

Tender ID:-	DEL/LHO/P&E/2024-25/04
Date:-	24-07-2024



STATE BANK OF INDIA

INVITES ONLINE ITEM RATE TENDERS

FOR

CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA

FROM

THE CONTRACTORS EMPANELLED FOR DELHI CIRCLE UNDER THE CATEGORY OF CIVIL WORKS CC (50-100 LAKHS) AND CWC (50-100 LAKHS)

PART – A (TECHNICAL BID)

Last Date and Time of submission: 07-08-2024 up to 15:00 Hours

TENDER ISSUED TO : _____(Not Applicable)_____

TENDER COST : NIL

CLIENT : State Bank of India, LHO New Delhi

Architect & PMC: M/s Mohan & Associates
202 Padma Tower II
Rajendra Place,
NEW DELHI-110049
Contact- 7428190271

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Tender documents are in two parts (Volumes) i.e. Part – A (Online Technical Bid)
and Part – B (Online Sealed Price Bid without e-reverse auction)

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NOTICE INVITING TENDER

State Bank of India invites online Tenders on percentage rate basis from the Bank's Empanelled Contractors / vendors / firm in Delhi Circle of Civil Work- Category CC- 50 to 100 Lacs & Category CWC i.e. from Rs. 50 Lakh to Rs. 100 Lakh for Civil Repair & Renovation Of 22 Rooms With Washrooms & Construction Of New Plumbing Shafts At Hostel Block Building Of Sbild Noida. Details of tenders are as under:

1.	Name of Work	CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA
2.	Time allowed for completion	03 months from the date of placing Letter / Mail of Acceptance.
3.	Earnest Money Deposit (1% of Estimated Cost)	₹ 70,000/- (Rupees Seventy Thousand only) through ONLINE mode i.e. Debit Card/ Credit Card/ Net Banking/NEFT/RTGS paid through the portal of etendering.
4.	Initial Security Deposit	2% of total contract value including EMD
5.	Total Security Deposit	5% of Total Contract Value
6.	Pre- Bid Meeting	N/A
7.	Last date and time of Submission of Tenders (Technical Bid & online sealed Price Bid)	07-08-2024 up to 3:00 p.m.
8.	Mode of submission of Tenders (Technical Bid & online sealed Price Bid) at www.tenderwizard.com/SBIE TENDER	<p>Technical Bid : Signed and stamped Undertaking (Annexure-A), Signed & stamped Process Compliance Statement (Annexure-B), scan copy of EMD to be uploaded online as Technical Bid. The bidders shall also submit hard copy of Signed and stamped Undertaking (Annexure-A), Signed & stamped Process Compliance Statement (Annexure-B) & EMD to the address as mentioned in Sr. No. 10 on or before due date and time of submission of tender.</p> <p>Price Bid : Price Bid to be filled Online. Please note that there will be no reverse auction and rates quoted in online sealed price bids will be final.</p>
9.	Date and time of opening of Technical Bid and Online Price Bids.	07-08-2024 at 3:30 p.m.
10.	Date & Time of E-reverse auction	Not Applicable
11.	Authority & Place of opening the Tenders	Asst. General Manager (P&E), State Bank of India, 5 th Floor, P & E Department, Local Head Office, 11 – Sansad Marg, New Delhi – 110 001
12.	Defects Liability Period	12 months from the date of handing over of the project to the satisfaction of Bank.
13.	Validity of Offer	04 months from the date of opening of tenders.
14.	Liquidated Damages	At the rate of 0.5% of the Contract Value per week which subject to a maximum of 5% of the accepted Contract Value.

