be used therein, the Architect / Consultant shall give notice thereof in writing to the contractor shall confirm in writing within seven days of giving such oral instructions the contract shall

alter to, add to, or omit from as the case may be in accordance with such but the contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the contract, stipulations, specifications or contract drawings without previous consent in writing of the Architect/ Consultant and the value of such extras, alterations, additions or omissions shall in all cases be determined by the Architect / Consultant and the same shall be added to or deducted from the contract value, as the case maybe.

21.0 Valuation of Variations:

No claim for an extra shall be allowed unless it shall have been executed under the authority of the Architect / Consultant with the concurrence of the SBIIMS as herein mentioned. Any such extra is herein referred to as authorized extra and shall be made in accordance with the following provisions.

(i) The net rates or prices in the contract shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work price herein.

(ii) Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ.

The net prices of the original tender shall determine the value of the items omitted, provided if omissions do not vary the conditions under which any remaining items of Works are carried out, otherwise the prices for the same shall be valued under sub-Clause 'c' hereunder.

Where the extra works are not of similar character and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items or works are carried out, then the contractor shall within 7 days of the receipt of the letter of acceptance inform the Architect/ consultant of the rate which he intends to charge for such items of work, duly supported by analysis of the rate or rates claimed and the Architect/consultant shall fix such rate or prices as in the circumstances in his opinion are reasonable and proper, based on the market rate. Where extra work cannot be properly measured or valued the contractor shall be allowed day work prices at the net rates stated in the tender, of the BOQ or, if not, so stated then in accordance with the local day work rates and wages for the district; provided that in either case, vouchers specifying the daily time (and if required by the Architect/Consultant) the workman's name and materials employed be delivered for verifications to the Architect /consultant at or before the end of the week following that in which the work has been executed.

It is further clarified that for all such authorized extra items where rates cannot be derived from the tender, the Contractor shall submit rates duly supported by rate analysis worked on the 'market rate basis for material, labour hire / running charges of equipment and wastages etc. plus 15% towards establishment charges, contractor's overheads and profit. Such items shall, not be eligible for escalation.

22.0 Final measurement:

The measurement and valuation in respect of the contract shall be completed within two months of the virtual completion of the work.

23.0 Virtual Completion Certificate (VCC):

On successful completion of entire works covered by the contract to the full satisfaction of the SBIIMS, the contractor shall ensure that the following works have been completed the satisfaction of the SBIIMS:

Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor's labour equipment and machinery.

Demolish, dismantle and remove the contractor's site office, temporary works, structure including labour sheds/camps and constructions and other items and things whatsoever brought upon or erected at the site or any land allotted to the contractor by the SBIIMS not incorporated in the permanent works.
Remove all rubbish, debris etc. from the site and the land allotted to the contractor by the SBIIMS and shall clear, level and dress, compact the site as required by the SBIIMS

Shall put the SBIIMS in undisputed custody and possession of the site and all land allot by the SBIIMS

Shall hand over the work in a peaceful manner to the SBIIMS

All defects / imperfections have been attended and rectified as pointed out by the Architects to the full satisfaction of SBIIMS

Upon the satisfactory fulfillment by the contractor as stated above, the contractor is entitled to apply to the Architect / consultant is satisfied of the completion of work. Relative to which the completion certificate has been sought, the Architect/ consultant shall within fourteen (14) days of the receipt of the application for completion certificate, issue a VCC in respect of the work for which the VCC has applied.
This issuance of a VCC shall not be without prejudice to the SBIIMS's rights and contractor liabilities under the contract including the contractor's liability for defects liability nor shall the issuance of VCC in respect of the works or work at any site be

construction as a waiver of any right or claim of the SBIIMS against the contractor in respect of or work at the site and in respect of which the VCC has been issued.

24.0 Work by other agencies:

The SBIIMS / Architect / consultant reserves the rights to use premises and any portion the site for execution of any work not included in the scope of this contract which it may desire to have carried out by other persons simultaneously and the contractor shall not only allow but also extend reasonable facilities for the execution of such work. The contractor however shall not be required to provide any plant or material for the execution of such work except by special arrangement with the SBI. Such work shall be carried out in such manner as not to impede the progress of the works included in the contract.

25.0 Insurance of works:

Without limiting his obligations and responsibilities under the contract the contractor shall insure in the joint names of the SBIIMS And the contractor against all loss of damages from whatever cause arising other than the excepted risks, for which he is responsible under the terms of contract and in such a manner that the SBIIMS and contractor are covered for the period stipulated I clause of GCC and are also covered during the period of maintenance for loss or damage arising from a cause, occurring prior to the commencement of the period of maintenance and for any loss or damage occasioned by the contractor in the course of any operations carried out by him for the purpose of complying with his obligations under clause.

The Works for the time being executed to the estimated current Contract value thereof, or such additional sum as may be specified together with the materials for incorporation in the works at their replacement value.

The constructional plant and other things brought on to the site by the contractor to the replacement value of such constructional plant and other things.

Such insurance shall be effected with an insurer and in terms approved by the SBIIMS which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the Architect / consultant the policy if insurance and the receipts for payment of the current premiums.

26.0 Damage to persons and property:

The contractor shall, except if and so far as the contract provides otherwise indemnify the SBI against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims

proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto except any compensation of damages for or with respect to:

a) The permanent use or occupation of land by or any part thereof.

b) The right of SBIIMS to execute the works or any part thereof on, over, under, in or through any lands.

c) Injuries or damages to persons or properties which are unavoidable result of the execution or maintenance of the works in accordance with the contract.

d) Injuries or damage to persons or property resulting from any act or neglect of the SBIIMS their agents, employees or other contractors not being employed by the contractor or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents such part of the compensation as may be just and equitable having regard to the extent of the responsibility of the SBIIMS, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

27.0 Contractor to indemnify SBIIMS:

The contractor shall indemnify the SBIIMS against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision sub-clause 26.0 of this clause.

28.0 Contractor's superintendence:

The contractor shall fully indemnify and keep indemnified the SBIIMS against any action, claim, or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect to any article or part thereof included in the contract. In the event of any claim made under or action brought against SBIIMS in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expenses to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the SBIIMS if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Architect / consultant in this behalf.

29.0 Third Party Insurance:

Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 25.0 of GCC shall insure against his liability for any material or physical damage, loss, or injury which may occur to any property including that of SBIIMS, or to any person, including any employee of the SBIIMS, by or arising out of the execution of the works or in the carrying out of the

contract, otherwise than due to the matters referred to in the provision to clause 25.0 thereof.

30.0 Minimum amount of Third Party Insurance:

Such insurance shall be affected with an insurer and in terms approved by the SBIIMS which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the. Architect / consultant the policy or policies of insurance cover and receipts for payment of the current premiums.

The minimum insurance cover for physical property, injury, and death is Rs. 5 Lakh per occurrence with the number of occurrences limited to four. After each occurrence contractor will pay additional premium necessary to make insurance valid for four occurrences always.

31.0 Accident or Injury to workman:

The SBIIMS Shall not be liable for or in respect to any damages or compensation payable at law in respect or inconsequence of any accident or injury to any workmen or other person in the employment of the contractor or any sub-contractor, save and except an accident or injury resulting from any act or default of the SBIIMS or their agents, or employees. The contractor shall indemnify and keep indemnified SBIIMS against all such damages and compensation, save and except as aforesaid, and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

32.0 Insurance against accidents etc. to workmen:

The contractor shall insure against such liability with an insurer approved by the SBIIMS During the whole of the time that any persons are employed by him on the works and shall, when required, produce to the architect / consultant such policy of insurance and receipt for payment of the current premium. Provided always that, in respect of any persons employed by any sub-contractor the contractor's obligation to insured as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBIIMS is indemnified under the policy but the contractor shall require such sub-contractor to produce to the Architect /consultant when such policy of insurance and the receipt for the payment of the current premium.

33.0 Remedy on contractor's failure to insure:

If the contractor fails to effect and keep in force the insurance referred to above or any other insurance which he may be required to effect under the terms of contract, then and in any such case the SBIIMS may effect and keep in force any such insurance and

pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the SBIIMS as aforesaid from any amount due or which may become due to the contractor, or recover the same as debt from the contractor.

Without prejudice to the others rights of the SBIIMS against contractors. In respect of such default, the employer shall be entitled to deduct from any sums payable to the contractor the amount of any damages costs, charges, and other expenses paid by the SBIIMS And which are payable by the contractors under this clause. The contractor shall upon settlement by the Insurer of any claim made against the insurer pursuant to a policy taken under this clause, proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the monies received from the Insurer in respect of such damage shall be paid to the contractor and the Contractor shall not be entitled to any further payment in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.

34.0 Commencement of Works:

The date of commencement of the work will be reckoned from the date of award of letter by the SBIIMS

35.0 Time for completion:

Time is essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a period of **90 days** from the date of commencement. If required in the contract or as directed by the Architect / consultant. The contractor shall complete certain portions of work before completion of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

36.0 Extension of time:

If, in the opinion of the Architect/consultant, the work be delayed for reasons beyond the control of the contractor, the Architect/consultant may submit a recommendation to the SBIIMS to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the SBIIMS Through the Architect' Consultant in writing at least 30 Days before the expiry of the scheduled time and while applying for extension of time he shall furnish the reason in detail and his justification if an', for the delays. The architect/consultant shall submit their recommendations to the SBIIMS in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the provision of liquidated damages as stated under clause 10.0 shall become

applicable. Further the contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

37.0 Rate of progress:

Whole of the materials, plant and labour to be provided by the contractor and the mode, manner and speed of execution and maintenance of the works are to be of a kind and conducted in a manner to the satisfaction of the Architect/consultant should the rate of progress of the work or any part thereof be at any time be in the opinion the. Architect / consultant too Slow to ensure the completion of the whole of the work the prescribed time or extended time for completion the Architect/consultant shall the re upon take such steps as considered necessary by the Architect / consultant to expedite progress so as to complete the works by the prescribed time or extended time. Such communications from the Architect / consultant neither shall relieve. The contractor from fulfilling obligations under the contract nor he will be entitled to raise any claims arising out of such directions.

38.0 Work during nights and holidays:

Subject to any provision to the contrary contained in the contract no permanent work shall save as herein provided be carried on during the night or on holidays without the permission in writing of the Architect/consultant, save when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the work in which case the contractor shall immediately advise the Architect / consultant. However the provisions of the clause shall not be applicable in the case of any work which becomes essential to carry by rotary or double shifts in order to achieve the progress and quality of the part of the works being technically required / continued with the prior approval of the Architect / consultant at no extra cost to the SBIIMS.

All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance.

39.0 No compensation or restrictions of work:

If at any time after acceptance of the tender SBIIMS shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not required the whole or any part of the work to be carried out. The Architect / consultant shall give notice in writing that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise what so ever on account of any profit or advantage which he might have derived from the execution of the Work fully but which he did not derive in consequence of the fore closure of the whole or part of the work.

Provided that the contractor shall be paid the charges on the cartage only of materials actually and bonafide brought to the site of the work by the contractor and rendered

surplus as a result of the abandonment, curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the Architect/Consultant shall have in such cases the option of taking over all or any such materials at their purchase price or a local current rate whichever is less.

In case of such stores having been issued from SBIIMS stores and returned by the contractor to stores, credit shall be given to him at the rates not exceeding those at which were originally issued to the contractor after taking into consideration and deduction for claims on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of Architect / consultant shall be final.

40.0 Suspension of work:

The contractor shall, on receipt of the order in writing of the Architect / consultant (whose decision shall be final and binding on the contractor) suspend the progress of works or any part the offer such time and in such manner as Architect/consultant may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons:

a) On account any default on the part of the contractor, or
b) For proper execution of the works or part thereof for reasons other than the default the contractor, or
c) For safety of the works or part thereof.
The contractor shall, during such suspension, properly protect and secure the works the extent necessary and carry out the instructions given in that behalf by the Architect / consultant.
i)If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:

The contractor shall be entitled to an extension of time equal to the period of every such suspension. No compensation whatsoever shall be paid on this account.

41.0 Action when the whole security deposit is forfeited:

In any case in which under any clause or clauses of this contract, the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit the Architect / consultant shall have the power to adopt any of the following course as they may deem best suited to the interest of the SBIIMS:

To rescind the contract (of which rescission notice in writing to the contractor by - Architect / consultant shall be conclusive evidence) and in which case the security, deposit of the contractor shall be forfeited and be absolutely at the disposal of SBIIMS.

To employ labour paid by the SBIIMS and to supply materials to carry out the work, or part of the work, debiting the contractor with the cost of the labour and materials cost of such labour and materials as worked out by the Architect / consultant shall final and

conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract certificate of architect /consultant as to the value of work done shall be final conclusive against the contractor.

To measure up the work of the contractor, and to take such part thereof as shall unexecuted, out of his hands, and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (The amount of which excess the certificates in writing of the Architects / consultant shall final and conclusive) shall be borne by original contractor and may be deducted any money due to him by SBIIMS under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or sufficient part thereof.

In the event of any of above courses being adopted by the SBIIMS the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any engagements or make any advances on account of, or with a view to the execution of the work or the performance of the contract and incase the contract shall be rescind under the provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum or any work thereto for actually performed under this contract, unless, and until the Architect / consultant will have certified in writing the performance of such work and the value payable in respect thereof, and he shall only been titled to be paid the value so certified.

42.0 Owner's right to terminate the contract:

If the contractor being an individual or a firm commit any 'Act of insolvency' or shall be adjusted an insolvent or being an incorporated company shall have an order for compulsory winding up voluntarily or subject to the supervision of Govt. and of the Official Assignee of the liquidator in such acts of insolvency or winding up shall be unable within seven days after notice to him to do so, to show to the reasonable satisfaction of the Architect / Consultant that he is able to carry out and fulfill the contract, and to dye security therefore if so required by the Architect /Consultant.

Or if the contractor (whether an individual firm or incorporated Company) shall suffer execution to be issued or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor.

Or shall assign or sublet this contract without the consent in writing of the SBIIMS through the Architect/Consultant or shall charge or encumber this contract or any payment due to which may become due to the contractor there under:

has abandoned the contract; or

has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the SBIIMS through the Architect / consultant written notice to proceed, or

has failed to proceed with the works with such diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or has failed to remove the materials from the site or to pull down and replace work within seven days after written notice from the SBIIMS through the Architect / Consultant that the said materials were condemned and rejected by the Architect/ consultant under these conditions; or has neglected or failed persistently to observe and perform all or any of the acts matters or things by this contract to be observed and performed by the contactor for seven days after written notice shall have been given to the contractor to observe or perform the same or has to the detriment of good workmanship or in defiance of the SBIIMS or Architect's / consultant's instructions to the contrary subject any part of the contract. Then and in any of said cases the SBIIMS and or the Architect / consultant, may not withstanding any previous waiver, after giving seven days' notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the SBIIMS or the Architect/consultant or the obligation and liabilities of the contractor the whole of which shall continue in force as fully as if the contract had not been determined and as if the works subsequently had been executed by or on behalf of the contractor. And, further the SBIIMS through the Architect / consultant their agents or employees may enter upon and take possession of the work and all plants, took scaffoldings, materials, sheds, machineries lying upon the premises or on the adjoining lands or roads use the same by means of their own employees or workmen in carrying on and completing the work or by engaging any other contractors or persons to the work and the contractor shall not in any was interrupt or do any act, matter or thing to prevent or hinder such other contractor or other persons employed for complement and finishing or using the materials and plant for the works.

When the works shall be completed or as soon thereafter as convenient the SBIIMS Or architect/consultant shall give a notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within 14 days after receive thereof by him the SBIIMS sell the same by publication, and after due publication, and shall, adjust the amount realized by such auction. The contractor shall have no right to question any of the act of the SBIIMS incidental to the sale of the materials etc.

43.0 Certificate of payment:

The contractor shall be entitled under the certificates to be issued by the Architect / consultant to the contractor within 10 working days from the date of certificate to payment from SBIIMS From time to time SBIIMS shall recover the statutory recovering

other dues including the retention amount from the certificate of payment. Provided always that the issue of any certificate by the Architect / consultant during progress of works or completion shall not have effect as certificate of satisfaction relieve the contractor from his liability under clause.

The Architect / consultant shall have power to withhold the certificate if the work or in part thereof is not carried out to their satisfaction. The Architect/consultant may by any certificate make any corrections required previous certificate.
The SBIIMS shall modify the certificate of payment as issued by the architect/ consultant from time to time while making the payment
The contractor shall submit interim bills only after taking actual measurements and properly recorded in the Measurement books.

The final bill may be submitted by contractor within a period of one month from the date of virtual completion and Architect / consultant shall issue the certificate of payment within a period of two months. The SBIIMS Shall pay the amount within a period of three months from the date of issue of certificate provided there is no dispute in respect of rates and quantities.

The contractor shall submit the interim bills in the prescribed format with all details.

44.0

A. Settlement of Disputes and Arbitration:

Except where otherwise provided in the contract all questions and disputes to the meaning of the specifications, design, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question , claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings specifications, estimates, instructions orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

If the contractor considers that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the Architect or in case the contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contractor raise any dispute, the contractor shall forthwith give notice in writing of his claim, or dispute to The Senior Vice President. SBIIMS, Head Office, Mumbai and endorse a copy of the same to the Architect, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the contractor shall not be entitled to raise any claim nor shall the SBIIMS be in any way liable in respect of any claim by the

contractor unless notice of such claim shall have been given by the contractor to the Senior Vice President, SBIIMS, Head Office, Mumbai in the manner and within the time as aforesaid. The Contractor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the Senior Vice President, Head Office, Mumbai in writing in the manner and within the time aforesaid.

B. Settlement of Disputes and Arbitration:

The Senior Vice President, Head Office, Mumbai shall give his decision in writing on the claims notified by the receipt of the contractor may within 30 days of the receipt of the decision of the Sr. V.P., Head Office / Submit his claims to the conciliating authority namely the M.D. & C.E.O., SBIIMSPL, Head Office, Mumbai for conciliation along with all details and copies of correspondence exchanged between him and the SBIIMS

If the conciliation proceedings are terminated without settlement of the disputes, the contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned M.D. & C.E.O. of the SBIIMS for appointment of an arbitrator to adjudicate the notified claims falling which the claims of the contractor shall be deemed to have been considered absolutely barred and waived.

Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the contractor as aforesaid and all claims of the SBIIMS shall be referred for adjudication through arbitration by the Sole Arbitrator appointed by the M.D. & C.E.O. and who will be of Deputy General Manager rank. It will also be no objection to any such appointment that the Arbitrator so appointed is a SBIIMS, Officer and that he had to deal with the matters to which the Contract relates in the course of his duties as SBIIMS, Officer. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid by the said M.D. & C.E.O. of the SBIIMS Such person shall be entitled to proceed with the reference from the stage at which it was let by his predecessor.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.

It is also a term of this contract that no person other than a person appointed by such Chief General Manager as aforesaid should act as arbitrator. The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any or any accordance modification or reenactment thereof and the rules made there under.

It is also a term of the contract that if any fees are payable to the Arbitrator these shall be paid equally by both the parties. However, no fees will be payable to the arbitrator if he is a SBIIMS Officer.

It is also a term of the contract that the Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any of the arbitrators shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The Cost of the reference and of the award (including the fees, if any of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and din what manner, such costs or any part thereof, shall be paid and fix or settle the amount of costs to be so paid.

45.0 Water supply:

The contractor shall make his own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following condition.

i) That the water used by the contractor shall be fit for construction purposes to the satisfaction of the Architect /consultant's.

ii) The contractor shall make alternative arrangements for the supply of water if the arrangement made by the contractor for procurement of water in the opinion of the Architect / consultant is unsatisfactory.

iii) In case contractor is permitted to use SBIIMS's source of water i.e. Municipal connection, Bore well (existing or new) etc., the SBIIMS will recover @ 0.5% of contract amount form the final bill of contractor.

The contractor shall construct temporary well / tube well in SBIIMS land for taking water for construction purposes only after obtaining permission in writing from the SBIIMS The contractor has to make his own arrangements for drawing and distributing the water at his own cost. He has to make necessary arrangements. To avoid any accidents or damages caused due to construction and subsequent maintenance of the wells. He has to obtain necessary approvals from local authorities, if required, at his own cost. He shall restore the ground to its original condition after wells are dismantled on completion of work or hand over the well to the SBIIMS without any compensation as directed by the architect /consultant.

46.0 Power supply:

The contractor shall make his own arrangements for power and supply / distribution system for driving plant or machinery for the work and for lighting purpose at his own cost, the cost of running and maintenance of the plants are to be included in his tender

prices, He shall pay all fees and charges required, by the power supply and include the same in his tendered rates and hold the owner free from all such costs. He has to obtain necessary approval from the appropriate authorities, if required.

In case contractor is permitted to use Bank's source of power supply provided at one point, the SBIIMS will recover @ 0.5% of contract amount from the bill of contractor.

47.0 Treasure trove etc.

Any treasure trove, coin or object antique which may be found on the site shall be the property of SBIIMS and shall be handed over to the bank immediately.

48.0 Method of measurement:

Unless otherwise mentioned in the schedule of quantities or in mode of measurement, the measurement will be on the net quantities or work produced in accordance with up to date rules laid down by the Bureau of Indian Standards. In the event any dispute/ disagreement the decision of the Architect / consultant shall be final and binding on the corrector.

49.0 Maintenance of registers:

The contractor shall maintain the following registers as per the performa at site of work and should produce the same for inspection of SBIIMS /Architect / consultant whenever desired by them. The contractor shall also maintain the records / registers as required by the local authorities / Govt. from time to time.

ANNEXURE – A	MEASUREMENT BOOKS
ANNEXURE – B	CEMENT REGISTER (DAILY RECORD)
ANNEXURE – C	STEEL REGISTER
ANNEXURE – D	STEEL CONSUMPTION REGISTER BILL WISE
ANNEXURE – E	DRAWING REGISTER
ANNEXURE – F	MATERIAL AT SITE REGISTER
ANNEXURE – G	HINDRENCE REGISTER
ANNEXURE – H	CONCRETE CUBE TEST REGISTER
ANNEXURE – I	FILE AND REGISTER FOR EXTRA / VARIATION ITEMS
ANNEXURE – J	MATERIAL TEST REGISTER AND FILE

ANNEXURE – K SITE ORDER BOOK (IN TRIPLICATE)

ANNEXURE – L LEAD CUULKING REGISTER

ANNEXURE – M LABOUR REPORT AND PROGRESS REGISTER

ANNEXURE – N SITE VISIT & INSTRUCTION BOOK

ANNEXURE – O CERTIFIED TRUE COPIES OF THE CONTRACT

ANNEXURE – P OTHER RECORDS AND REGISTER ON THE approved format as felt necessary to be maintained as per these documents or as directed by the Banks/ Architects/ Bank / Architect.

50.0 Force Majeure:

Neither contractor nor SBIIMS shall be considered in default in performance of the obligations if such performance is prevented or delayed by events such as but not war, hostilities revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of or for any other cause beyond the reasonable control of the party affected or prevents or delayed. However, a notice is required to be given within 30 days from the happening of the event with complete details, to the other party to the contract ,if it is not possible to serve a notice, within the shortest possible period without delay.

As soon as the cause of force majeure has been removed the party whose ability perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.

From the date of occurrence of a case off or force majeure obligations of the party affected.

51.0 Water power and other facilities:

The rate quoted by the contractor shall include all expenses that are required for providing all the water required for the work and the contractor shall make his own arrangements for the supply of good quality water suitable for the construction and good quality drinking water for their workers If necessary the contractor has to sink a tube well
/ open well and bring water by means of tankers at his own cost for the purpose The SBIIMS will not be liable to pay any charges in connection with the above

The rate quoted in the tender shall include the expenses for obtaining and maintaining power connections and shall pay for the consumption charges

The contractors for other trades directly appointed by the SBIIMS shall be entitled to take power and water connections from the temporary water and power supply obtained by the contractor However, the concerned contractor shall make their own arrangements to draw the supply and pay directly the actual consumption charges at mutually agreed rates between them. All municipal charges for drainage and water connection for Construction purposes shall be borne by the contactor and charges payable for permanent connections, if any, shall be initially paid by the contactor and the SBIIMS will reimburse the amount on production of receipts.

The SBIIMS as well as the Architect / consultant shall give all possible assistance to the Contractor's to obtain the requisite Permission from the various authorities, but the responsibility for obtaining the same in time shall be of the contractor.

In case contractor is permitted to use Bank's source of water and power supply provided at one point, the SBIIMS will recover @ 0.5% of contract amount for water and electricity separately from the bill of contractor.

51.0 Facilities for contractor's employees:

The contractor shall make his own arrangement for the housing and welfare of his staff and workmen including adequate drinking water facilities. The contractor shall also make the arrangements at his own cost for transport where necessary for his staff and workmen to and from site of work at his own cost.

52.0 Lighting of works:

The contractor shall at all times provide adequate and approved lighting as required for the proper execution and supervision and inspection of work.

53.0 Firefighting arrangements:

The contractor shall provide suitable arrangement for firefighting at his own cost. This purpose he shall provide requisite number of fire extinguishers and adequate number of buckets, some of which are to be always kept filled with sand and some with water these equipment shall be provided at suitable prominent and easily accessible place and shall be properly maintained.

Any deficiency in the fire safety or unsafe conditions shall be corrected by the contractor at his own cost and, to the approval of the relevant authorities. The contractor makes the following arrangements at his own cost but not limited the following:

a) Proper handling, storage and disposal of combustible materials and waste.

b) Work operations which can create fire hazards.
c) Access for fire-fighting equipment.
d) Type, number and location of containers for the removal of surplus materials and rubbish.
e) Type, size, number and location of fire extinguishers or other tire fighting equipment.
f) General housekeeping.

54.0 Site order book:

A site order book shall be maintained at site for the purpose of quick communication between the Architect / Consultant. Any communication relating to the work may be conveyed through records in the site order book. Such a communication from one party to the other shall be deemed to have been adequately served in terms of contract Each site order book shall have machine numbered pages in triplicate and shall carefully maintained and preserved by the contractor and shall be made available to the architect /consultant as and when demanded- Any instruction which the architect/consultant may like to issue to the contractor or the contractor may like to bring to the architect / consultant two copies of such instructions shall be taken from the site order book and one copy will be handed over to the party against proper acknowledgment and the second copy will be retained for their record.

55.0 Temporary fencing/barricading:

The contractor shall provide and maintain a suitable temporary fencing/barricading and gates at his cost to adequately enclose all boundaries of the site for the protection of the public and for the proper execution and security of the work and in accordance with the requirement of the architect/consultant and regulations of local authorities. These shall be altered, relocated and adopted from time to time as necessary and removed on completion of the work.

56.0 Site meetings:

Site meetings will be held to review the progress and quality evaluation. The contractor shall depute a senior representative along with the site representative and other staff of approved sub-contractors and suppliers as required to the site meetings and ensure all follow up actions. Any additional review meetings shall he held if required by the architect/ consultant.-

57.0 Disposal of refuse:

The contractor shall cart away all debris, refuse etc. arising from the work from the site and deposit the same as directed by the architect / consultant at his own cost. It is the responsibility of the contractor to obtain from the local authorities concerned to the effect that all rubbish arising out of contractor's activities at the construction site or any other off-site activities borrow pits has been properly disposed off.

58.0 Contractor to verify site measurement:

The contractor shall check and verify all site measurements whenever requested other specialists contractors or other sub-contractors to enable them to prepare the own shop drawing and pass on the information with sufficient promptness as will in any way delay the works.

59.0 Displaying the name of the work:

The contractor shall put up a name board of suitable size as directed by the architect/ consultant indicating there in the name of the project and other details as given by the architect/consultant at his own cost and remove the same on completion of work.

60.0 As built drawings:

For the drawings issued to the contractor by the Architect / Consultant. The architect Consultant will issue two sets of drawings to the Contractor for the items for some changes have been made. From the approved drawings as instructed by the SBIIMS / Architect / Consultant. The contractor will make the changes made on these copies and return these copies to the architect / Consultant for their approval. In cases revision is required or the corrections are not properly marked the architect/Consultant will point out the discrepancies to the contractor. The contractor will have to incorporated these corrections and / or attend to discrepancies either on copies as directed by the architect / consultant and resubmit to him for approval. The architect / consultant will return one copy duly approved by him.

For the drawings prepared by the contractor:

The contractor will modify the drawing prepared by him wherever the changes made by the SBIIMS / architect / consultant. And submit two copies of such modified drawings to the architect/ consultant for approval. The architect / consultant will return one copy of the approved drawing to the contractor.

61.0 Approved make:

The contractor shall provide all materials from the list of approved makes at his own cost and also appoint the specialized agency for the waterproofing, anti-termite treatment, aluminum doors and windows and any other item as specified in the tender. The architect/consultant may approve any make / agency within the approved list as given in the tender after inspection of the sample/mockup.

62.0 Procurement of materials:

The contractor shall make his own arrangements to procure all the required materials for the work. All wastages and losses in weight shall be to the contractors account

63.0 Excise duty, taxes, levies etc.;

The contractor shall pay and be responsible for payment of all taxes, duties, levies, royalties, fees, cess or charges in respect of the works including but not limited to sales tax, tax on works contract excise duty, and Octroi, payable in respect of materials, equipment plant and other things required for the contact. All of the aforesaid taxes, duties, levies, fees and charges shall be to the contractor's account and the SBIIMS Shall not be required to pay any additional or extra amount on this account. Variation of taxes, duties, fees, levies etc. if any, till completion of work shall be deemed to be included in the quoted rates and no extra amount on this account. Variation of taxes, duties, fees, levies etc. if any, till completion of work shall be deemed to be included in the quoted rates and no extra claim on this account will in any case be entertained. If a new tax or duty or levy or cess or royalty or Octroi is imposed under as statutory law during the currency of contract the same shall be borne by the contractor. However, GST will be paid extra.

64.0 Acceptance of tender:

The SBIIMS shall have the right to reject any or all tenders without assigning any reason. They are not to bind to accept the lowest or any tender and the tenderer or tenderers shall have no right to question the acts of the SBIIMS However adequate transparency would be maintained by the SBIIMS

65.0 Photographs:

The Contractor shall at his own expense supply to the Architects with duplicate hard copies of large photographs not less than 25 cm. x 20 cm. (10" x 8") of the works, taken from two approved portions of each building, at intervals of not more than one months during the progress of the work or at every important stage of construction.

In addition to above, the contractor shall be bound to submit adequate no. of site photographs along with each Running Bill for the project clearing showing major progress of work measured and claimed therein failing which the Architect/ SBIIMS may consider returning the Bill to the contractor and no claim for delay on this account will be entertained.

66.0 Safety Codes:

1. First aid appliances including adequate supply of sterilized dressing and cotton wool shall be kept in a readily accessible place.

2. An injured person shall be taken to a public hospital without loss of time, in cases when the injury necessitates hospitalization.

3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from the ground.

4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm. (clear) and the distance between two adjacent running's shall not be more than 30 cm. When a ladder is used an extra labour shall be engaged for holding ladder.

5. The excavated material shall not be placed within 1.5 meters of the edge of the trench half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.

6. 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 one meter.

7. No floor, roof or other part of the structure shall be so overloaded with debris or material as to render it unsafe.

8. Workers employed on mixing and handling material such as asphalt, cement, mortar, concrete and lime shall be provided with protective footwear and rubber hand gloves.

9 Those engaged in welding works shall be provided with welders' protective eye shield and gloves.

10. (i) No paint containing lead or lead products shall be used except in the form of paste readymade paint.
(ii)Suitable face masks should be supplied for use by the workers when the paint applied in the form of spray or surface having lead paint dry rubbed and scrapped.

11. Overalls shall be supplied by the contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during cessation of work.

12 Hoisting machines and tackle used in the works including their attachments anchor and supports shall be in perfect condition.

13. The ropes used in hoisting or lowering material or as a means of suspension shall be durable quality and adequate strength and free form defects.

1.0 Local laws, Acts, Regulations:

The contractor shall strictly adhere to all prevailing labour laws inclusive of contract labour (regulation and abolition act of 1970) and other safety regulation. The contractor shall comply with the provision of all labour

legislation including the latest requirements of all the Acts, Laws, any other regulations that are applicable to the execution of the project.

i) Minimum Wages Act 1948 (Amended)
ii) Payment of Wages Act 1936 (Amended)
iii) Workmen's Compensation Act 1923 (Amended)
iv) Contract labour regulation and abolition act 1970 and central rules 1971 (amended)
v) Apprentice act 1961 (amended)
vi) Industrial employment (standing order) Act 1946 (amended)
vii) Personal injuries (compensation insurance) act 1963 and any other modifications
viii) Employees' provident fund and miscellaneous provisions Act 1952 and amendment thereof
ix) Shop and establishment Act
x) Any other act or enactment relating thereto and rules framed there under from time to time.

2.0 Accidents:

The contractor shall immediately on occurrence of any accident at or about the site or in connection with in execution of the work report such accident to the Architect/ Consultant. The contractor shall also report immediately to the competent authority wherever such report is required to be lodged by the law and take appropriate actions thereof.

SPECIAL CONDITION OF CONTRACT

SCOPE OF WORK:

The scope of work is to carry out **PROPOSED CONSTRUCTION OF C.I. PIPING WORK (DUCT) FOR LHO SBI @ LAL DARWAJA, AHMEDABAD.** as defined in these documents.

1.0 Address of site:

The site is located at **STATE BANK OF INDIA, LHO BUILDING AT LAL DARWAJA, AHMEDABAD.**

Dimensions and levels

All dimensions and levels shown on the drawings shall be verified by the contractor on the site and he will be held responsible for the accuracy and maintenance of all the dimensions and the levels. Figured dimensions are in all cases to be accepted and no dimension shall be scaled. Large scale details shall take precedence over small-scale drawings. In case of discrepancy the contractor shall ask for clarification from the Architect/Consultant before proceeding with the work.

2.0 Notice of operation:

The contractor shall not carry out any important operation without the consent in writing from the Architect/Consultant.

3.0 Construction records:

The contractor shall keep and provide to the Architect/Consultant full and accurate records of the dimensions and positions of all new work and any other information necessary to prepare complete drawings recording details of the work as constructed.

4.0 Safety of adjacent structures and trees

The contractor shall provide and erect to the approval of the Architect/ Consultant such supports as may be required to protect effectively all structures and protective guards to trees which may be endangered by the execution of the works or otherwise take such permanent measures as may be required by the Architect to protect the trees and structures.

5.0 Temporary works:

Before any temporary works are commenced the contractor shall submit at least 7 days in advance to the Architect/Consultant for approval complete of

all temporary works he may require for the execution of the works. The contractor shall carry out the modifications relating to strength, if required by the Architect/Consultant may require in accordance with the conditions of contract at his own cost. The contractor shall be solely responsible for the stability and safety of all temporary works and unfinished works and for the quality of the permanent works resulting from the arrangement eventually adopted for their execution.