15.	Rates	This is an Item Rate Tender. Rates quoted by the bidder shall be including all labour, Materials, Royalties, Octroi, taxes etc except GST which shall be paid extra at the rate & as per Govt / Statutory guidelines / Rules.
16.	Interval of interim bills.	Minimum 30 days
17.	Minimum Net Amount of Interim Bill as admissible after checking by the Bank.	Minimum Rs 30 Lacs plus GST subject to clause 15 above
18.	Release of Total Security Deposit (EMD, ISD & Retention Money) :-	<p>“50% of the Total Security Deposit (EMD, ISD & Retention Money) shall be refunded to the Contractor on”:</p> <p>i) Issue of Virtual Completion Certificate by the Architect / Banks/ PMC & authentication of the same by the Bank.</p> <p>ii) Contractor’s removal of his materials, equipment, labour force, temporary sheds/ stores etc. from the site, (excepting for a small presence required if any for the Defect Liability Period and approved by the Bank).</p> <p>The remaining 50% of the amount may be refunded 15 days after the end of defects liability period provided he has satisfactorily carried out all the works and attended to all defects to the satisfaction of the Bank and in accordance with the conditions of the contract, including site clearance.</p>
19.	Additional Performance Deposit (ASD) / Additional Performance Guarantee (APG)	<p>ASD/ APG shall be deposited by the bidder whose bid is accepted only if their bid amount is 7.5% or more below to the estimated cost put to tender.</p> <p>The Amount of such ASD / ASG shall be the difference amount between 92.50% of the estimated cost and the accepted price / bid FDR (in the name of contractor & SBI) or Bank Guarantee drawn on any other nationalized Bank (except SBI) may also be accepted as ASD / APG. ASD/APG should be deposited/submitted within 15 days of date of issue of letter of Acceptance / work order.</p> <p>ASD shall be returned only after completion of the work to the satisfaction of the Bank.</p>
20.	Note	Contractor shall obtain all the clearances from Municipal Corporation, NDMC, NGT, ASI & other related authorities.

Site Conditions :

Its absolutely necessary that bidder/s should visit the site and get himself acquainted with the site conditions , working hours, various security aspects, other restriction, conditions, permissions to be followed / complied with / obtained as per Administrative Authority of the Building / Municipal Corporation etc. The Contractor shall be bound by the terms, conditions & requirements of the Administrative Authority of the Building. It will be duty of the contractor to timely obtain various permissions / pass etc from the Administrative Authorities of Building and Municipal Corporation.

Mode of Submission of Tender:

Technical bid is to be submitted as per NIT clause no. 8.

The Price Bid in form of item rate sealed price bid shall be filled online. First the Technical Bids (Undertaking ,Process Compliance Statement and EMD submission) shall be opened and after that the Price Bids of only those bidders shall be opened whose Annexure-A & Annexure-B are found in order and who have submitted valid EMD.

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.

State Bank of India has the right to accept / reject any or all tenders without assigning any reasons.

For E-Tender related queries:

Service provider: M/s Antares Systems Limited, Registered Office at: - #24, Sudha Complex, 3rd Stage, 4th Block, Bangalore - 560079. Ph: - 080-49352000 / 40482000 Fax: - 080-49352034

Help Desk: 080-40482100 / 1800-3096630 / 9044314492/ 9073677150/ 151 / 152 / 9674758506 / 9674758723 / 26 / 033 4604 6611

Contact Person: Mr. Pravesh, Mob: 9044314492/Mr. Kushal Bose Mo: 9674758719 (On working days-9 am to 6 pm)

E-mail: praveshmani.t@antaressystems.com / kushal.b@antaressystems.com

For any other queries the vendors may contact Assistant General Manager (Civil)- 7600037709 or Dy Manager (Civil)- 7600035933 , **Premises & Estate Department, 5th Floor, Local Head Office, State Bank of India, 11 – Sansad Marg, New Delhi – 110 001.**

Assistant General Manager (P & E),
State Bank of India,
Premises & Estate Dep't
5th Floor, Local Head Office.
11, Sansad Marg, New Delhi -110 001

Date : 24-07-2024

SAMPLE BUSINESS RULE DOCUMENT

CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA

(A) Business rules for E-tendering:

1. Only Bank's **empaneled Civil contractors** with SBI under appropriate category who are invited by the project Architect/SBI shall only be eligible to participate.
 2. SBI 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, SBI 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 Bank's Civil Engineer, at the address mentioned hereinbefore by the stipulated date i.e. (1) Demand Draft of specified amount of EMD, (2) Process compliance form dully signed. 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:

SBI shall finalize the Tender through e-tendering mode for which **M/s Antares Systems Limited** has been engaged by SBI 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 SBI through **M/s Antares Systems Limited**, 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 SBI is not responsible for such eventualities.