6.0 Temporary roads

The contractor shall provide access road to the site from the nearest main road at no extra cost and as directed by the Architect/Consultant. The contractor shall also responsible for proper maintenance of this access road and would take all care to see that existing services, if any, are maintained in working order at his own cost. The laying and maintaining the temporary roads within the site area shall be the contractor's responsibility and the contractor shall take such measures that are necessary and as directed by the Architect/Consultant.

7.0 Water, power, and other facilities:

a) The rate quoted by the contractor shall include all expenses that are required for providing all the water required for the work and the contractor shall make his own arrangements for the supply of good quality water suitable for the construction and good quality drinking water for their workers. If necessary The contractor has to sink a tube well/ open well and bring water by means of tankers at his own cost for the purpose. The SBI will not be liable to pay any charges in connection with the above.

b) The rate quoted in the tender shall include the expenses for obtaining and maintaining power connections and shall pay for the consumption charges.

c) The contractors for other trades directly appointed by the SBI shall be entitled to take power and water connections from the temporary water and power supply obtained by the contractor. However the concerned contractor shall make their own arrangements to draw the supply and pay directly the actual consumption charges at mutually agreed rates between them. All municipal charges for drainage and water connections for construction purposes shall

be borne by the contractor and charges payable for permanent connections, if any, shall be initially paid by the contractor and the SBI will reimburses the amount on production of receipts.

d) The SBI as well as the Architect/ Consultant shall give all possible assistance to the contractors to obtain the requisite, permission from the various authorities, but the responsibility for obtaining the same in time shall be of the contractor.

8.0 Office accommodation

a) The contractors shall provide and maintain all necessary offices, workshops, stores, shelters, sanitary facilities, canteens and other temporary structures for themselves in connections with the work at the site at their own cost after getting the approval from the Architect/ Consultant.

b) A site office for the use of SBI/ the Architect/ Consultant shall be provided by the contractors at his own expenses.

c) All temporary buildings and facilities as mentioned above shall be removed on completion of the work or at any other earlier date as directed by the contractors.

All the expenses for obtaining statutory approvals and maintenance of the above facilities as wall as running expenses shall be borne by the contractor at no extra cost. It is also the responsibility of the contractor to obtain statutory approvals for providing the above facilities

9.0 Facilities for Contractor's employees:

The contractor shall make his own arrangement for the housing and welfare of his staff and workmen including adequate drinking water facilities. The contractor shall also make the arrangement at his own cost for transport where necessary for his staff and workmen to and from site of work at his own cost.

10.0 Lighting of works:

The contractors shall at all times provide adequate and approved lighting as required for the proper execution and supervision and inspection of work.

11.0 Fire fighting arrangements:

i) The contractor shall provide suitable arrangement for fire fighting at his own cost. For this purpose he shall provide requisite number of fire extinguishers and adequate number of buckets, some of which are to be always kept filled with sand and some with water. These equipments shall be provided at suitable prominent and easily accessible places and shall be properly maintained.

ii) Any deficiency in the fire safety or unsafe conditions shall be corrected the contractor at his own cost and to the approval of the relevant authorities. The contractor shall make the following arrangements at his own cost but not limited to the following.

a) Proper handling, storage and disposal of combustible materials and waste.

b) Work operations which can create fire hazards

c) Access for fire fighting equipments.

d) Type, number and location of containers for the removal of surplus materials and rubbish.

e) Type, size, number and location of fire extinguishers or other fire fighting equipments.

f) General house keeping.

12.0 Site order book:

The Site order book shall be maintained at the site for the purpose of quick communication with the Architect/ Consultant. Any communication relating to the works may be conveyed through records in the site order book. Such a communication from one party to the other shall be deemed to have been adequately served in terms of contract. Each site order book shall have machine numbered pages in triplicates and shall carefully maintained

and preserved by the contractor and shall be made available to the Architect/ Consultant as an when demanded. Any instructions which the Architect/ Consultant may like to issue to the contactor or the contractors may like to bring to the Architect/ Consultant Two copies of such instructions shall be taken from the site order book and one copy will be handed over to the party against proper acknowledgement and the second copy will be retained for their record.

13.0 Temporary fencing/ barricading

The contactor shall provide and maintain a suitable temporary fencing/ barricading and gates at his cost to adequately enclose all boundaries of the site for the protection of the public and for the proper execution and security of the work and in accordance with the requirement of the Architect/ Consultant and regulations of local authorities. These shall be altered, relocated and adopted from time to time as necessary and removed on completion of the work.

14.0 Site meetings:

Site meetings will be held to review the progress and quality evaluation. The contactor shall depute a senior representative along with the site representative and other staff of approved sub-contractors and suppliers as required to the site meetings and ensure all follow up actions. Any additional review meetings shall be held if required by the Architect/ Consultant.

15.0 Disposal of refuse:

The contactor shall cart away all debris, refuse etc. arising from the work from the site and deposited the same as directed by the Architect/ Consultant at his own cost. It is the responsibility of the contactor to obtain approval from the local authorities concerned to the effect that all rubbish arising out of contractor's activities at the construction site or any other site activities borrow pits has been properly disposed off.

16.0 Contractor to verify site Measurements:

The contractor shall check and verify all site measurements wherever requested by other specialist contractors or other sub-contractos to enable them to prepare their own shop drawings and pass on the information with sufficient promptness as will not in any way delay the works.

17.0 Displaying the name of the work:

The contractor shall put up a name board of suitable size as directed by the Architect/ Consultant indicating the name of the project and other details as given by the Architect/ Consultant at his own cost and remove the same on completion of work.

18.0 Bar bending schedule:

The contractor shall prepare a detailed bar bending schedule for all reinforced concrete works and got them approved by the Architect/ Consultant well in advance.

19.0 As built drawings:

i) For the drawings issued to the contractor by the Architect/ Consultant. The Architect/ Consultant will issue two sets of drawings to the contractor for the items for which some changes have been made from the approved drawings as instructed by the SBI/ the Architect/ Consultant. The contractor will make the changes made on these copies and return these copies to the Architect/ Consultant for their approval. In case any revision is required or the corrections are not properly marked, the Architect/ Consultant will point out the discrepancies to the contractor. The contractor will have to incorporate these corrections and/or attend to discrepancies either on the copies as directed by the Architect/ Consultant and resubmit to him for approval. The Architect/ Consultant will return one copy duly approved by him.

ii) For the drawings prepared by the contractor,
The contractor will modify the drawings prepared by him wherever the changes are made by the SBI/ the Architect/ Consultant and submit two copies of such modified drawings to the Architect/ Consultant for approval. The Architect/ Consultant will return one copy of the approved drawing to the contractor.

20.0 Approved make:

The contractor shall provide all materials from the list of approved makes at his own cost and also appoint the specialized agency for the waterproofing, anti-termite, aluminum doors and windows and any other items as specified in the tender. The Architect/ Consultant may approve any make/ agency within the approved list as given in the tender after inspection of the sample/ mock up.

21.0 Procurement of materials:

The contractor shall make his own arrangement to procure all the required materials for the work. All wastages and losses in weight shall be to the contractor's account.

22.0 Excise duty, Taxes, Levies etc.

The contractor shall pay and be responsible for payment of all taxes, duties, levies, royalties, fees, cess or charges in respect of the works including but not limited to sale taxes, tax on works contract excise duty and octroi, payable in respect of material, equipments plant and other things required for the contract. All the aforesaid taxes, duties, levies, fees and charges shall be to the contractor's account and the SBI shall not be required to pay any additional or extra amount on this account. Variation of taxes, duties, levies, etc. if any, till completion of work shall be deemed to be included in the quoted rates and no extra claim on this account will in any case be entertained. If a new tax or duty or levy or cess or royalty or octroi is imposed under as statue or law during the currency of the contract/ work/ project the same shall be borne by the contractor.

23.0 Acceptance of tender:

The SBI shall have the right to reject any or all tenders without assigning any reason. They are not bound to accept the lowest or any tender and the tenderer or tenderers shall have no right to question the acts of the SBI. However adequate transparency would be maintained by the SBI.

24.0 Defects after virtual completion and defects liability period:

Any defect, shrinkage, settlement or other faults which may appear within the "Defects Liability Period" which shall be as per NIT from the date of the

virtual completion of the works, arising in the opinion of the Architect from materials or workmanship not in accordance with the Contract, shall upon the direction in writing of the Architect, and within such reasonable time as shall be specified therein, be amended and made good by the Contractor, at his own cost and in case of default then Bank may employ and pay other person/ agency to amend and make good such defects, shrinkage, settlement or other faults, and all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such damage, loss and expenses shall be recoverable from him by the Bank or may be deducted by the Bank, upon the Architect's certificate in writing, from any money due or that may become due to the Contractor, or the Bank may in lieu of such amending and marking good by the Contractor deduct from any money due to the Contractor a sum, to be determined by the Architect equivalent to the cost of amending such work and in the event of the amount retained under clause 1 of GCC hereof being insufficient, recover the balance from the Contractor, together with any expenses the Bank may have incurred in connection therewith. Should any defective work have been done or material supplied by any Sub-Contractor employed on the works, who has been nominated or approved by the Architect as provided in Clauses 15 of GCC the contractor shall be liable to make good in the same manner as if such work or material has been done or supplied by the Contractor and been subject to the provisions of this Contract. The Contractor shall remain liable under the provisions of this Contract not withstanding the signing of any Certificate or the passing of any accounts, by the Architect.

SAFETYCODES

SAFETY CODE

SCAFFOLDS

i) Suitable double type steel H frame scaffolds or suitable alternative arrangements shall be provided for workmen for all works that cannot be done safety from the ground, or from solid construction except in the case of short duration work which can be done safety from ladders. When a ladders is used, it shall be of rigid construction made either of good quality wood or

steel. The steps shall have a minimum width of 450 mm and a maximum rise of 300mm. Suitable hand holds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than ¼ to 1(1/4 horizontal and 1 vertical).

ii) Scaffolding or staging more than 4 m above the ground floor, swung or suspended from an overhead support or erected with a stationary support shall have a guard rail properly bolted, braced or otherwise secured, at least 1 m above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened so as to prevent it from swaying from the building or structure.

iii) Moving or Suspended type scaffolding specifications: Instead of Double type H frame steel scaffolding, if any Contractor desires to use suspended type of scaffolding or any other type of arrangement, they may do so but it should be supported by the full specifications, methodology and other relevant details in order to study and approve the same by the Consultant. No such arrangement of scaffolding will be altered unless the same is approved by the Consultant/Bank.

iv) Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally and if the height of the platform, gangway or stairway is more than 4 m above ground level or floor level, they shall be closely boarded and shall have adequate width and be suitably fenced as described in (ii) above.

v) Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1m.

Wherever there are open excavations in ground, they shall be fenced off by suitable railing and danger signals installed at night so as prevent persons slipping into the excavations.

vi) Safe means of access shall be provided to all working places. Every ladder Shall be securely fixed. No portable single ladder shall be over 9m in length while the width between side rails in rung ladder shall in no case, be less than

290mm or for ladder upto and including 3m in length. For longer ladders the width shall be increases at least 20mm for each additional metre of length.

OTHER SAFETY MEASURES

i) All personnel of the contractor working within the plant site shall be provided with safety helmets. The welder's goggles while welding works and all metal workers shall be provided with safety gloves. Persons employed in metal cutting and grinding shall wear safety glasses. For polymer application suitable hand gloves and other safety equipment/devices shall be provided.

ii) Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.

EXCAVATIONS & TRENCHING

i) All trenches, 1.25 m or more in depth shall at all times be supplied with at least one ladder each 3 m in length or fraction thereof. The ladder shall be extended from bottom of the trench to at least 1 m above the surface of the Ground, Sides of trenches which are 1.5 m or more in depth shall be stepped back to give suitable slope or securely held by timber bracing so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5m of the edges of the trench or half of the depth of the trench whichever is more. Undercutting shall be done.

ii) The Contractor shall take all measures on the site of the work to protect the public 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 any such persons or which may with the consent of the contractor, be paid to compromise any claim by any such person.

DEMOLITION.

i) Before any demolitions/chiseling/breaking work is commenced and also During the process of the work:

a) All roads, open areas adjacent to the work site shall be suitably protected as directed by providing covered sturdy shed for thoroughfare of the staff, customers and public.
b) No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.
c) All practical steps shall be taken to prevent danger to persons employed from the risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

PERSONNEL, SAFETY, EQUIPMENTS.

i) All necessary personal safety equipment as considered adequate by the Engineer should be kept available for the use of the person employed on the site and maintain in a condition suitable for immediate use and the contractor should take adequate steps to ensure proper use of equipment by those concerned.

a) Workers employed on mixing asphaltic materials, Cement and Chemicals/Polymer shall be provided with protective footwear, goggles and hand groves as per the requirements etc.

b) Those engaged in white washing and mixing or stacking of cement Bags or any materials shall be provided with protective goggles.
c) Those engaged in welding works shall be provided with welder's Protective eyesight lids.

d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

e) When workers are employed in sewers and manholes, which are in use, the contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into manholes and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public.

f) The contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form, Wherever men above the age of 18 are employed, on the work of lead painting the following precautions should be taken:

i. No paint containing lead or lead products shall be used except in the form of paste or ready made paint.

ii. Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scraped.

iii. Overalls shall be supplied by the contractor t the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.

iv. When the work is done near any public place where is risk of drawings all necessary equipments should 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.

HOISTING MACHINES

i) Use of hoisting machines and tackle including their attachments, anchorages and supports shall conform to the following standards or conditions:

1 a) These shall be of good mechanical constructions sound material and adequate strength and free from patent defect and shall be kept in good repair and in good working order.

b) Every rope used in hoisting or lowering materials or as means of suspensions shall be of durable quality and adequate strength and free from patent defects.

2 Every crane driver or hoisting appliance operator shall be properly Qualified and no person under the age of 21 years shall be in charge of any hoisting machine including scaffolding which or give signals to operators.

3 In case of every hoisting machine and of every chain ring hook, shackle Shovel and pulley block used in hoisting 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. In case of a hoisting machine having a variable safe working load, each 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.

4 In case of departmental machines, the safe working load shall be notified by the Engineer. As regards contractor's machine, the contractor shall notify the safe working load of the machine to he Engineer whenever he brings any machinery to site of work and get it verified by the Engineer concerned.

ii) Motors, gearing, transmission, electric wiring and other hoisting appliances Should be provided with such efficient safeguards, hoisting appliances should be provided as will reduce to the minimum of the risk of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary, should be provided. The workers should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

iii) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use.

iv) Adequate washing facilities should be provided at or near places of work.

v) These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

vi) To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer, Engineers of the Department or their representatives.

vii) Notwithstanding the above clause from (i) to (x vii), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

APPENDIX HEREIN BEFORE REFERRED TO

1) Name of the organization Offering Contract: The Circle Head &Vice President (Civil). SBIIMS, Circle Office, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-1

2) Consultants : **M/s L. J. Purani & Associates**

3) Site Address : SBI LHO building, Ahmedabad.

4) Scope of Work : Proposed C.I. Piping Work in duct Area of SBI, LHO building at Lal darwaja, Ahmedabad.

5) Name of the Contractor : ----------

---

6) Address of the Contractor : ----------

---

7) Period of Completion : 90 days from the date of Issue of work order.

8) Earnest Money Deposit : **Rs. 19000/- (Rupees Nineteen thousand only) by means of Demand Draft/Pay Order** (Valid for a period of 130 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn **in favour of State Bank of India and payable at Ahmedabad.**

9) Retention Money : As per clause no. 1 e of general Conditions

10) Defects Liability Period : Twelve Months from the date of Virtual Completion.

11) Insurance to be undertaken by the Contractor at his cost (Contractor's all risk policy) : 125% of Contract Value

12) Liquidated damages : 0.5% of the Contract amount shown in the tender per week subject to max. 5% of the contract value or actual final bill value.

13) Value of Interim Bill (Min.) **:** Rs. 10 Lacs. No advance on materials / plant / machinery or mobilization advance shall be paid under any circumstances.

14) Date of Commencement : From the date of work order issued to the Contractor/ or the day on which the Contractor is instructed to take possession of the site whichever is earlier.

15) Period of Final Measurement : 2 Months from the date of Virtual Completion.

16) Initial Security Deposit : 2% of the Accepted Value of the Tender.

17) Total Security Deposit : 5% of the final bill amount including ISD.

18) Refund of initial Security Deposit
Comprising of EMD and ISD. : 50% of the Security Deposit

Shall be refunded to the Contractor on completion of the work and balance refunded only after the Defect Liability Period is over.

19) Period for Honoring Certificate : One Month for R.A.Bills

20) The final bill will be submitted by the Contractor within one month of the date fixed for completion work and the Bill shall be certified within 3 months from the date of receipt of final bill provided the bills are submitted with all pre-requisite documents/test reports etc. prescribed in the tender.

_____

Signature of Tenderer.

Date:

LETTER OF DECLARATION

To,
The C.H. & V.P., Circle Office,
SBI Infra Management Solutions Pvt. Ltd., Third Floor, SBI, LHO,
Bhadra, Laldarwaja,
Ahmedabad-1

Dear Sir,

PROPOSED CONSTRUCTION/ RENOVATION OF C.I. PIPING WORK AND REPAIR IN DUCT AREA OF SBI, LHO BUILDING AT LAL DARWAJA, AHMEDABAD

Having examined the terms & conditions, drawings, specifications, design relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto and affecting the quotation, I/We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum on the item rate basis mentioned in the attached schedule and in accordance in all respect with the specifications, design, drawings and instructions in writing referred to in conditions of Tender, the articles of agreement, conditions of contract and with such conditions so far as they may be applicable.