2. **M/s. Antares Systems Limited** shall arrange to train you 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 SBI through 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 SBI 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 percentage rate 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 on percentage above or below the estimated cost put to tender.
 - (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 & PASSWORD:** Each Bidder is assigned a Unique User Name & Password by M/s Antares Systems Limited. The Bidders are requested to change the Password after the receipt of initial Password from M/s Antares Systems Limited. 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 L1 Bidder backs out or fails to complete the work **as per the rates quoted**, SBI shall have the liberty to take action as deemed necessary including de-paneling such contractors and forfeiting their EMD and imposing heavy penalty to contractor to recover the losses occurred to the Bank.
9. At the end of the E-tendering, SBI will decide upon the winner. SBI decision on award of Contract shall be final and binding on all the Bidders.
10. SBI shall be at liberty to cancel the E-tendering process/tender at anytime, before ordering, without assigning any reason.
11. SBI 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 SBI to any other party.

- SBI decision on award of Contract shall be final and binding on all the Bidders.
- SBI reserve their rights to extend, reschedule or cancel any E-tendering within its sole discretion.
-
- SBI or its authorized service provider M/s Antares Systems Limited shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.
- SBI or its authorized service provider M/s Antares Systems Limited is not responsible for any damages, including damages that result from, but are not limited to negligence.
- SBI or its authorized service M/s Antares Systems Limited 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 Antares Systems Limited.

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

ANNEXURE-A

UNDERTAKING

(The bidders are required to print this on their company's letter head and sign, stamp and upload with technical Bid)

Assistant General Manager (P & E),
State Bank of India,
Premises & Estate Deppt,
5th Floor, Local Head Office.
11, Sansad Marg
New Delhi -110 001

Dear Sir,

Subject : CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA

- I / We refer to the tender notice issued by you for Repair & Renovation works of existing boundary wall of SBILD Dehradun new premises in connection with the above.
- I undertake to submit in Hard copy the tender document along with all Terms & Conditions, Specifications, NIT, Instruction to Tenderes etc as uploaded on the site and subsequent annexure and Corrigendum's duly signed and stamped by authorized representative/ signatory on becoming L1. However we accept all the terms and conditions along with the specifications, Drawings, Layouts etc defined in the tender documents as uploaded by the on the site of e-Tendering agency.
- I/ We hereby offer to perform, provide, execute, complete and maintain the works in conformity with the drawings, designs, conditions of contracts, specifications, schedule of quantities relating to the works.
- I/ We have satisfied myself/ ourselves as to the site conditions, examined the drawings and all aspects of the tender conditions, subject to above, I/ We do hereby agree, should this tender be accepted in whole or in part, to:
 - a. Abide by and fulfill all the terms and provisions of the said conditions annexed here to,
 - Complete the works within the period as mentioned in NIT as per the work programme enclosed with the tender in two or three shifts if considered necessary by the Employer / Consultants at no extra cost to the Employer.
 - I / We have deposited an earnest money as per NIT which, I / We note, will not bear any interest and is liable for forfeiture and I shall not be allowed to participate in any of the tender of SBI for a period of 06 months from the date of opening of this tender
- If our offer is withdrawn by us within the validity period of acceptance by the Employer.

Or
- If the contract agreement is not executed by us within 15 days from the date of receipt of the letter of acceptance.

Or
- If we fail to pay the initial security deposit /ASD / APG as stipulated.

Or

- If the work is not commenced immediately after issue of Mail / Letter of Acceptance.
- I / We understand that you are not bound to accept the lowest or any tender you receive.

(Signature of Authorized Person of the Firm)

(Seal of the Firm)

Name of the Signatory :

Date :

Place :

ANNEXURE – B

PROCESS COMPLIANCE STATEMENT

(The bidders are required to print this on their company's letter head and sign, stamp and upload with technical Bid)

To,
M/s. **Antares Systems Limited**

AGREEMENT TO THE PROCESS RELATED TERMS AND CONDITIONS FOR THE E-TENDER FOR CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA

This has reference to the Terms, Conditions etc for the E-tendering mentioned in the Tender documents. This letter is to confirm that:

- 1) The undersigned is authorized representative of the company.
- 2) We have studied and understood the Commercial Terms and the Business Rules governing the E tendering of E-Tendering Agency and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the E-tendering Process / Tool and have understood the functionality of the same thoroughly.
- 4) We confirm that SBI and M/s. **Antares Systems Limited** shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the E tendering platform due to loss of internet connectivity, electricity failure, virus attack problems with the PC and / or 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 honour the Bids placed by us during the E-tendering process.

With regards.

(Signature of authorised Signatory)

(Seal of the Company/Firm)

Name :

Date :

Designation :

Address of Company/Organization

FORM OF TENDER

To,
Assistant General Manager (P & E),
State Bank of India,
Premises & Estate Deptt,
5th Floor, Local Head Office.
11, Sansad Marg
New Delhi -110 001

Dear Sir,

CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA

- I/ We refer to the Notice Inviting Tender issued by you for the captioned work.
- 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.
- 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.
- I/We have already deposited the Earnest Money Amount as per NIT.
 - I/We are uploading /submitting the Part-A (Technical Bid) with other requisite documents online at designated site.
 - We confirm that I/We will participate in online Indicative (Sealed) Bid and in on- line reverse auction as per schedule.
 - I/We confirm that I/We are duly authorized to participate in the tendering/bidding and understand that my / our tender is liable to be rejected if,
 - At any times it comes to the notice of the Banks that I/We have concealed or / and have given any wrong information.
 - The tender is not duly filed and /or signed and / or is incomplete and/or not kept confidential.
 - The bid contains any condition / alteration / modification and/or any tempering with the tender documents is done at our end.
 - Tender submitted after due date and time

All the pages of the tender documents are affixed with the seal/stamp of my/our company and initialed / signed by the undersigned.

Signature of Tenderer/s

Seal /stamp of the firm/company (Duly authorized for tendering)

(On Non -Judicial Stamp paper of appropriate value)

ARTICLES OF AGREEMENT

This agreement made theday of between AGM (P&E), State Bank of India, LHO New Delhi (hereinafter called the Bank or SBI) which expression shall include the successors and assigns) of the one part and M/s. company / partnership for registered under the Indian Companies Act/ Partnership Act having its registered office..... (hereinafter called 'the Contractors' which expression shall include the present directors / partners and also the directors / partners from time to time as also their respective heirs, legal representatives, administrators and assigns) of the other part.

WHEREAS the employer is desirous of execution of work i.e **"CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA"** and has caused drawings and specifications describing the works to be done prepared by Project Architects **M/s Mohan & Associates having their offices at 202 Padma Tower II Rajendra Place, NEW DELHI-110049 Contact- 7428190271** (hereinafter called "the Architect")

AND WHEREAS THE SAID Drawings numbered as mentioned in the tender documents hereinafter mentioned and to be issued from time to time, the specifications and the Schedule of items and quantities have been signed by or on behalf of the parties hereto.

AND whereas the contractors have agreed to execute upon and subject to the condition set forth herein and Schedule of items and quantities, General & special Conditions of Contract, specification 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 hereinafter referred to as "the said conditions"). The works shown upon the said drawing 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 of ____Rs____ (Rupees _____in words_____) as there in arrived at or such other sum as shall become payable there under (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 times and the manner set forth in the said Conditions, the Contractors shall upon and subject to the said conditions execute and complete the work shown upon the said drawings and described in the said specifications and the schedule of items and quantities.
2. The employer shall pay the Contractors the amount or such other sum as shall become payable, at the times and in the manner specified in the said conditions.
3. The term "the Architect" in the said condition shall mean the said "M/s _____" or in the event of their ceasing to be the Architect for the purpose of this contract for whatever reason, such other person or persons as shall be nominated for that purpose by the Employer, not being a person to whom the Contractor shall object for reasons considered to be sufficient by the Employer provided always that no person or persons subsequently appointed to be Architect under this contract shall be entitled to disregard or over rule any previous decisions or approval or direction given or expressed in writing by the architect for the time being.
4. The said conditions and appendix thereto shall be read and construed 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.