MEMORANDUM

(a)	Description of work	Proposed C.I. Piping Work in duct Area of SBI, LHO building at Lal darwaja, Ahmedabad.
(b)	Earnest Money	**Rs. 19,000/- (Nineteen Thousand only) by means of Demand Draft / Pay Order** (Valid for a period of 180 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn **in favour of State Bank of India and payable at Ahmedabad.**
(c)	Time allowed for completion of work from the date of issue of work order.	90 days from the date of commencement as per tender.

Should this tender be accepted, I/we hereby agree to abide by and fulfill the terms and provisions of the said conditions of Contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to SBIIMS, the amount mentioned in the said conditions.

I/we have deposited Demand Draft / Banker's Cheque / FDR for a sum of **Rs. 19,000/- (Rupees Nineteen thousand only)** as Earnest money deposit with the SBI Infra Management Solutions Pvt. Ltd. Should I/we do fail to execute the contract when called upon to do so, I/we hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd.

We understand that as per terms of this tender, the SBIIMS may consider accepting our tender in part or whole or may entrust the work of various buildings proposed (i.e. Institute Building, Staff Qtrs. And Director's Bungalow/Interior work) in phases. We, therefore, undertake that we shall not raise any claim/compensation in the eventuality of Bank deciding to drop any of the building/buildings from the scope of work of this tender at any stage during the contract period. Further, we also undertake to execute the work entrusted to us in phases on our approved rates and within the stipulated time limit without any extra claim for price escalation as provided for in Clause 9.0.1 "Instructions to Tenderers" of this tender.

We, hereby, also undertake that, we will not raise any claim for any escalation in the prices of any of the material during the currency of contract/execution/completion period.

Yours faithfully,

Signature of contractor With Seal

PROFORMA FOR RUNNING A/C BILL

TABLE - XIII

i. Name of Contractor/ Agency :

ii. Name of Work :

iii. Sr. No. of this Bill:

iv. No. & Date of previous Bill :

v. Reference to Agreement No. :

vi. Date of Written order to commence :

vii. Date of Completion as per Agreement :

SR.No	Item Description	Unit	Rate (Rs.)	As per Tender		Up to Previous R.A. Bill		Up to Date (Gross)		Present Bill		Remarks
				Qty	Amount (Rs.)	Qty	Amount (Rs.)	Qty	Amount (Rs.)	Qty	Amount (Rs.)	
1	2	3	4	5	6	7	8	9	10	11	12	13

Note:

1.	If part rate is allowed for any items, it should be indicated with reasons for allowing such a rate.	_____ _____ Net Value since previous bill
2.	If ad-hoc payment is made, it should be mentioned specifically.	

CERTIFICATE

The measurements on the basis of which the above entries for the Running Bill No. ---- ---------- were made have been taken jointly on ---------- and are recorded at pages ---------- to ---------- of measurement book No.- ----------.

----------	----------	----------
Signature and date of Contractor	Signature and date of Architects Representative (Seal)	Signature and date of Site Engineer

The work recorded in the above-mentioned measurements has been done at the site satisfactorily as per tender drawings, conditions and specifications.

----------	----------
Architect	Signature and date of Site Engineer

TABLE - XV

MEMORANDUM FOR PAYMENT

R/A BILL NO.

1.	Total value of work done since previous bill (A)	Rs.....
2.	Total amount of secured advance due since Previous Bill (B)	Rs.....
3.	Total amount due since Previous Bill (C) (A+B)	Rs.....
4.	PVA on account of declaration in price of Steel, Cement and other materials and labour as detailed in separate statements enclosed.	Rs.....
5.	Total amount due to the Contractor	Rs.....
	OBJECTIONS:	
i)	Secured Advance paid in the previous R/A	Rs.....
ii)	Retention money on value of works as per accepted tenders up to date amount Rs.	Rs.....
	Less already recovered	Rs.....
	Balance to be recovered	Rs.....
iii)	Mobilization Advance, if any	Rs.....
(a)	Outstanding amount (principal + interest) as on date	Rs.....
(b)	To be recovered in this bill	Rs.....
iii.	Any other Departmental materials cost to be recovered as per contract, if any	Rs.....
iv.	Any other Departmental service charges to be recovered if any, as per contract (water, power etc.) enclose Statement.	Rs.....

The bill amount to Rs. ---------- (both figures and words) has been scrutinized by us after due checking of the measurements of work as required and is recommended for payment.

Date:----------

Signature of Architect with Seal

The bill amount to Rs.----------certified by Consultants has been scrutinized by me after due test checking of measurements of works as required and is recommended for payment for an amount of Rs.....

Date : ----------

Signature of Banks/ SBIIMS Engineer

	STATUTORY DEDUCTION:	
i)	Total Amount due (E)	Rs. ----------
ii)	Less I.T. Payable	Rs. ----------
iii)	Less S.T. Payable	Rs. ----------
	Net Payable	Rs. ----------

This figures given in the Memorandum for payable has been verified and bill passed for payment ---------- (in words and figures)

Date:----------

Signature of the Circle Head & VP

TECHNICAL SPECIFICATION

Specifications for Civil & Plumbing Works

MATERIALS:

M-1 Water:

Water shall not be salty or brackish and shall be clean, reasonably clear and free objectionable quantities of silt and traces of oil and injurious alkalis, salts, organic matter and other deleterious material which will either weaken the mortar or concrete or cause efflorescence or attack the steel in R.C.C Container for transport, storage and handling of water shall be clean. Water shall conform to the standards specified in I.S.456-1978.

If required by the Engineer-in-charge it shall be tested by comparison with distilled water. Comparison shall be made by means of standard cement tests for soundness, time of setting and mortar strength as specified in I.S.269-1976. Any indication of unsoundness, change in time of setting by 30 minutes or more or decrease of more than 10 per cent in strength of mortar prepared with water sample when compared with the results obtained with mortar prepared with distilled water shall be sufficient cause for rejection of water under test.

Water for curing mortar, concrete or masonry should not be too acidic or too alkaline. It shall be free of elements which significantly affect the hydration reaction or otherwise interfere with the hardening of concrete during curing or those which produce objectionable stains or other unsightly deposits on concrete or mortar surfaces.

Hard and bitter water shall not be used for curing.

Portable water will be generally found suitable for curing mortar or concrete.

M-2. Lime:

Lime shall be hydraulic lime as per I.S. 712-1973. Necessary test shall be carried out as per I.S. 6932 (Parts I to X), 1973.

The following field tests for limes are to be carried out:

A very rough idea can be formed about the type of lime by its visual examination i.e. fat lime bears pure white colour, lime in form of porous lumps of dirty while colour indicates quick lime, and solid lumps are the unburnt lime stone.

Acid tests for determining the carbonate content in lime, Excessive amount of impurities and rough determination of class of lime.

Storage shall comply with I.S. 712-1973. The slaked lime, if stored, shall be kept in a weather proof and damp-proof shed with impervious floor and sides to protect it against rain, moisture, weather and extraneous materials mixing with it. All lime that has been damaged in any way shall be rejected and all rejected materials shall be removed from site of work.

Field testing shall be done according to I.S. 1624-1974 to show the acceptability of materials.

M-3. Cement:

Cement shall be ordinary Portland slag cement as per I.S. 269-1976 or Portland slag cement as per I.S. 455-1976.

M-4. White Cement:

The white cement shall conform to I.S. 80412-E 1978.

M-5. Coloured Cement:

Coloured cement shall be with white or gray Portland cement as specified in the item of the work.

The pigments used for coloured cement shall be of approved quality and shall not exceed 10% of cement used in the Mix. The mixture of pigment shall be properly grounded to have a uniform colour and shade. The pigments shall have such properties to provide for durability under exposure to sunlight and weather.

The pigment shall have the property such that it is neither by the cement nor detrimental to it

M-6. Sand:

Sand shall be natural sand, clean, well graded, hard strong durable and gritty particle free from injurious amounts of dust clay, kankar nodules, soft or flaky particles shale, alkali, salts organic matter, loam, mica or another deleterious substance and shall be got

approved from the Engineer-in-charge. The sand shall not contain more than 8 percent of silt as determined by field test. If necessary the sand shall be washed to make it clean.

Coarse Sand: The fineness modulus of coarse sand shall not be less than 2.5 and shall not exceed 3,0.

The sieve analysis of coarse shall be as under:

I.S.Sieve	**Percentage by weight**	**I.S.Sieve**	**Percentage by weight**
Designation	Passing Sieve	Designation	Passing Sieve
4.75 mm.	100	600 Micron	30-100
2.36 mm.	90 to 100	300 Micron	5-70
1.18 mm.	70-100	150 Micron	0-50

6.3 **Fine Sand:**The fineness modulus shall not exceed 1.0. The sieve analysis of fine sand shall be as under:

I.S.Sieve	**Percentage by weight**	**I.S.Sieve**	**Percentage by weight**
Designation	Passing Sieve	Designation	Passing Sieve
4.75 mm.	100	600 Micron	40-85
2.36 mm.	100	300 Micron	5-50
1.18 mm.	70-100	150 Micron	0-10

M-7. Stone Dust :

7.1. This shall be obtained from crushing hard black trap or equivalent. It shall not contain more than 8% of silt as determined by field test with measuring cylinder. The method of determining silt contents by field test is given as under :

7.2. A sample of stone dust to be tested shall be placed without drying in 200 mm. measuring cylinder. The quantity of the sample shall be such that it fills the cylinder upto100 mm. mark. The clean water shall be added upto 150 mm. mark. The mixture shall be stiffed vigorously and the content allowed to settle for 3 hours.

7.3. The height of silt visible as settled layer above the stone dust shall be expressed as percentage of the height of the stone dust below. The stone dust containing more than 8% silt shall be washed so as lowering the silt content within the allowable limit.

7.4. The fineness modulus of stone dust shall not be less than 1.80.

M-8. Stone Grit:

8.1. Grit shall consist of crushed or broken stone and be hard strong, dense, durable, clean, of proper gradation and free from skin or coating likely to prevent adhesion of mortar Grit shall generally be cubical in shape and as far as possible flaky elongated pieces shall be avoided. It shall generally comply with the provisions of I.S. 383-1970. Unless special stone of particular quarries is mentioned, grit shall be obtained from the best black trap or equivalent hard stone as approved by the Engineer-in-charge. The grit shall have no deleterious reaction with cement.

8.2. The grit shall conform to the following gradation as per sieve analysis:

I.S.Sieve	**Percentage by weight**	**I.S.Sieve**	**Percentage by weight**
Designation	through Sieve	Designation	through Sieve
12.50 mm.	100%	4.75 mm.	0-20%
10.00 mm.	85-100%	2.36 mm.	0-25%

8.3. The crushing strength of grit will be such as to allow the concrete in which it is used to used to built up the specified strength of concrete.

8.4. The necessary tests for grit shall carried out as per the requirements of I.S.2386(Parts I to VII) 1963, as per instructions of the Engineer-in-charge. The necessity of test will be decided by the Engineer-in-charge. The necessity of test will be decided by the Engineer-in-charge.

M-9. Cinder :

9.1 Cinder is well burnt furnace residue, which has been fused or sintered into lumps of varying sizes.

9.2 Cinder aggregates shall be well burnt furnace residue obtained from furnace using coal fuel only. it shall be sound clean free from clay, dirt ash or other deleterious matter.

9.3 The average grading for cinder aggregates shall be as mentioned below :

I.S.Sieve Designation	Percentage passing	I.S.Sieve Designation	Percentage passing
20 mm.	100	4.75 mm.	70
10 mm.	86	2.36 mm.	52

M-10. Lime Mortar :

10.1. Lime shall confirm to specification M-2 Water shall conform to specification M-1.

Sand: Sand Shall conform to specification M-6.

10.2. Proportion of Mix : 10.2.1. Mortar shall consist of such proportions of slaked lime and sand as may be specified in the item. The slaked lime and sand be measured by volume.

10.3. Preparation of Mortar :

10.3.1. Lime mortar shall be prepared by wet process as per I.S. 1625-1971. Power driven mill shall be used for preparation of lime mortar. The slaked lime shall be placed in the mill in an even layer and ground for the 180 revolutions with a sufficient water. Water shall be added as required during grinding (care being taken not to add more water) that will bring the mixed material to a consistency of stiff paste. Thoroughly wetted sand shall then be added evenly and the mixture ground for another 180 revolutions.

10.4. Storage : 10.4.1 Mortar shall always be kept damp, protected form sum and rain till used up , covering it by tarpaulin or open sheds.

10.5. Use : 10.5.1 All mortar shall be used as soon as possible after grinding it should be used on the day on which it is prepared. But in no case mortar made earlier than 36 hours shall be permitted for use.

M-11. Cement Mortar:

11.1 Water shall conform to specification M –1. Cement. Cement shall conform to specification M- 3.

Sand: Sand shall conform to M-6

11.2 Preparation of Mix :11.2.1 Cement and shall be mixed to specified proportion, sand being measured by measuring boxes. The proportion of cement will be by volume on the basic of 50 kg / Bag of cement being equal to 0.0342 Cu.m. The mortar may be hand mixed or machine mixed as directed.

11.3 Preparation of mortar : 11.3.1 In hand mixed mortar cement and sand in the specified proportions shall be thoroughly mixed dry on a clean impervious platform by turning over at least 3 times or more till a homogenous mixture of uniform colour is obtained.,

Mixing platform shall be so arranged that no delirious extraneous material shall get mixed with mortar or mortar shall be gradually added and thoroughly mixed to form a stiff plastic mass of uniform colour so that each particle of sand shall be completely covered with a film of wet cement. The water cement ratio shall be adopted as directed.

11.3.1 The mortar so prepared shall be used within 30 minutes of adding water Only such quantity of mortar shall be prepared as can be used within 30 minutes.

M-12 Stone Coarse Aggregate For nominal Mix Concrete :

12.1 Coarse aggregate shall be machine crushed stone of black trap or equivalent and be hard, strong m dense, durable clean and free form skin and coating likely to prevent proper adhesion for mortar.

12.2 The aggregate shall generally be cubical in shape. Unless special stones of particular quarries are mentioned aggregates shall be machine crushed from the best black trap or equivalent hard stone as approved. Aggregate shall have no deleterious reaction with cement. The size of the coarse aggregate for plain cement concrete and ordinary reinforced cement concrete shall generally be as per the table given below. However in case of reinforced cement concrete the maximum limit may be restricted to 6 mm. less than the minimum lateral clear distance between bars or 6 mm. less than the cover, Whichever is smaller.

TABLE

l.s.sieve	percentage passing for single sized aggregates of nominal size			I.S.Sieve Designation sized	Percentage passing for single aggregates of Nominal size		
80 mm.	--	--	--	12.5 mm.	--	--	--
63 mm.	100	--	--	10 mm.	0.5	0.02	0.30
40 mm.	85-100	100	--	4.75 mm	--	0.5	0.5
20 mm.	0-20	85-100	100 mm.	2.35	--	--	--
15 mm.	--	--	85-100				

NOTE: This percentage may be carried some what by Engineer-in-charge when considered necessary for obtaining better density and strength of concrete.

12.3. The grading test shall be taken in the beginning and at the change of source of materials. The necessary test indicated in I.S. 383-1970 and I.S. 456-1978 shall have to be carried out to ensure the acceptability. The aggregates shall be stores separately and handled in such a manner as to prevent the intermixing of different aggregates. If the aggregates. are covered with dust, they shall be washed with water to make them clean.

M-13. Brick Bats Aggregate :

13.1 Brick bat aggregate shall be broken from well burnt or slightly over burnt and dies brick. It shall be homogeneous in texture roughly cubical shape, clean and free from dirt of any other foreign material. The brick bats shall be of 40 mm. to 50 mm. size unless otherwise specified in the item. The unburnt or over burnt brick bats shall not be allowed.

13.2 The brick bats shall be measured by volume by suitable boxes or as directed.

M-14 Bricks :

14.1 The bricks shall be hand or machine moulded and made from suitable soils and kiln-burnt. They shall be free from crack and nodules of free lime. They shall have smooth rectangular faces with sharp corners and shall be of uniform colour. The bricks shall be moulded with a frog of 100 mm. X 40 mm. and 10 mm. to 20 mm. deep on one of its flat sides. The bricks shall not break when thrown on the ground from a height of 600 mm.

14.2 The size of modular bricks shall be 190 mm. X 90 mm. X 90 mm.

14.3 The size of the conventional bricks shall be as under : (9″x$4\frac{3}{8}$″ x $2\frac{3}{4}$″)225 x 110 x 75 mm.

14.4 Only bricks of one standard size shall be used on one work. The following tolerances shall be permitted in the conventional size adopted in a particular work. Length : 1.8 (3.0 mm.) Width : 1/6 ″ (1.51 mm.) Height : 1/6″ 1.50 mm.)

14.5 The crushing strength of the bricks shall not be less than 35 Kg./Sq.Cm. The average water abscriptics shall not be more than 20 prevent by weight. Necessary tests for crushing strength and water absorption etc. shall be carried out as per I.S. .3493 (Part-I to IV) 1976.

M-15. Mild Steel Bars :

15.1 Mild steel bars reinforcement for R.C.C work shall conform to I.S. 432(Part-II) 1966 and shall be tested quality. It shall also comply with relevant part of I.S. 456-1978.