5. The plans, agreement and documents mentioned herein shall form the basis of this contract.
6. This contract is neither a fixed Lump sum contract nor a piece work contract but is a contract to carry out the work in respect of the entire project on item rate basis to be paid for according to actual measured quantities at the rates contained in the schedule of quantities and rates or as provided in the said conditions.
7. The Bank / Employer reserves to itself the rights of altering the specifications and nature of work by adding to or omitting any item of work or having portions of the same carried out without prejudice to the contract.
8. Time shall be considered as the essence of this contract and the contractor here by agrees to commence the work soon after the site is handed over to him or from the 14th day after date of issue of formal work order as provided for in the said conditions of contractor whichever is later and to complete the entire work within ____ (period of contract) months subject never the less to the provisions for extension of time.
9. All payments by the Employer under this contract will be made only at _____.
10. Any dispute arising under this Agreement shall be referred to arbitration in accordance with the stipulations laid down in the tender.
11. That all the parts of this contract have been read by the contractor and fully understood by the contractor. They further agree to complete the said work to fullest satisfaction of architect / Employer.
12. IN WITNESS WHEREOF the Employer and the contractors have set their respective hands to these present through their duly authorized official and the said two duplicates hereof to be executed on its behalf of the day and year first herein above written.

Signed on behalf of the

Signed on behalf of the

STATE BANK OF INDIA

CONTRACTORS

In the presence of :

In the presence of :

1. Signature :
Name :
Address :

1. Signature :
Name :
Address :

In the presence of :

In the presence of :

2. Signature :
Name :
Address :

2. Signature :
Name :
Address :

INSTRUCTIONS TO THE TENDERERS

1.0 Scope of Work

“CIVIL REPAIR & RENOVATION OF 22 ROOMS WITH WASHROOMS & CONSTRUCTION OF NEW PLUMBING SHAFTS AT HOSTEL BLOCK BUILDING OF SBILD NOIDA” all as described in Tender and Drawings inclusive hereto as Specifications.

1.1 Site and its location:

The proposed work is to be carried out at State Bank Institute of Learning & Development, Sector-62, Noida.

2.0 Tender Documents

2.1 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
- Drawings
- Price Bid
- NIT
- Performance Guarantee Agreement

2.2 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 :

- o Bill of Quantities / Price bid
- o NIT, corrigendum and addendum
- o Additional Conditions
- o Technical Specifications
- o Drawings
- o Special Condition of Contract
- o General Condition of Contract
- o Instructions to Tenderers

2.3 Complete set of tender documents including relative drawings can be downloaded from e-Tendering portal of e-Tendering service provider engaged by SBI

2.4 The tender documents are not transferable.

3.0 Site Visit

3.1 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, labor, 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 while submitting his tender.

4.0 Earnest Money

4.1 The tenderer are requested to submit the Earnest Money as mentioned in NIT

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

4.3 No interest will be paid on the EMD

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

4.5 EMD of successful tenderer will be retained as a part of security deposit.

5.0 Initial Security Deposit (ISD)

The successful tenderer will have to submit a sum as mentioned in NIT within a period of 15 days of acceptance of tender.

6.0 Security Deposit (TSD)

6.1 Total Security Deposit shall be as per NIT which is including ISD. Balance difference of TSD & ISD shall be deducted from the running bill of the work at the rate of 10% of the respective running account bill i.e. deduction from each running bill account will be 10% till total 5% of contract value is reached. 50% of the total security 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 successful completion defects liability period as specified in the contract.

6.2 No interest shall be paid on the amount retained by the Bank as Security Deposit.

7.0 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 Bank. However, the written acceptance of the tender by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered into or not.

8.0 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 specified in the NIT from the date of handing over of site or from the date of Letter of Acceptance whichever is later.

9.0 Validity of tender

Tenders shall remain valid and open for acceptance for a period as mentioned in the NIT (validity of Offer) from the date of opening of price bid. 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 Bank, without prejudice to any other right or remedy, the Bank shall be at liberty to forfeit the EMD.

10.0 Liquidated Damages

The liquidated damages shall be as mentioned in the NIT.

11.0 Rate and prices:

11.1 In case of item rate tender

11.1.1 The tenderers shall quote their rates on percentage basis above or below the estimated cost both in words and figures. In case of discrepancy between the rate quoted in words and figures the percentage rate quoted in words will prevail. The rate and amount of each item shall be calculated based on the item rates quoted and the requisite total is given.

11.1.2 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.

11.1.3 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.

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.

11.1.4 Each page of the BOQ shall be signed by the authorized person and cutting or overwriting shall be duly attested by him

11.1.5 Each page shall be totaled and the grand total shall be given.

11.1.6 The rate quoted shall be firm and shall include all costs, allowances, taxes, levies, labour cess, statutory charges, local municipal charges, liassioning charges etc. unless otherwise specified to be paid extra in these tender documents. Only GST will be paid extra as applicable.