15.2 All the reinforcement shall be clean and free from dirt, paint, grease, mile scale or loose or thick rust at the time of placing.

15.2.1 For the purpose of payment, the bar shall be measured correct upto 100 mm. length and weight payable worked out at the rate specified below :

1.	6mm. x 0.22 Kg./Rmt		8.20mm.2.47 Kg./Rmt
2.	8mm. x 0.39 Kg./Rmt.	9.	22mm. 2.98 Kg./Rmt
3.	10mm x 0.62 Kg./Rmt	10.	25mm. 3.85 Kg./Rmt
4.	12mm x 0.89 Kg./Rmt	11.	28mm. 4.83 Kg./Rmt
5.	14mm x 1.21 Kg./Rmt	12.	32mm. 6.31 Kg./Rmt
6.	16mm x 1.58 Kg./Rmt	13.	36mm. 7.99 Kg./Rmt
7.	18mm x 3.00 Kg./Rmt	14.	40mm 9.86 Kg./Rmt.

M-16. High yield Strength Steel Deformed Bars :

16.1 High yield strength steel deformed bars are either cold twisted or hot rolled, shall conform to I.S. 1739-1966 and I.S.1139-1966 respectively.

16.2 Other provision and requirements shall conform to specification NO. M-18 for Mild steel bars.

M-17. High Tensile Steel Wire:

17.1 The high tensile wires for the use in prestressed concrete work shall conform to I.S. 2090-1962.

17.2 The tensile strength of the high tensile steel bars shall be as specified in the item. In absence of the given strength, the minimum strength shall be taken as per para 6.1 of I.S. 1785-1962. Testing shall be done as per I.S. requirements.

17.3 The high tensile steel shall be free from loose mill scale, rust oil, grease, or any other harmful matter, Cleaning of steel bars may be carried out by immersion in solvent solution, wire brushing or passing through a pressure box containing carborundum.

17.4 The high tensile wire shall be obtained from manufactures in coil having diameter not less than 350 times the diameter of wire itself so that wire springs back straight back straight on being uncoiled.

M-18. Mild Steel Binding Wire :

18.1 The mild steel wire shall be of 1.63 mm or 1.22 mm. (16 or 18 gauge) diameter and shall conform to I.S. 280-197.

18.2 The use of black wire be permitted for binding reinforcement bars. It shall be free from rust, Oil paint, grease, looser mile scale or any other undesirable coating which may prevent adhesion of cement mortar.

M-19. Structural Steel :

19.1 All structural steel shall conform to I.S. 226-1965. The steel shall be free from the defects mentioned in I.S. 226-1975 and shall have a smooth finish. The material shall have a smooth finish. The material shall be free from loose mile scale, rust pits or other defects affecting the strength and durability. Rivet bars shall conform to I.S. 1148-1973.

19.2 When the steel is supplied by the Contractor test certificates of the manufactures shall be obtained according to I.S. 226-1975 and other relevant Indian Standards.

M-20. Galvanised Iron Sheets :

20.1 The galvanised iron sheets shall be plain or corrugated sheets of specified in item. The G.I. sheets shall conform it I.S. 217-1977. The sheets shall be undamaged in carriage and handling either by rubbing off of zinc coating or otherwise they shall have clean and bright surface and shall be as directed as per site condition.

20.2 The length and width of G.I. sheet shall be as directed as per site condition.

M-21. Asbestos Cement Sheets :

21.1 Asbestos cement sheets plain, corrugated or semi corrugated shall conform to I.S. 459-1970.

21.2 Ridges & Hips :

21.2.1 Ridges and hips shall be same thickness at that of A.C.sheets. The types of ridges suitable for the type of sheets and locations.

21.2.2 Other accessories to be used in roof such as flashing pieces, caves filler pieces valley gutters, north light and ventilator curves, barge boards etc. shall be standard manufacture and shall be suitable for the type of sheets and location.

M-22. Shuttering :

22.1 The shuttering shall be either of widen planking of 30 mm. minimum thickness with or without steel lining roof steel plates stiffened by steel angles. The shuttering shall be supported on battens and beams and props of vertical bellies properly cross braced together so as to make the centering rigid. In places of bully props, brick pillar of adequate section built in mud mortar may be used.

22.2 The form work shall be sufficiently strong and shall have camber, so that it assumes correct shape after deposition of the concrete and shall be able to resist forces caused by vibration of live load of men working over it and other incidental loads associated with it. The shuttering shall have smooth and even surface and its joints shall not permit leakage of cement grout.

22.3 If at any stage of work during or after placing concrete in the structure, the form work sags or bulges out beyond the required shape of the structure, the concrete shall be removed and work redone with fresh concrete and adequately rigid form work. The complete from work shall be got inspected by and got approved from the engineer-in-charge, before the reinforcement bars are placed in position.

22.4 The props shall consist of bullies having 100 mm. minimum diameters measured at mix length and 80 mm, at thin end and shall be placed as per design requirement. These shall rest squarely on wooden sole plates 40 mm. thick and minimum bearing area if 0-10 sq. m. laid on sufficiently hard base.

22.5 Double wedges shall further be provided between the sole plate and the wooden props so as to facilitate tightening and easing of shuttering without jerking the concrete.

22.6 The timber used in shuttering shall not be so dry as to absorb water from concrete and swell or bulge nor so green or wet as to shrink after erection. The timber shall be properly sawn and planed on the sides and surface coming in contact with concrete. Wooden from work with metal sheet lining or steel plates stiffened by steel angles shall be permitted.

22.7 As far as practicable, clamps shall be used to hold the forms together and use of nails and spikes avoided.

22.8 The surface of timber shuttering that would come in contact with concrete shall be well wetted and coated with soap solutions before the concreting is done. Alternatively coat of raw linseed oil or oil of approved manufacturer may be applied in place of soap solution. In case of steel shuttering either soap solution or raw linseed oil shall be applied after thoroughly cleaning the surface. Under no circumstances black or burnt oil shall be permitted.

22.9 The shuttering for beams and slabs shall have camber of 4 mm. per meter (1 to 250) or as directed by the Engineer-in-charge so as to offset the subsequent deflection. For cantilevers, The camber at free end shall be 1/50 of the projected length or as directed by the Engineer-in-charge.

M-23. Welded Steel Wire Fabric:

23.1 Welded steel wire fabric for general purpose shall be manufactures from cold drawn steel wire "as drawn" or galvanised steel conforming to I.S. 226-1975 with longitudinal and transverse wire securw4ely connected at every intersection by a process of electrical resistance welding and conforming to I.S. 4948-1974. It shall be fabricated and finished in workmanlike manner and shall be free from injurious defects and shall be rust proof. The type of mesh shall be oblong or square as directed. The mesh sizes and size of wire for square as well as oblong welded steel wire fabric shall be as directed. The steel wire fabric in panels shall be in one whole piece in each panel as far as stock size permit.

M-24. Acrylic Sheets :

24.1 Acrylic sheet be of thickness as specified in the item and of an specified shape and size as the case may be. Panels may be flat or curved . It should be light in weight. It shall be colourless or coloured or opaque as specified in the item. Colourless sheet shall be as transparent as the finest optical glass. Its light transmission rate shall be about 95%. Transparency shall not be affected for the sheets of larger thickness. It shall be extremely resistant to sunlight, weather and low temperatures. It shall not show any significant yellowing or change in physical properties or loss of light transmission over a longer period of use. The sheet shall be impact resistant also. Sheets should be available in complete range of standard transparent, translucent and opaque colours. Sheets shall be of

such quality that they can be cut bent and jointed as desired. Solution for the joints shall be used as per the requirement of manufacturer.

M-25. Fixtures and fastenings :

25.1 General

25.1.1 The fixtures and fastenings, that is, butt, hinges, tee and strap hinges sliding door bolts, tower bolts, door latch, bath room latch, handles, door stoppers, casement window fasteners, casement stays and ventilators catch shall be made of the metal as specified in the item or its specifications.

25.1.2 They shall be of iron, bras, aluminium, chromium plated iron chromium plated brass, copper oxidised iron, copper oxidised brass or anodized aluminium as specified.

25.1.3 The fixtures shall be heavy, Medium or light type. The fixtures and fastenings shall be smooth finished and shall be such as will ensure ease of operation.

25.1.4 The samples of fixtures and fastenings shall be got approved as regards quality and shape before providing them in position.

25.1.5 Brass and anodised aluminium fixtures and fastenings shall be bright finished.

25.2 Holdfasts :

25.2.1 Holdfasts shall be made from mild steel flat 30 cm. length and one of the holdfasts shall be bent at right angle and two nos. of 6 mm. diameter holes shall be made in it for fixing it to the frame with screws. At the other end. The holdfast shall be forked and bent at right angles n opposite directions.

25.3 Butt hinges :

25.3.1 Railway standard heavy type butt hinges shall be used when so specified.

25.3.2 The strap hinges shall be manufactured from M. S. Sheet.

25.4 Siding door bold (Aldrops): 43 The Aldrops as specified in the item shall be used and shall be got be got approved.

25.5 Tower bolts (Barrel Type):43.5.1 : Tower bolts as specified in the item shall be used as shall be used and shall be got approved.

25.6 Door Latch:**43.7.1**The size of door latch shall be taken as the length of latch.

25.7 Bathroom Latch :43.5.1 Bathroom latch shall be similar to tower bolt.

25.8 Handle : The size of the handles shall be determined by the inside grip length of the handles. Handles shall have a base plate of length 50 mm more than size of the handle.

25.9 Door Stopper: 43.9.1 door stoppers shall be either floor door stopper type or door catch type floor stopper shall be of overall size as specified as shall have rubber cushion.

25.10 Door Catch :43.10.1 Door catch shall be fixed as height of about 900 mm from the floor level so that one part of the catch is fitted on the inside of the shutter and the other part is fixed in the wall with necessary wooden plug arrangements for appropriate fixate. The catch shall be fixed 20 mimesed the face of the door for easy operation of catch.

25.11 Wooden Door stop with highs :

25.11.1wooden door stop of size 100mm X 60 mm X 40 mm shall be fixed on the door frame with a high of 75 mm size at high of 900 mm from the floor level the wooden door stop shall be provided with 3 coats of approve oil paint.

25.12 Case meant window fastener : Casement window fastener for single leaf window shutter shall be left or right handled as directed.

25.13 Casement stays (straight peg stay) :

25.13.1 The stays shall be made from a channel section having three holes at appropriate position so that the window can be opened either fully or partially as directed as directed. size of the stay shall be 250 mm to 300 mm as directed.

25.14 Ventilator catch :

25.14.1 The pattern and shape of the catch shall be as approved .

25.15 Pivot :

25.15.1 The base and socket plate shall be made form minimum 3 mm thick plate and projected pivot shall not be less than 12 mm length and shall be firmly riveted to the base plate in case of brass pivot.

M-26. Flooring Tiles :

26.1. (A) Plain Cement tiles :

26.1.1 The plain cement tiles shall be general purpose type. These are the tiles in the manufacturer of which no pigments are used Cement used in the manufacturer of tiles shall be as per Indian Standards.

26.1.2 The tiles shall be manufactured from a mixture of cement and natural aggregates by pressure process. During manufacture, the tiles shall be subjected to a pressure of not less than 140 Kg/Sq. Cm. The proportion of cement to aggregate in the backing of the tiles shall be not

less than 1:3 by weight. The wearing face through the tiles are of plain cement, shall be provided with stone chips of 1 to 2 mm. Size. The proportions of cement to the marble chips aggregate in the wearing layer of the tiles shall be three parts of cement to one part chips by weight. The minimum thickness Of wearing layer shall be 3 mm. The colour and texture of wearing layer shall be uniform through out its face and thickness. On removal from mould, the tiles shall be kept in moist conditions continuously at least for seven days and subsequently, if necessary, for such long period as would ensure their conformity to requirements of I.S. : 1237-1980 regarding strength resistance to wear and water absorption.

26.1.2 The wearing face of the tiles shall be plain, free from projections, depressions and cracks and shall be reasonably parallel to the back face of the title. All angles shall be right and all edges shall be sharp and true.

26.1.3 The size of tiles shall generally be square shape 24.85 Cm. x 24.85 Cm. or 25 Cm. x25 Cm. The thickness of tiles shall be 20 mm.

26.1.4 Tolerance of length and breadth shall be plus or minus one millimeter, Tolerance or thickness shall be plus 5 mm.

26.1.5 The tiles shall satisfy the tests as regards transverse strength, resistance to wear and water absorption as per I.S.:1237-1980.

26.2 (B) Plain Coloured Tiles :

26.2.1 These tiles shall have the same specification as per plain cement tiles as per (A) above except that they shall have a plain wearing surface where in pigments are used. They shall conform to I.S. 1237-1980.

26.2.2 The pigment used for colouring cement shall not exceed 10 percent by weight of cement used in the mix. The pigments, synthetic or otherwise, used for colouring tiles shall have permanent colour and shall not contain materials detrimental to concrete.

26.2.3 The colour of the tiles shall be specified in the item or as directed.

26.3 (C) Marble mosaic tiles :

26.3.1 These tiles have the same specifications as per plain cement tiles except the requirements as stated below:

26.3.2 The marble mosaic tiles shall conform to I.S. 1237-1980. The wearing face of the tiles shall be mechanical ground and filled. The wearing face of tiles shall be free from projections, depressions and cracks and shall be reasonably parallel to the back face of the tiles. All angles shall be right angles and all edges shall be sharp and true.

26.3.3 Chips used in the tiles be from smallest up to 20 mm. size. The minimum thickness of wearing layer of tiles shall of 6 mm. For pattern of chips to be used on the wearing face, a few samples with or without their full size photographs as directed shall be presented to the Engineer-in-charge for approval.

26.3.4 Any particular samples, If found suitable shall be approved by the Engineer-in-charge, or he may ask for a few more samples to be prepared indicating roughly the particular sized chips to be more or less in the samples presented. The samples have to be made by the contractor till a suitable sample is finally approved for use in the work.

The Contractor shall ensure that the tiles supplied for the work shall be in conformity with the approved sample only, in terms of its dimensions, thickness of backing layer and wearing surface, materials, ingredients, colour shade, chips, distribution etc. required.

26.3.5 The tiles shall be prepared from cement conforming to Indian Standards or coloured Portland cement generally depending upon the colour of tiles to be used or as directed

26.4 (D) Chequred Tiles:

26.4.1 Chequred tiles shall be plain cement tiles or marble mosaic tiles. The former shall have the same specification as per (A) above and the letter as per marble mosaic tiles as per (C) except as mentioned below :

26.4.2 The tiles shall be of nominal size of 250 mm. x 250 mm. or as specified. The center to center distance of chequer shall not be less than 25 mm. and not more than 50 mm. The overall thickness of the tile shall be 22 mm.

26.4.3 The grooves in the chequers shall be uniform and straight. The depth of the grooves shall not be less than 3 mm. The chequred shall be plain, coloured or mosaic as specified. The thickness of the upper layer measured from the top of the chequres shall not be less than 6 mm. The tiles shall be given the first grinding with machine before delivery to site.

26.4.4 Tiles shall conform to relevant I.S. 1237-1980.

26.5 (E) Chequred Tiles for Stair cases :

26.5.1 The requirements of these tiles shall be the same as chequred as per (D) above except in following respects;

(1) The length of a tile including nose shall be 330 mm.

(2) The minimum thickness shall be 28 mm.

(3) The noising shall have also the same wearing layer as at the top.

(4) The nosing edge shall be rounded.

(5) The front portion of the tile for a minimum length of 75 mm. from and including the nosing shall grooves running parallel to noising and at center not exceeding 25 mm. Beyond that the tiles shall have normal chequer pattern.

M-27. White glazed tiles :

27.1 The tiles shall be of best quality as approved by the Engineer-in-charge. They shall be flat and true to shape. They shall free from cracks , crazing, spots chipped edges and corners. The glazing shall be of uniform shade.

27.2 The tiles shall be nominal size of 150 mm x 150 mm. unless otherwise specified. The maximum variation from the stated sizes, other than the thickness of tile, shall be plus or minus 1.5 mm. The thickness of tile shall be 6 mm. Except as above the tiles shall conform to I.S. 777-1970.

M-28. Galvanised iron pipes and fittings :

28.1. Galvanised iron pipe shall be of the medium type and of required diameter and shall comply with I.S. 1239-1979. The specified diameter of the pipes shall refer to the inside diameter of the bore, Clamps, screw and all galvanised iron fittings shall be of the standard 'R' or equivalent make.

M-29. Bib cock and stop cock :

29.1 A bib cock is a draw off tap with a horizontal inlet and free outlet. A stop cock is a valve with a suitable means of connection for insertion in a pipe line for controlling or stopping the flow.

29.2 They shall be of screw down type and of brass chromium plated and of diameter as specified in the description of the item. They shall conform to I.S. 781-1977 and they shall be of best Indian make. They shall be polished bright.

29.3 The minimum finished weight of bib cock and stop cock shall be as given below :

Diameter	Bib cock	Stop cock	Diameter	Bibcock	Stop cock
8 mm.	0.25 Kg.	0.25 Kg.	15 mm.	0.40 Kg.	0.40 Kg.
10 mm.	0.30 Kg.	0.35 Kg.	20 mm.	0.75 Kg.	0.75 Kg.

M-30. Gun metal wheel valve :

30.1 The gun metal wheel valve be of approved quality. These shall be gun metal fitted with wheel and shall be of gate valve opening full way and of the size as specified. These shall conform to I.S. 778-1971.