GENERAL & IMPORTANT NOTES

1 GENERAL NOTES:

- (i) Unless otherwise specified in these tender documents mode of measurements specifications etc. shall be as per relevant IS codes.
- (ii) Source of materials / samples / brands / makes etc. shall be got approved from the Architects / Bank before using. In case of deviations, decision of the Bank shall be final and binding and shall not be open for arbitration.
- (iii) The Architects have their specific role / duties / rights as defined in these tender documents. However in the event of any dispute arising out of differences between the opinions of the Architects and also their role/ duties/rights, the Banks' decision shall be final & binding on the Architects and the Contractor and shall not be open to arbitration.
- (vi) The Contractor will extend full co-operation, support and all required assistance to Architect / Bank for discharging their duties and responsibilities efficiently and effectively.
- (vii) The contractor has to supply and adhere to the specific makes and specifications of all the items, which are mentioned in the separate list of approved makes. Any work found not as per the tender specifications and list of approved the contractor has to replace the same without any delay. The contractor is instructed of get approval of all the materials to be used on this site before starting the work. He should provide different sample of material for approval, before execution of work.
- (viii) All quantities indicated in the tender are approximate & are likely to change. The contractor must take actual measurement at site and billing shall be done as per the actual measurement of the work done at site.
- (ix) Work has to be got executed at site in coordination with various agencies working at site.
- (x) The contractor is instructed to get the approval of the materials to be used on this site before starting the work. He shall provide different sample of materials for approval before execution of the work
- (xi) All material have to be used in full size/length only. Joints should be avoided as far as possible.
- (xii) Any item mentioned in the BOQ with "TO THE SHAPE" will have measurement of onsite executed to the shape area only.
- (xiii) Making various levels & line out for total layout on site for the items in scope of the work shall be done by the contractor at his own cost.
- (xiv) MTC (Manufacturer Test certificate) Where ever applicable shall be arranged & submitted by the contractor. Testing of wood for moisture, knot % etc. shall be carried out by the contractor at his own cost.

2. IMPORTANT NOTES:

- (i) The contractor's qualified & authorized representative shall remain on site during the entire execution process for coordination with various agencies / Architect / Bank & execution of work.
- (ii) If the assigned work is in running/working Branch, the contractor should have executed the site erection work in odd hours, Holidays and Sundays.
- (iii) The contractor shall prepare all loose furniture items at his workshop only & deliver the same to

the site at appropriate time as instructed by the Architect/BMs/Bank Officials.

(iv) The site shall be cleaned on day-to-day basis & all debris shall be disposed away at the location beyond the limit as approved by the local authority.

(v) Hidden measurements:- It is contractor's responsibility to get the measurement checked immediately on completion of such items. This shall be done before finishing the same. The Architect / Bank shall be provided with such details well in advance so that the other work is not held up due to last moment action.

(vi) Before starting the work at site, the contractor shall mark out the plan & levels of the false ceiling, partitions etc. in coordination with other agencies on site.

vii) The rates quoted shall be inclusive of all taxes, Duties, Octroi, Transportation, Delivery, Installation, Testing, Commissioning etc. complete at the site. No extra will be paid for any kind of taxes. However, the GST will be paid extra as applicable as per actual.

viii) The entire job shall be executed in total coordination with the other agencies working on the project & also with landlord, Branch Manager and Bank officials etc.

ix) Architect of the project shall be kept informed about the progress of the work at various stages.

x) The contractor shall arrange on his own for lighting & plug point with socket & electrical wiring, DB's etc. required during entire execution process. However supply at point shall be provided by the bank / landlord

(xi) Any Hidden item MUST be photographed and need to be sent via e- mail or CD to Architect / Bank

xii) BILLING PROCESS:

The contractor/Architect should take care of the following while submitting the final Bill

The Final Bill Should Contain:-

a) Abstract in tender BOQ format only.

b) Schedules for detailed measurement sheet for all items (in detailed break up).

c) Original insurance policies as per tender terms and conditions.

d) Completion certificate issued by the concerned Architect.

e) Inspection & completion certificates for all types of false ceiling.

f) Test report for Toughened Glass.

g) Copy of LOA etc.

h) All documents shall carry contractor's signature & seal with address. - All documents shall be submitted in 1 + 1 copies.

i) The contractor shall also provide all measurement sheet in soft copy (in Excel format).

j) The contractor shall submit the purchase bill copy of major items used in the project.

k) That extension of time, if any, beyond scheduled date of completion has been granted by the Competent Authority.

- l) Original receipt of purchase of Corian/plywood/ Gypboard and other major materials used in the work from the original manufacturer/authorized dealers/distributors.
- m) If any advances paid during the execution of the work.
- n) Acceptances form the contractor that "Accepted as full and final settlement of all claims"
- o) The total cost of work should be within the sanction amount, If not, revised sanction taken from the Competent Authority to be attached with the Final Bill

IMPORTANT: ALL DOCUMENTS SHALL BE SUBMITTED AT ONCE (NOT IN PIECEMEAL MANNER) ALONG WITH FULL&FINAL BILL &SHALL BE DULY SIGNED BY PUTTING COMPANY'S ADDRESS SEAL

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 (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 ‘SBI shall mean SBI having its Office at Fifth Floor, SBI, LHO, New Delhi and includes the client’s representatives, successors and assigns.

1.0.2 ‘Architects/ Consultants’ shall mean the person or agency engaged by the Bank for Architectural / PMC services. The whole work, measurements shall be carried out under his supervision.

1.0.3 ‘Site Engineer’ shall mean an Engineer appointed by the SBI 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 incorporation, 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.

1.1.11 ‘Engineer-in-charge’ shall mean the Bank’s Civil/Electrical Engineer in-charge of the Project, as nominated by the AGM (P&E) / AGM Civil.

1.0.5 ‘Drawings’ shall mean the drawings prepared by the Architects and issued by the Engineer and referred 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.

1.0.6 ‘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.

1.0.7 “Month” means calendar month.

1.0.8 “Week” means seven consecutive days.

1.0.9 “Day” means a calendar day beginning and ending at 00 Hrs and 24 Hrs respectively.

1.0.10 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) Assist General Manager – (P &E)
- ii) Assist General Manager – (Civil)
- iii) SBI Engineer (Civil and Electrical) in-charge of the Project.

CLAUSE

1.0 Total Security Deposit:

Total security deposit shall be 5% of contract value. Deduction from each running bill account (if permitted) will be @ 10% till Total Security Deposit (TSD) reaches to 5% of contract value. The 50% of the Total Security Deposit shall be paid to the contractor on the basis of Architect's certifying the virtual completion. The balance 50% would be paid to the contractors after completion Defects Liability Period as specified in the contract/WORK ORDER.

1.1 Earnest Money Deposit-

As per NIT. The EMD/ any other amount with the Bank shall stand absolutely forfeited if the tenderer revokes his tender after acceptance of rate at any time the period when he is required to keep his tender open acceptance by the SBI or after it is accepted by the SBI , the contractor fails to enter into a formal agreement or fails to commence the work within the stipulated time.

1.2 **Initial Security Deposit (ISD)**: Additional Security Deposit as per NIT.

1.3 Retention Money:

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 plus Retention Money shall both together not exceeding 5% of the contract value including EMD. 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:
- iv. In case of difference between rates written in figures and words, the rate in words shall prevail.
- v. 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/awarded 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 SBI 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/or re- execution 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 SBI 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 SBI and the contractor.

ii) Contract Agreement:

On receipt of intimation of the acceptance of tender from the SBI /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 SBI through its Architect / consultants are the properties of the SBI They are not to be used on other work.

7.0 Detailed drawings and instructions:

The SBI 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 SBI 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 SBI 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 SBI /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 SBI 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 SBI 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 SBI

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 SBI and the original policy may be lodged with the SBI

13.0 Inspection of work:

The SBI / 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 SBI/Architect/consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. No person unless authorized by the SBI/ 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 SBI 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 be 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 SBI/ 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 SBI 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 SBI, the contractor shall ensure that the following works have been completed the satisfaction of the SBI:

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 SBI not incorporated in the permanent works.