M-31. European type water closet/with low level flushing :

31.1 The European type water closet shall be white glazed porcelain first quality and shall be of wash down type conforming to I.S. 2556-1973 and I.S. 771-1979.

31.2 'S' trap shall be provided as required with water seal not less than 50 mm. The solid plastic seat and cover shall be of the best Indian make conforming to I.S. 2548-1980. They shall be made of moulded syntactic materials which shall be tough and hard with high resistance to solvents and shall be free from blisters and other surface defects and shall have chromium plated brass hinges and rubber buffer of suitable size.

M-32. Orissa type water closet :

32.1 The specification of Orissa type white glazed water closet of first quality shall conform to I.S. 2556 (Part-III) 1981 and relevant specification of Indian type water closet except that pan will be with the integral squatting pan of size 580 mm x 440 mm. with raised footrest.

M-33. Indian type water closet :

33.1 The Indian type white glazed water closet of first quality shall be of size as specified in the item and conforming to I.S. 771-1979 and I.S. 2556 (Part-II) 1981. Each pan shall have integral flushing ring of suitable type with adequate number of holesalroung as directed to have satisfactory flushing. It shall also have inlet at back or front connecting flush pipe as directed. The inside of the bottom of the pan shall have sufficient slope from the front towards the outlet and surface shall be uniform and smooth.

Pan shall be provided with 100 mm. diameter 'P' or 'S' trap with approximately 50 mm. water seal and 50 mm. diameter vent horn.

M-34. (A) Foot Rests :

34-A-1 A pair of white glazed earthen ware rectangular foot rests of minimum size 250 mm. x 130 mm 20 mm. shall be provided with water closet.

M-35. Low level enamel flushing tank :

35.1. The low level flushing tank shall be of 15 liters capacity. It shall conform to I.S. 774-1971. The flushing vaster shall be of best quality and free from any defects. The flushing tank shall have outlet 32 mm. diameter The outlet shall be connected with W.C. Pan by lean pipe or P.V.C. pipe as specified. The flushing tank shall be provided with inlet and outlet for fixing G.I. inlet pies and over-flow pipes. The flushing cistern shall be provided with chromium plated handle for flushing. The flushing tank shall be provided with brackets of cast iron so that it can be fixed on wall at specified height. The brackets shall Conform to I.S. 775-1970.

M-36. Cast iron flushing cistern :

36.1. The cast iron flushing cistern shall be of 15 liters capacity. It shall conform to I.S. 774-1971. The flushing cistern shall be of best quality free from any defects. The flushing cistern shall have outlet of 32 mm. diameter. The outlets shall be connected to lead pipe of 32 mm. diameter. The lead pipe shall conform to I.S. 404 (Part-I) 1962. For fixing G.I. inlet pipes and overflow pipe 20 mm. diameter. inlet and outlet shall be provided. The flushing cistern shall be provided with galvanised iron chain and pull of sufficient length and shall be got approved from the Engineer-in-charge. The cast iron flushing cistern shall be painted with one coat of anticorrosive paint and two coats of paints. The flushing cistern shall be fixed on two C.I. brackets. The C.I. brackets shall conform to I.S. 775-1970.

M-37. Flush cock :

37.1. Half turn flash cock (Heavy Weight) shall be of gun metal chromium plated of diameter as specified in the description of the item. The flush cock shall conform to relevant Indian Standard.

M-38. Cast iron pipes and fittings :

38.1 All soil waster, vent and antisyphonage pipes and fittings shall conform to I.S. 1729-1964. The pipe shall have spigot and socket ends with head on spigot end. The pipes and fittings shall be true to shape, smooth, cylindrical, their inner and outlet surfaces being as nearly as practicable concentric. They shall be sound and nicely cast and shall be free from

cracks, laps, pinholes or other imperfection and shall be neatly dressed and carefully fettled.

38.2 The end of pipes and fittings shall be of reasonable square to their axis.

38.3 The sand cast iron pipes shall be of the diameter as specified in the description and shall be in lengths of 1.5 M, 1.8 M. and 2 M. including socket ends of the pipe unless shorter lengths are either specified or required at junctions etc. The pipes and fittings shall be supplied without ears unless specified or directed otherwise.

38.4 Tolerances.

38.4.1 The Standard weights and thickness of pipes shall be as shown in the following table : A tolerance up to minus 10 percent may however be against these standard weights.

Sr. no.	**Nominal**	**Thickness**	**Overall Weight of pipe excluding ears**		
			1.5 m. long	1.8m. long	2.m. long
1.	75 mm.	50 mm.	12.83 Kg.	16.52 Kg.	18.37 Kg.
2.	100 mm.	5.0 mm.	18.14 Kg.	21.67 Kg.	24.15 Kg.

38.4.2 A tolerance up to minus 15 percent in thickness and 20 mm. in length will be allowed. For fittings tolerance in lengths shall be plus 15 mm. and minus 10 mm.

38.4.3 The thickness of fittings and their socket and spigot dimensions shall conform to the thickness and dimensions specified for the corresponding sizes of straight pipes. The tolerances in weights and thickness shall be the same as for straight pipes.

M-39. NahniTrap :

39.1 Nahni trap shall be of cast iron and shall be sound and free from porosity or other defects which affect serviceability The thickness of the base metal shall not be less than 6.5 mm. The surface shall be smooth and free from craze, ships and other flaws or any other kind of defects which affect serviceability. The size of nahni trap shall be as specified and shall be of self cleaning design.

39.2 The Nahni trap shall be of quality approved by the Engineer-in-charge and shall generally conform to the relevant Indian Standards.

39.3 The Nahni trap provided shall be with deep seal, minimum 50 mm, except at places where trap with deep seal can not be accommodated. The cover shall be cast iron. Performed cover shall be provided on the trap of appropriate size.

M-40. Gully Trap :

40.1 Gully Trap shall conform to I.S. 651-1980. It shall be sound, free defects such as fire cracks. The glaze of the traps shall be free from crazing. They shall give a sharp clear note when struck with light hammer. There shall be no broken blisters.

40.2 The size of the gully trap shall be as specified in the item.

40.3 Each gully trap shall have one C.I. gratings of square size corresponding to the dimensions of inlet of gully trap, It will also have a water tight. C.I. cover with frame inside dimensions 300 mm. x 300 mm., the cover with frame inside dimension, 300 mm. 300 mm., the cover weighing not less than 4:53 Kg. and the frame not less than 2.72 Kg. The grating cover and frame shall be of sound and good casting and shall have truly square machined seating faces.

M-41. Glaze Stone Ware Pipe And Fitting :

41.1 The pipes and fittings shall be of best quality as approved by the Engineer-in-charge. The pipe shall be of best quality manufactured from stone-ware of fire clay, salt glazed thoroughly burnt through the whole thickness, of a close even texture, shall be smooth and perfectly glazed. The pipe shall be capable to withstand pressure of 1.5 mm. lead without showing sign of leakage. The thickness of the wall shall not be less than $1/12^{th}$ of the internal dia. The depth of socket shall not be less than 38 mm. The socket shall be sufficiently large to allow a joint of 1 mm. around the pipe.

41.2 The pipes shall generally conform to relevant I.S. 651-1980.

M-42. G.I.WaterSpot :

42.1 The G.I.pipes of 40 mm. dia shall be of medium quality and specials shall be of 'R' brand or equivalent brand of best approved quality.

42.2 The pipe shall have length as required for the thickness of wall in which it is fixed. and at the outside end tee and bend cut at half the length shall be provided and at other end

coupling shall be provided to have better fixing. The water spout shall be provided as per detailed drawings or as directed.

M-43. Asbestos Cement Pipe (A.C. Pipe):

43.1 The asbestos cement pipe of diameter as specified in the description of the item shall conform to I.S. 1626-1980. Specials like bends, shoes cowls, etc. shall conform to relevant Indian Standards. The interior of pipe shall have a smooth finish, regular surface and regular, internal diameter. The tolerance in all dimensions shall be as per I.S. 1626-Part-I 1980.

M-44.Crydon Ball valve :

44.1. Ball valve of screwed type including polyethylene float and necessary lever etc. shall be of the size as mentioned in the description of item and shall conform to I.S. 1703-1977.

M-45. Bitumen Felt For Water Proofing And Damp Proofing :

45.1 Bitumen felt shall be on the fiber bases and shall be type 2, self finished grade-2 and shall conform to I.S. 1322-1970.

M-46 Selected Earth :

46.1 The selected earth shall be hat obtained from excavated material or shall have to brought from outside as indicated in the item. If item does not indicate anything, The selected earth shall have to be brought from outside.

46.2 The selected earth shall be good yellow soil and shall be got approved from the Engineer-in-charge. In no case black cotton soil or similar expansive and suitable soil shall be used. It shall be clean and free from all rubbish and perishable materials, stones or brick bats. The clods shall be broken to a size of 50. mm or less, Contractor shall make his own arrangement at his own cost for land for borrowing selected earth. The stacking of material shall be done as directed by the Engineer-in-charge in such a way as not to interfere with any constructional activities and in proper stacks.

46.3 When excavated material is to be used, only selected stuff got approved form the Engineer-In-Charge shall be used. It shall be stacked separately and shall comply with all the requirements of selected earth mentioned above :

Item No. 2

Providing & laying 20mm thick double coat mala cement plaster on interior brick / concrete wok for plastering comprising of base coat of 12mm thick cement plaster in cement mortar (1-Cement : 4-Coarse sand) in rough finishing and 8mm thick top coat of cement mortar 1:2 (1-Cement : 2-Coarse sand) finished with trovel including scaffolding curing etc. complete.(Any Height with waterproof chemical)

- **A.** Ground Floor
- **B.** First Floor
- **C.** Second Floor
- **D.** Third Floor
- **E.** Fourth Floor
- **F.** Fifth Floor
- **G.** Sixth Floor
- **H.** Seventh Floor
- **I.** Eighth Floor
- **J.** Nine Floor
- **K.** Tenth Floor
- **L.** Terrace

Specification for 15 thick cement plaster shall conform to item no. 17.60[ii] & item no 17.69 & item no 17.94 of General Technical Specifications for building work .

Rate shall be for a unit of one square meter.

2.0 MODE MEASUREMENTS & PAYMENT :

1.0The rate shall include the cost of all materials, labour and scaffolding etc, involved in the operations described under workmanship.
All plastering shall be measured in square metres unless, otherwise specified length, breadth or height shall be measured correct to a centimeter.
Thickness of the plaster shall be exclusive of the thickness of the key i.e. grooves or open joints in brick work, stone work etc. or space between laths. Thickness of plaster shall be average thickness with minimum 20 mm. at any point on this surface.
This item includes plastering up to floor two level.
The measurement of wall plastering shall be taken between the walls or partition (dimensions before plastering being taken) for length and from the top of floor or skirting to ceiling for height. Depth of cover of cornices if any shall be deducted.
Soffits of stairs shall be measured as plastering on ceilings, Flowing soffits shall be measured separately.
For jambs, soffits, sills etc. for openings not exceeding 0.5 sq. mt. each in area for ends of joints, beams, posts, girders, steps etc. not exceeding 0.5 sq. mt. each in area and for openings exceeding 0.5 sq.mt. and not exceeding 3.0 sq. mt. in each area deductions and additions shall be made in the following manner :

(a) No deductions shall be made for ends joints, beams posts etc. and openings not exceeding 0.5 sq. mt. each and no addition shall be made for reveals, jambs, soffits, sills etc. of these opening for finish to plaster around ends of joints, beams, posts etc.

(b) Deduction for openings exceeding 0.5 sq. mt. but not exceeding 3 sq. mt. each shall be made as follows and no addition shall be made for reveals, jambs, soffits etc. sills etc. of these openings.

(i) When both faces of all wall are plastered with same plaster, deduction shall be made for one face only.

(ii) When two faces of wall are plastered with different types of plasters or if one faces is plastered and the other pointed, deductions shall be made from the plaster or pointing on the side of frame for door, window etc. on which width or reveals is less than that on the other side but no deductions shall be made on the other side. Where width of reveals on both faces of all are equal, deductions of 50% of area of opening on each face shall be made from area of plaster and/or pointing as the case may beFor openings having door frames equal to projecting beyond the thickness of wall, full deduction for opening shall be made from each plastered face of the wall.
In case of openings of area above 3 sq. mt. each, deduction shall be made for opening but jambs, soffits and sills shall be measured.

The rate shall be for a unit of one square metre.

Item No. 3 & 4

Providing and fixing on wall face C.I. water pipe including filling the joints with spun yarn soaked in neat cement slurry and cement mortar 1:2 (1- Cement : 2-fine sand) etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials

1)C.I. pipes for Drain - 75 mm dia

2)C.I. pipes for Drain - 100 mm dia

1.0. Materials: Water shall conform to M-1. Cement mortar shall conform to M-11. The C. I. pipe and fittings shall conform to M-68.

2.0. Workmanship:

2.1. The relevant specifications of item No. 15.87 (A) shall be followed except the C. I. pipe 75 mm. dia. shall be embedded in masonry surrounded with 12 mm. thick cement mortar.

2.2. The pipes shall be fixed in the masonry work as it proceeds. The pipe shall be kept vertical or to the line as directed. The pipe shall have minimum surroundings of 12 mm. thick cement mortar at every portion of external surface. The length shall be caulked with spun yarn and cement mortar as soon as the next length of pipe is placed in position. The socket end the pipe shall be kept closed till the next length of pipe is fitted and jointed to prevent any brick-bats or concrete or pieces of wood falling in and chocking the pipes.

3.0. Mode of measurements & payment:

3.1. The relevant specifications of item No. 15.87 (A) shall be followed.

3.2. The rate shall be for a unit of one running meter.

Item No 6

Providing & fixing M.S structural steel work etc. of required pattern with M.S. flat, Angles, Pipes etc. as required spacing & frame around or round bars with round headed bolts, nuts or by screw including one coat of primer and two coat of synthetic enamel paint etc. complete.

1.0 MATERIALS :

1.1 Structural Steel :

1.1.1 All structural steel shall conform to I.S. 226-1965. The steel shall be free from the defects mentioned in I.S. 226-1975 and shall have a smooth finish. The material shall have a smooth finish. The material shall be free from loose mile scale, rust pits or other defects affecting the strength and durability. Rivet bars shall conform to I.S. 1148-1973.

1.1.2 When the steel is supplied by the Contractor test certificates of the manufactures shall be obtained according to I.S. 226-1975 and other relevant Indian Standards.

2.0 WORKMANSHIP:

2.1 The M. S. Grill shall be prepared as per the drawings or as directed for fixing to wooden frames of windows etc.

2.2 The grill shall be fabricated to the designs and patterns shown in the drawings and the weight shall be as directed and the joints shall be riveted or welded as shown in the plan or as directed. The grill so formed shall be fixed into the frames of the windows etc., before they are erected in position. The outside strip frame of the grill shall be housed to its full thickness into the recess cut into the frame of the windows etc. The grill shall be fixed to the frame with number of bolts and nuts of screws viz. bolt nut/screw per 30 cm. Of the length of outer strip subject to a minimum of 2 nos. on each side of the frame or as indicated in the drawings or as directed.

2.3 The bolts and nuts or screws shall be counter sunk and shall be fixed with the top of their heads flush with the face of frame strips.

3.0 MODE OF MEASUREMENT AND PAYMENT:

3.1 No payment shall be made for weight of screws, bolts, nuts etc. Only weight of grill shall be paid.

3.2 The rate shall be for unit of one Kg.

Item No 7

Providing and Fixing 6 mm thick Lexan Polycarbonate multi wall roofing sheet fixed with hilti screw and rubber silicon sealer and alluminium strip of size 50 x 3 mm etc complete as directed by Engineer in charge

1.0 SCOPE OF ITEMS

Item covers providing and Fixing Polycarbonate sheet of approved make or as suggested by Architect / Consultant. Item covers installation with necessary making frame structure, fabrication, Adjusting and cleaning. Necessary scaffolding, Labour, all an item & safety measures for satisfactory completion of item.

2.0 Material

2.1 Polycarbonate sheet shall confirm IS 14443 : 1997

2.2 Structural steel shall confirm M 22 from General Technical Specifications for Building Works

3.0 Workmanship

3.1 As per Item No. 15.1 of 2 from General Technical Specifications for Building Works considering 10mm thick Polycarbonate sheet instead of corrugate GI Sheet.

3.2 Sheet shall be firmly fixed, true to the alignment by mentioned in drawing to the satisfaction of Architect or Engineering Incharge

4.0 Mode of Measurement

4.1 Measurement shall be in sq. m correct to two places of decimal for the work completed as specified as para.3 above.

4.2 Rate quoted shall be for the works including vibrators or any other materials as specified described in the respective items of work.

5.0 Payment :

Payment shall be made for quantity recorded in the Measurement Book as per para 4.0 above at the rate quoted by the bidder in Schedule – B of approved tender.

Item No. 24

1.0 Providing and laying Vitrified tiles 6 to 10 mm thick , 12" x 12" in flooring treads of steps and landing laid on a bed of 12mm thick cement mortar 1:3 (1-cement : 3-coarse sand) finishing with flush pointing in white cement.

2.0 Material

1.1 Ceramic tiles:

The tiles shall be of best quality as approved by the Engineer-in-charge. They shall be flat and true to shape. They shall free from cracks , crazing, spots chipped edges and corners. The glazing shall be of uniform shade.

The tiles shall be nominal size of 400 mm x 400 mm. unless otherwise specified. The maximum variation from the stated sizes, other than the thickness of tile, shall be plus or minus 1.5 mm. The thickness of tile shall be 6 mm. Except as above the tiles shall conform to I.S. 777-1970

2.0 WORKMANSHIP:

2.1 The work shall be carried out for skirting as dedo. Before fixing white glazed tiles of shade and size as specified, the surface shall be prepared by heavy scarping, making joints etc. to the required line, level and plumb. The surface shall be thoroughly wetted before commencing the laying work. Thereafter about 10 mm. thick backing of cement mortar in specified proportion shall be applied on the surface in true like and level generally as per specifications of plaster item.

2.2 The white glazed tiles shall be laid on cement mortar bedding of 12 mm thick in C.M. 1:3. the mortar shall have sufficient plasticity for laying and there shall be no hard lumps that would interfere with the evenness of bedding the base shall be cleared with well wetted. The mortar shall then be spread in thickness not less than 10 mm at any place and average 12 mm thickness. The proportion of the cement mortar shall be as specified in the item.

2.3 Fixing tiles :

2.3.1 The tiles before lying shall be soaked in water for at least two hours Neat Gracie cement grout at 3.3 Kg/Cement /Sq. mt. Of honey like consistency shall be separated over the mortar bedding as directed. The edges of the tiles be smeared with neat cement slurry. The tiles shall be well pressed and gently tapped with a wooden mallet till they are properly bedded and in level with the adjoining tiles. There shall be no hollows in bed

or joints. The joints between the tiles shall be as thin as possible in straight line or as per pattern.

2.3.2 The tiles shall not have staggered joints. The joints shall be true to centre line both ways. The Nahni trap coming in the flooring shall be so positioned that its grating shall replace only one tile as far as possible. Where full size tiles cannot be fixed, they shall be cut (swan0 to be required size and the edges rubbed smooth to ensure straight and true joints. The joints shall be filled with grey cement grout with wire brush of trowel to a depth of 5 mm. and loose material removed. White cement shall be used for pointing the joints., After fixing the tile finally in an even the flooring shall be kept wet and allowed to nature undisturbed for 7 days.

2.4 Cleaning :

2.4.1 The surplus cement grout that may have come out of the joints shall be cleared off before it sets. Once the floor has set, it shall be carefully washed, cleared by dilute acid and dried. Proper precaution and measures shall be taken to ensure that the tiles are not damaged in any way till the completion of the construction.

3.0 MODE OF MEASUREMENT & PAYMENT

3.1 The work done shall be measured in sq. mt. For visible area of work done, The length and width of the flooring shall be measured not between the faces of skirting or dedos or plastered face of wall as the case may be. The paving under dedo or skirting shall not be measured. No deduction shall be made not extra paid for any opening in the floor of area up to 0.1 sq. mt. Nothing extra shall be paid for laying the floors at different levels in the same rooms.

3.2 The rate shall be for a unit of one sq. metre.

Water Supply & Drainage

Item No. 5

Providing laying and jointing in true line and level 50mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings make PRINCE /SUPREME / ASTRAL / FINOLEX or equivalent as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concelled as directed including

necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.50mm dia.

1.0. Materials:
UPVC / CPVC pipes shall confirm of Schedule- 40/80 of any standard brand & quality and make as approved by the Engineer-in- charge.

2.0.Workmanship:

2.2.Fixing of the tube fitting to wall ceiling and floors:

2.2.1. In case of fixing of tubes and fillings to the walls or ceiling, these shall run on the surface of the wall or ceiling (not in chase) unless otherwise specified. The fixing shall be done by means of standard pattern, holder lamps keeping the pipes about 15 mm clear of the wall. When it is found necessary to conceal the pipes and when specified so, chasing may be adopted or pipe fixed in duets or recesses etc. Provided that there is sufficient space to work on the pipe with usual tools. The pipe shall not ordinarily be buried in walls or solid floors, where unavoidable, pipes may be buried for short distances provided that adequate protection is given against damage and where so required joints are not buried. Where required M.S. tube sleeve shall be fixed at a place a pipe is passing through a wall or floor for expansion and contraction and other movements. In case the pipe is embedded in walls or floors, it should be painted with anti-corrosive bitumastic paint of approved quality. The pipe should not come in contact with lime mortar or lime concrete as the pipe is affected by lime. Under the floors, the pipe shall be laid in layer of sand filling.

2.2.2. All pipes and fittings shall be fixed truly vertical and horizontal unless unavoidable. The pipes shall be fixed to walls with standard pattern clamp so required size and shape, one end of which shall be properly plugged or cemented into walls with cement mortar1:3 (1cement:3 coarse and) and the right ened round the pipes to hold it securely. These clamps shall be spaced at regular intervals in straight length at 2MC/C interval in horizontal run and 2.5M. interval in vertical run. For pipe of 15mm dia.up to 25mm.dia.the holes in the walls and floors shall be made by drilling with chisel or jumper and not by dismantling the brick work or concrete. However for bigger diameter pipes, the holes shall be carefully made of the smallest required size. After fixing the pipe the holes shall be made good with cement mortar1:3 (1 cement:3 coarse and) and properly finished to match the adjacent surface.

2.3.Testing of joints:

2.3.1. After laying and jointing, the pipes and fittings shall be inspected under working conditions of pressure and flow. Any joint found leaking shall be red one, and all leaking pipes removed and replaced with out extra cost.

2.3.2. The pipes and fillings as they are laid shall be tested to hydraulic pressure of 6Kg./sq.cm.The pipe shall be slowly and carefully charged with water allowing all air lose cape and avoiding all shock and water hammer. The draw off takes and stop cock shall then be closed and specified hydraulic pressure shall be applied gradually. The pressure gauge must be accurate. The pipes and fillings shall be tested inspections as the work of laying proceed skeeping the joints exposed for inspection during the testing.

3.0.Mode of measurements & payment:

3.1. The description of each item shall unless otherwise stated, be held to include where necessary, conveyance, and delivery, handling, unloading, storing fabrication, hoisting, all labour for finishing to required shape and size; testing, fitting in position, straight, culling and waste, return of packing etc.

3.2. The length shall be measured on running meter basis of finished work. The length shall be taken along the centre line of the pipe and fittings. The pipes fixed to walls,ceiling,floors etc.shall be measured and paid under this item.

3.3. All the work shall be measured in decimal systems fixed in its place, subject to tolerance given below unless otherwise stated:

(i) Dimension shall be measured to the nearest 0.01meter,

(ii) Area shall be worked out to the nearest 0.01sq.meter.

3.4. All measurement so culling shall unless otherwise stated be held to include the consequent waste.

3.5. In case of filling of unequal bore, the largest bore shall be measured for the test.

3.6. Testing of pipe lines fillings and joints include for providing all plant and appliances necessary for obtaining access to the work to be tested and carrying out the tests.

3.7. The rate includes galvanised steel tubing with screwed socket joints, together with all fittings (such as bends, sockets, springs, elbows, tees, crosses, short pieces, clamps and plugs unions etc.) and fixing complete with clamping wall-hooks, wooden plugs etc. and also cutting, screwing and waste and for making forged (or handmade) bends on piping as required. Connector shall be inserted, where required or directed. The rate also includes cutting through walls, floors etc. and their making good and painting exposed threads with anti-corrosive paint as above and testing. Whorelubesarclo be fixed to wall, ceiling and flooring, the rate shall not include painting of pipes, providing sleeves and sand Oiling under floor for which separate payment shall be made.

3.8. The rate shall be for a unit of one Running meter.

Item No 11

Dismantling santtary fittings like wash basin. W.C. pan Indian and European type, flushing tank etc. including stacking the materials with all lead and lift.

1.0 MATERIALS :

1.1 European type water closet/with low level flushing :

1.1.1 The European type water closet shall be white glazed porcelain first quality and shall be of wash down type conforming to I.S. 2556-1973 and I.S. 771-1979.

1.1.2 'S' trap shall be provided as required with water seal not less than 50 mm. The solid plastic seat and cover shall be of the best Indian make conforming to I.S. 2548-1980. They shall be made of moulded syntactic materials which shall be tough and hard with high resistance to solvents and shall be free from blisters and other surface defects and shall have chromium plated brass hinges and rubber buffer of suitable size.

2.0 WORKMANSHIP: Closet shall be fixed to the floor by means of 75 mm. long 6.5 mm. diameter counter sunk bolts and nuts embedded in the floor concrete using rubber or fiber washers so as not to allow any lateral displacement. The joint between the trap of W.C. and soil pipe shall be made with C.M. 1 : 1 (1 cement : 1 fine sand)

3.0 MODE OF MEASUREMENTS & PAYMENT :

3.1 The rate shall include the cost of all labour for fixing pans and seat and cover, inlet, connections etc. complete including testing the same.

Rate shall be including all fittings & fixtures as approved by architect.

3.2 The rate shall be for a unit of one number

Item No. 12

Providing and fixing wash basin with single hole for pillar tap with C.I. Or M.S. brackers painted white including cutting holes and making good the same including providing and fixing C.P. brass waste 40 mm dia. and bottel trap with rubber sink etc. complete Vitreous China Flat back wash basin 550mm x 400mm size in white colour.cera, hindware, roco equivalent only.

(CERA Make Cornate Cat . no S 2040103)

1.0 MATERIALS :

1.1 The Wash Basin Jaquar or equivalent shall be of 1st quality and make as approved by the Engineer-in-charge.

1.2 Wash Basin Jaquar or equivalent:

1.2.1 Wash basin shall be of white porcelain first quality best Indian make and it shall conform it I.S. 2556 (Part-IV) 1972 and I.S. 771-1979. The size of the wash basin shall be as specified in the item, Wash basin shall be of one piece construction with continued over-flow arrangements. All internal angles
shall be designed so as to facilitate cleaning. Wash basin shall have single tap hole or two holes as specified. Each basin shall have a circular waste hole which is either rebated or beveled internally with 65 mm. diameter at top and 10 mm. depth to suit the waste fitting. The necessary stud slot to receive the bracket on the under side of the basin shall be provided. Basin shall have an internal soap holder recess which shall fully drain into the bowl.

1.2.2 White glazed pedestal of the quality and colour as that of the basin shall be provided where specified in the item. it shall be completely recessed at the back for reception of supply and wash pipe. It shall be capable of supporting the basin rigidly and adequately and shall be so designed as to make the height from floor to top of basin 750mm. to 800 mm. as directed.

2.0 WORKMANSHIP :

2.1 The wash basin shall be fixed on the wall as and where directed. The wash basin shall be supported on a pair of M. S. or C.I. brackets fixed in C.M. 1 : 3 (1 cement : 3 sand). The bracket shall conform to I. S. : 775-1962. The wall plaster on the rear shall be cut to rest the top edge of the wash basin. After fixing the basin, plaster shall be made good and surface finished to match with the existing one.

2.2 The bracket shall be painted white with ready-mixed paint.

2.3 The C.I. brass trap and union shall be connected to 32 mm. dia. waste pipe which shall be suitably bent towards the wall and which shall discharge into an open drain leading to a gully trap or direct into the gully-trap on the ground floor and shall be connected to a waste

pipe through a floor trap on the upper floors. C. P. brass trap and union may not be provided where the surface drain or a floor trap is
placed directly under the basin and the waste is discharged into vertically.

2.4 The height of the front edge of the wash basin from the floor level shall be 80 cms.

2.5 The necessary inlet, outlet connections and fittings such as pillar cocks. C. P. dress waste trap waste pipe, stop cock, chain wish rubber plug etc. shall be fixed.

2.6 The payment of fittings shall be made separately under separate item.

3.0 MODE OF MEASUREMENTS & PAYMENT :

3.1 The rate includes cost of all labour, materials; tools and plant etc. required for satisfactory completion of this item as specified in workmanship.

3.2 The rate shall be for a unit of one number.

Item no. 13
"Providing & fixing White/Light Coloured Vitreous China Large Urinal Cera No 5004, or Jaquar URS-13261 535mm x 355mm x 345mm as per product detail with Flushing System as per product detail, with C.I. hangers, Bottle Trap, Prassmatics angular cock, Waste Coupling, including cutting and making good the walls and floors wherever required.(Make: Urinal: Cera no: 5004 or equivalent, Prassmatics angular cock : Jaquar PRS-077 or equivalent, Waste coupling : Cera no. CM203 (half thread) or Essco ALE-544FT or equivalent, Bottle trap: Jaquar no ALE-773 or equivalent.)

The work shall be carried out as per BOQ description.
Rate shall be for a unit of one No.

Item no: 14
'Providing & fixing Orissa pan Indian type water closet of size 63 cm. x 45 cm. white glazed vitrous china with trap & foot rest incl. flushing pipe etc. complete at all levels with all respects.

1.0 MATERIALS :
1.1 Indian type water closet :
1.1.1 The Indian type white glazed water closet of first quality shall be of size as specified in the item and conforming to I.S. 771-1979 and I.S. 2556 (Part-II) 1981. Each pan shall have integral flushing ring of suitable type with adequate number of holes alroung as directed to have satisfactory flushing. It shall also have inlet at back or front connecting flush pipe as directed. The inside of the bottom of the pan shall have sufficient slope from the front towards the outlet and surface shall be uniform and smooth.
1.1.2 Pan shall be provided with 100 mm. diameter 'P' or 'S' trap with approximately 50 mm. water seal and 50 mm. diameter vent horn.

2.0 WORKMANSHIP :

2.1 The pan shall be sunk into the floor and embedded in a cushion of average 15 cm. cement 1 : 5 : 10 (1 cement : 5 fine sand : 10 graded stone aggregate or brick aggregate 40 mm. nominal size) or as specified. This concrete shall be left 115 mm. below the top level of the pan so as to allow for flooring and its bed concrete. The floor should be suitably sloped so that the waste water is drained into the pan. The pan shall be provided with 100 mm. 'P' or 'S' trap as specified in the item No. 23.113 with approximately 50 mm. seal. The joints between the pan and the trap shall be made leak-proof with cement mortar 1 : 1 (1 cement : 1 fine sand).

3.0 MODE OF MEASUREMENTS & PAYMENT :

3.1 The rate shall include the cost of all materials and labours involved in the operations described under workmanship. Rate shall be including all fittings & fixtures as approved by architect.

3.2 The rate shall be for a unit of one number.

Item No. 15 :

Providing and fixing wash down water closet (european type W C pan) with integral P and S trap

including jointing the trap with soil pipe in cement mortar 1:1 (1 cement fine sand) including

Providing and fixing Plastic Seat and cover for wash down water closet with C.P. brass hinges and

rubber buffers and also includes provide and fixing jet wash Facilities complete (A)Vitereous China Pattern: (I) in White Colour (CERA Universal Cat. no S1050106)

MATERIALS :

1.1 European type water closet/with low level flushing :

1.1.1 The European type water closet shall be white glazed porcelain first quality and shall be of wash down type conforming to I.S. 2556-1973 and I.S. 771-1979.

1.1.2 'S' trap shall be provided as required with water seal not less than 50 mm. The solid plastic seat and cover shall be of the best Indian make conforming to I.S. 25481980. They shall be made of moulded syntactic materials which shall be tough And hard With high resistance to solvents and shall be free from blisters and other surface defects and shall have chromium plated brass hinges and rubber buffer of suitable size.

2.0 WORKMANSHIP : Closet shall be fixed to the floor by means of 75 mm. long 6.5 mm. diameter counter sunk bolts and nuts embedded in the floor concrete using rubber or fibre washers so as not to allow any lateral displacement. The joint between the trap of W.C. and soil pipe shall be made with C.M. 1 : 1 (1 cement : 1 fine sand)

3.0 MODE OF MEASUREMENTS & PAYMENT :

3.1 The rate shall include the cost of all labour for fixing pans and seat and cover, inlet, connections etc. complete including testing the same.
Rate shall be including all fittings & fixtures as approved by architect.

3.3 The rate shall be for a unit of one number.

Item No. 16

Providing and fixing metropole flush valve (jaquar catlog No FLV-1085)(self closing spring loaded) at any floor, level and height. (I) 40 mm dia

As per Manufacturer's Specifications.

Item no: 17
Providing & Fixing C.P.Brass angle valve 15mm (jaquar catlog CON-053 KN)
As per manufacturer's Specifications.
Rate shall be for a unit of one number.

Item No 18

Providing and fixing in position 15mm dia Quarter Turn CP brass stop cocks of heavy type ISI marked of Jaguar or Parko make.

As per Manufacturer's Specifications

Item No. 19
Providing and fixing PVC SWR Nahni trap IS 14735 for drain - 100 mm diameter with jali of the following nominal diameter of self cleansing design with C.I scread down or hinged grating including the cost of cutting and making good the walls.

MATERIALS :
Nahani traps or P-TRAP, floor traps shall be PVC / deep seal with an effective seal of 50 mm. The trap and waste pipes shall be set in cement concrete blocks firmly supported on the structural floor. The blocks shall be in 1:2:3 mix (1 cement: 2 coarse sand: 4 stone aggregate 20 mm nominal size) mixed with water proof compound and extended to 40 mm below finished floor level. Contractor shall provide all necessary shuttering and centering for the blocks. Size of the block shall be 30 x 30 cms of the required depth. The trap shall be installed at lowest point ensure no pending occurs at perimeters of the drain.
FLOOR TRAP INLET
Bath room traps and connections shall ensure free and silent flow of discharging water. Where specified, the Contractor shall provide a special type galvanised iron inlet fitting without or

with one, two or three inlet sockets to receive the waste pipe. Joint between waste and fitting shall be connected to a C.I. 'P' or 'S' trap with at least 50mm seal (Hopper and traps shall be paid for separately). Floor trap inlet fittings and the trap shall be set in cement concrete blocks.

Workmanship

2.1. The Nahni trap with 100 mm. dia inlet and 50 mm. dia. outlet shall be fixed as per drawing or as directed.

2.2. The Nahni trap shall be jointed with S.S. PVC Pipe, 75 mm. dia. with Adasive joints. The Adasive joints shall be done in conformation with I.S.

Mode of measurements and payment

3.1. The rate includes cost of all labour, materials, tools and plants etc. required for satisfactory completion of this item including lead, jointing and testing.

The rate shall be for a unit of one No.

Item no. 20

Providing & fixing S.W. Gully trap with C.I.grating brick masonary chamber & water tight C.I. Cover with frame of 300x300 mm size (inside)with standard weight. Square mouth trap 100mm x 100mm size P- type

1.0 MATERIALS: Water, Cement mortar of proportion 1:5, Burnt brick shall conform to part-1 Item no 31

1.1 Gully Trap :

1.1.1 Gully Trap shall conform to I.S. 651-1980. It shall be sound, free defects such as fire cracks. The glaze of the traps shall be free from crazing. They shall give a sharp clear note when struck with light hammer. There shall be no broken blisters.

1.1.2 The size of the gully trap shall be as specified in the item.

1.1.3 Each gully trap shall have one C.I. gratings of square size corresponding to the dimensions of inlet of gully trap, It will also have a water tight. C.I. cover with frame inside dimensions 300 mm. x 300 mm., the cover with frame inside dimension, 300 mm. 300 mm., the cover weighing not less than 4:53 Kg. and the frame not less than 2.72 Kg. The grating cover and frame shall be of sound and good casting and shall have truly square machined seating faces.

2.0 WORKMANSHIP :

2.1 Excavation for gulley trap shall be done true to dimensions and levels as indicated on plans or as directed. The excavation work shall generally be done as per relevant specification of item 4.0.0 of earth work.

2.2 Fixing :

2.2.1 The gulley trap shall be fixed over cement concrete 1 : 5 : 10 (1 cement : 5 sand : 10 graded brick bats aggregate 40 mm. nominal size) foundation, 650 mm. square and 100 mm. thick. The depth of top of concrete below the ground level shall be 675 mm. The jointing of gulley outlet to the branch drain shall be done similar to jointing of S. W. pipe as described in item No. 3.

2.3 Brick masonry chamber : After fixing and testing gulley and branch drain, a brick masonry 300 x 300 mm. inside with bricks in C. M. 1 : 5 (1 cement : 5 sand) shall be built be built with a 100 mm. brick work round the gully trap from the top of bed concrete upto ground level. The space between the chamber walls and the trap shall be filled with cement concrete 1 : 5 : 10. The upper portion of the chamber i.e. above the top level of the trap shall be plastered inside with cement mortar 1 : 3 (1 cement : 3 sand) finished

with floating coat of neat cement. The corners and bottom of the chamber shall be rounded of so as to slope towards the grating.

2.4 C.I. cover with frame 300 mm. x 300 mm. (inside) size shall than be fixed on the top of the brick masonry with C. C. 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 40 mm. thick and rendered smooth. The finished top of the cover shall be left about 40 mm. above the adjoining ground level so as to exclude the surface water from entering the gully trap.

MODE OF MEASUREMENTS &PAYMENT :

1.1 The rate includes cost of all labour, materials, tools and plant etc. required for satisfactory completion of this item as described above.
1.2 The rate shall be for a unit of one number basis.

Item No. 22

Providing and fixing Gun metal check or nonreturn fullway wheel valve of approved make (Zoloto or equivalent make) and quality approved by Architect. (Including All Charges.)

A. 40 mm dia.

1.0. Materials :

The gun metal check or not return full way wheel valve or specified dial, shall conform to I.S. :778-1964. The non-return valve shall be of tested quality.

2.0. Workmanship

2.1. The gun metal check or non return valve shall be fully cleared of all foreign matter before fixing. The fixing of shall be done by means of bolts nuts and 3 mm. rubber insertions with flags of spigot and socketed tail pieces, drilled to the same specifications as in case of socket and spigot flanges in case of flanged pipes. The joining shall be done leak proof.

3.0. Mode of measurements and payment

3.1. The rate includes all labours, materials, tools and plant etc. required for satisfactory completion of this item.
3.2. The rate shall be for a unit of one number.

Item No 23

Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks having crushing strength not less than 35 kg./Sqcm. In C.M. 1:5 C.I. cover with frame (Light duty) 900 mm. x 900 mm. internal dimension, total weight of cover with frame to be not less than 38 kg. (Weight of cover 23 kg. and weight of frame 15

kg.) R.C.C. top slab of cover 23 kg. and weight of frame 15 kg.) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : graded stone aggregate 20 mm. nominal size) foundation concrete 1:5:10 inside plaster 15 mm. thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete. [I] Inside dimensions 900 mm. x 900mm. & 1050mm. deep

Materials:

Water shall conform to M-1. Cement shall conform to M-3.Coarse sand shall conform to M-5. Brick shall conform to M-15.Stone aggregate shall conform to M-12.Brick bat shall conform to M-14 M.S. bar shall conform to M-18.

2.0. Workmanship

2.1. C. I. inspection chamber with provision of C.I. bends of specified size with bolts, nuts and felt washers for underground drain shall been closed in masonry chamber which shall be constructed as under:

2.2. The excavation shall be done true to dimensions and level showing one the plans or as directed.

2.3. Bed concrete shall be 15.Cms, thick C.C.1:5:10 (1cement:5 coarse sand:10 graded brick bat aggregates).The projection of bed concrete beyond the masonry walls shall be 7.5 cms.

2.4. Masonry walls and plaster work shall be carried out as per relevant specifications of item 24.40.

2.5. The cover slab shall be constructed as per relevant specifications of 24.27 (I).

3.0. Mode of measurements and payment

3.1. The earth work in excavation, providing and laying C.I.inspection chamber and bends shall be measured and paid for separately.

3.2. The rate shall be for a unit of One number.

LIST OF APPROVED MAKE

Architect's / Bank's selection regarding make will be final & binding to contractor

	ITEM		PRODUCT NAME & MANUFACTURER.
1	Cement	:	Ultra Tech, Gujarat Ambuja, Birla, Sanghi
2	White Cement	:	Birla, Ultra Tech, J K Cement
3	Steel Reinforcement	:	TISCO, VIZAG, SAIL, Electro therm (TMT FE-500)
4	Structural steel	:	TISCO, VIZAG, SAIL
5	Ceramic/ Glazed/ vitrified Tiles	:	H&R Johnson, Simpolo (Matrix), Somany
6	Polished Kota stone slab	:	Approved quality
7	Paints & distempers	:	Asian Paints, Berger, Dulax, Jotun, Nippon
8	Redoxide	:	Shalimar, Blundel, Asian,Berger
9	Exterior plastic cement	:	Asian Paints, Berger, Dulax, Jotun, Nippon
10	Construction chemicals/ concrete & mortar [waterproofing compound, Admixture Plasticizer, Non Shrink Grout Filler, water replant]	:	Fosroc, BASF, Cico
11	Polish	:	MRF, Asian, ICICI
12	Joint filler	:	GE Sillicon, Cibatul, STP, Pidilite,perma
13	Adhesive	:	Fevicol, Bal, Pidilite, Arldite
14	PVC Fillet	:	Roop, Anand, Forex Plastic
15	Weather silicon	:	Fosroc, Pidilite, Wacker, DOW Corning
16	Anti – termite treatment	:	Thyodin by Hoechest, Lyntric by Bayer India, Durmet by cynamid India, Nocil Pyramid
17	Silicon sealant	:	Fosroc, Pidilite, Wacker, DOW Corning
18	Flush doors	:	Sitapur plywood, Mysoboard, Suarshan W & P Industries, Bajwa, Baroda, Goyal, Industrial corp, Wood craft, Jain wood industries, Alpro, Genda-Northen Doors, Green ply,kitply, Bhutan
19	Plywood products/ shuttering ply/ commercial ply/ marine ply	:	Greenply, Novopan, Sitapur plywood/Kitply/ Century,Anchor, Duro, Formica, Decoboard
20	Laminate sheet	:	Decolam, Greenlam Merinolam Formica, National laminate, Neoluxe, Decolite, Delta
21	Bision panel (cement bonded particle board)	:	NCL Industries Ltd., Anchor, Kitply
22	Pre-laminated Particle board	:	Novapan, Bhutan,Eco board, Gren board

23	Steel doors, windows,	:	Agew, Godrej, Sen Harvik, Steelplast
24	Rolling Shutter and Grills	:	Swastic, Sarvottam, Survoday
25	Aluminum Sections	:	' Indal, Jindal, Bhoruka ,Alumilite, Narmada
26	Aluminum Composite Pantel	:	Finolex, Euro Bond, Alstrong, Durobuild
27	Perforated Aluminum sheets	:	Anodised, 2mm thick, 10mm dia. Holes creating @ 40% to 50% opening area
28	Hard ware	:	Ferrari, Blum, EPPW, palladium, Italia
29	Stainless steel screw, bolts, nuts, washers	:	Kundan, Puja, Atul
30	Dash fasteners	:	Hilti, Fisher, Bosch
31	Aluminum cleat	:	DECO or equivalent
32	Hydraulic Door closer	:	Everite, Gadget, Efficient, Hyper
33	Door locks	:	Godrej, Yale, Armour, link, Harison
34	Window Locks/handle	:	Dill or equivalent
35	Masking tapes	:	Sun control, wonder polymer
36	Filter rubber of glass panel	:	EPDM quality
37	Roller for sliding window	:	Casted from dearlean of Nylon 66 material & bearing should be of Japan / Singapore make double Z type
38	Wool felt/weather strip	:	Shall be imported of Italy make or equivalent
39	Hydraulic Floor spring	:	Everite, Hardwyn - Indian MAP, Dorma – Imported
40	All powder coated fittings	:	EP&PW or equivalent
41	Glass	:	Saint Gobin, ASAI Glass, Pillington Glass India Ltd.
42	Water stop	:	Fixopan, Caliplast
43	C.I. PIPES & FITTINGS	:	B.I.C., Neco, Hepco
44	C.I. Manhole Covers	:	B.I.C.,Neco, B.I.C, Rif or IS 1726 Approved
45	G.I. Pipes	:	Tata, Asian, Jindal
46	Stoneware pipes	:	Sonya or ISI Marked 651
47	P.V.C. PIPE/UPVC & FITTINGS	:	Supreme, prince, finolex
48	RCC Hume Pipe	:	ISI 458
49	G.I. fittings	:	I.S. I. Mark of approved make
50	Gun metal valves	:	Zoloto, leader, Sant,
51	Brass C.P. fittings	:	ESSCO, Jaquar or American standard
52	W.C. Pans, washbasin	:	PARRYWARE, Hindustan, CERA
53	W.C. seats	:	Commander, Patel
54	Bib cock, stop cock, flush cock	:	Essco, Jaquar, or American standard
55	S.S. sink	:	Nirali, Navkar, Jayana
56	PVC Tanks	:	Sintex, National
57	AAC Block	:	ETHIOS ENVIRO SOLUTION, Alcock, ABC Group, Asia Enterprise, Aerocon
58	Paver Block	:	Alcock, Vyara

(To be placed in cover 'A')

BILL OF QUANTITY

SR NO.	ESTIMATED QUANTITY	ITEM DESCRIPTION	UNIT
1	650.00	Dismentling C.I. pipes G.S.W.pipes abd A.C. rain water pipes with fittings and clamps including stacking the materials with all lead and lift (for any dia, of pipe)	Rmt
2	503.00	Providing & laying 20mm thick double coat mala cement plaster on interior brick / concrete wok for plastering comprising of base coat of 12mm thick cement plaster in cement mortar (1-Cement : 4-Coarse sand) in rough finishing and 8mm thick top coat of cement mortar 1:2 (1-Cement : 2-Coarse sand) finished with trovel including scaffolding curing etc. complete.(Any Height with waterproof chemical)	Sqmt
3	150.00	Providing and fixing on wall face C.I. water pipe including filling the joints with spun yarn soaked in neat cement slurry and cement mortar 1:2 (1-Cement : 2-fine sand) etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials 1)C.I. pipes for Drain - 75 mm dia	Rmt
4	250.00	2)C.I. pipes for Drain - 100 mm dia	Rmt
5	260.00	Providing laying and jointing in true line and level 50mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings make PRINCE /SUPREME / ASTRAL / FINOLEX or equivalent as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concelled as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	Rmt
6	1620.00	Providing & fixing M.S structural steel work, grill etc. of required pattern with M.S. flat, Angles, Pipes etc. as required spacing & frame around or round bars with round headed bolts, nuts or by screw with one coat primer & two coat oil paint as per detail drawings etc. complete.	Kg.

7	9.00	Providing and Fixing 6 mm thick Lexan Polycarbonate multi wall roofing sheet fixed with hilti screw and rubber silicon sealer and alluminium strip of size 50 x 3 mm etc complete as directed by Engineer in charge	Sqmt
8	5.00	Corrosion Remover Chemical (Rusting Chemical) (Including All Charges.)	Lt.
9	503.00	Removing and scraping of old deteriorated plaster of any thickness fromm wall / R.C.C member including stacking of serviceable material and disposal of unserviceable from site of work with all lead and lift	Sqmt
10	2.00	Provide & Fitting 900 mm X 900 mm M.S. Plate Chamber Cover (Including all material , Charges)	Nos.
11	10.00	Dismantling santtary fittings like wash basin. W.C. pan Indian and European type, flushing tank etc. including stacking the materials with all lead and lift.	Nos.
12	8.00	Providing and fixing wash basin with single hole for pillar tap with C.I. Or M.S. brackets painted white including cutting holes and making good the same including providing and fixing C.P. brass waste 40 mm dia. and bottel trap with rubber sink etc. complete Vitreous China Flat back wash basin 550mm x 400mm size in white colour.cera, hindware, roco equivalent only.) (CERA Make Cornate Cat . no S 2040103)	Nos.
13	8.00	Providing & fixing White/Light Coloured Vitreous China Large Urinal Cera No 5004, or Jaquar URS-13261 535mm x 355mm x 345mm as per product detail with Flushing System as per product detail, with C.I. hangers, Bottle Trap, Prassmatics angular cock, Waste Coupling, including cutting and making good the walls and floors wherever required.(Make: Urinal: Cera no: 5004 or equivalent, Prassmatics angular cock : Jaquar PRS-077 or equivalent, Waste coupling : Cera no. CM203 (half thread) or Essco ALE-544FT or equivalent, Bottle trap: Jaquar no ALE-773 or equivalent.)	Nos.
14	8.00	Providing & fixing Orissa pan Indian type water closet of size 63 cm. x 45 cm. white glazed vitrous china with trap & foot rest incl. flushing pipe etc. complete at all levels with all respects.	Nos.

15	8.00	Providing and fixing wash down water closet (european type W C pan) with integral P and S trap including jointing the trap with soil pipe in cement mortar 1:1 (1 cement fine sand) including Providing and fixing Plastic Seat and cover for wash down water closet with C.P. brass hinges and rubber buffers and also includes provide and fixing jet wash Facilities complete (A)Vitereous China Pattern: (I) in White Colour (CERA Universal Cat. no S1050106)	Nos.
16	8.00	Providing and fixing metropole flush valve (jaquar catlog No FLV-1085)(self closing spring loaded) at any floor, level and height. (I) 40 mm dia	Nos.
17	8.00	Providing & Fixing C.P.Brass angle valve 15mm(jaquar catlog CON-053 KN)	Nos.
18	8.00	Providing and fixing in position 15mm dia Quarter Turn CP brass stop cocks of heavy type ISI marked of Jaguar or Parko make.	Each
19	8.00	Providing and fixng PVC SWR Nahni Trap IS 14735 for drain - 100mm diameter with jali of the folowing nominal diamerter of self cleansing desing with C.I. scread down or hinged grating includingthe cost of cutting and making good the walls.	Nos.
20	8.00	Providing & fixing S.W. Gully trap with C.I.grating brick masonary chamber & water tight C.I. Cover with frame of 300x300 mm size (inside)with standard weight. Square mouth trap 100mm x 100mm size P- type	Nos.
21	8.00	5) Providing and fixing Flushing tank of Standard make	Nos.
22	7.00	Providing and fixing Gun metal check or nonreturn fullway wheel valve.(E) 40mm dia (Zoloto Valve) (Including All Charges.)	Nos.

23	2.00	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks having crushing strength not less than 35 kg./Sqcm. In C.M. 1:5 C.I. cover with frame (Light duty) 900 mm. x 900 mm. internal dimension, total weight of cover with frame to be not less than 38 kg. (Weight of cover 23 kg. and weight of frame 15 kg.) R.C.C. top slab of cover 23 kg. and weight of frame 15 kg.) R.C.C. top slab with 1:2:4 mix (1 cement: 2 coarse sand : graded stone aggregate 20 mm. nominal size) foundation concrete 1:5:10 inside plaster 15 mm. thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete. [I] Inside dimensions 900 mm. x 900mm. & 1050mm. deep	Nos.
24	23.00	Providing and laying Vitrified tiles 6 to 10 mm thick , 12'' x 12'' in flooring treads of steps and landing laid on a bed of 12mm thick cement mortar 1:3 (1-cement : 3-coarse sand) finishing with flush pointing in white cement. (upto 10 ton)	Sqmt
		TOTAL	