Remove all rubbish, debris etc. from the site and the land allotted to the contractor by the SBI and shall clear, level and dress, compact the site as required by the SBI

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

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

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

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 SBI 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 SBI 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 SBI / 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 SBI 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 SBI and contractor are covered for the period stipulated in 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 SBI which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the Architect / consultant the policy of 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 SBI 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 SBI 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 SBI, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

27.0 Contractor to indemnify SBI:

The contractor shall indemnify the SBI 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 SBI 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 SBI 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 SBI 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 SBI, or to any person, including any employee of the SBI, 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 SBI 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 SBI Shall not be liable for or in respect to any damages or compensation payable at law in respect or in consequence 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 SBI or their agents, or employees. The contractor shall indemnify and keep indemnified SBI 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 SBI 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 SBI 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 SBI 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 SBI 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 SBI 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 SBI 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 SBI

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 the stipulated period 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 SBI 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 SBI 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 SBI 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 SBI

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 SBI 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 SBI 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 SBI:

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 SBI.

To employ labour paid by the SBI 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 SBI 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 SBI 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 SBI 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 SBI 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 SBI 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 SBI or Architect's / consultant's instructions to the

contrary subject any part of the contract. Then and in any of said cases the SBI 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 SBI 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 SBI 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 SBI 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 SBI sell the same by publication, and after due publication, and shall, adjust the amount realized by such tender. The contractor shall have no right to question any of the act of the SBI 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 SBI From time to time SBI 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 SBI 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. Interim Bills shall be paid as per NIT.

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 SBI 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 AGM (P&E) LHO Delhi 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 SBI 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 AGM (P&E) LHO Delhi 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 AGM (P&E) LHO Delhi in writing in the manner and within the time aforesaid.

B. Settlement of Disputes and Arbitration:

The AGM (P&E) LHO Delhi 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 Submit his claims to the conciliating authority namely the CDO., SBI, LHO, Delhi for conciliation along with all details and copies of correspondence exchanged between him and the SBI.

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 CGM of the SBI 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 SBI shall be referred for adjudication through arbitration by the Sole Arbitrator appointed by the CGM 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 SBI, Officer and that he had to deal with the matters to which the Contract relates in the course of his duties as SBI, 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 CGM of the SBI 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 SBI 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 in 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 SBI source of water i.e. Municipal connection, Bore well (existing or new) etc., the SBI will recover as per clause **51.0** of this document from the final bill of contractor.

The contractor shall construct temporary well / tube well in SBI Pvt. Ltd land for taking water for construction purposes only after obtaining permission in writing from the SBI 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 SBI 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 SBI will recover as per clause **51.0** of this document from the final 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 SBI 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 enclosed perform at site of work and should produce the same for inspection of SBI /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.

- i) Register for secured advance
- ii) Register for hindrance to work
- iii) Register for running account bill
- iv) Register for labour

50.0 Force Majeure:

Neither contractor nor SBI 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 SBI 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 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 connection 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 reimburse the amount on production of receipts.

The SBI 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 SBI will recover @ 0.50% of final bill amount for water and electricity (Combined) from the bill of contractor.

52.0 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.

53.0 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.

54.0 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 make 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 fire fighting equipment.
- f) General housekeeping.

55.0 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 be 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.

56.0 Temporary fencing/barricading:

The contractor shall provide and maintain a suitable temporary fencing/barricading/ green nets 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.

57.0 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 be held if required by the architect/ consultant. -

58.0 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.

59.0 Contractor to verify site measurement:

The contractor shall check and verify all site measurements whenever requested other specialists contractors or 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.

60.0 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.

61.0 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 SBI / 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 SBI / 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.

62.0 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.

63.0 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

64.0 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 SBI 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.

65.0 Acceptance of tender:

The SBI 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 SBI. However adequate transparency would be maintained by the SBI

66.0 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/ SBI may consider returning the Bill to the contractor and no claim for delay on this account will be entertained.

67.0 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 runnings 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 from defects.

SPECIAL CONDITIONS OF CONTRACT

1. 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. Notice of operation:

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

3. 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. 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. 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. 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 be 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. 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.

d. All the expenses for obtaining statutory approvals and maintenance of the above facilities as well 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

8. Fire fighting arrangements:

The contractor shall provide suitable arrangement for firefighting 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.

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.

- Proper handling, storage and disposal of combustible materials and waste.
- Work operations which can create fire hazards
- Access for firefighting equipments.
- Type, number and location of containers for the removal of surplus materials and rubbish.
- Type, size, number and location of fire extinguishers or other fire fighting equipments.
- General housekeeping.

9. 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 work, 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 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 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 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 notwithstanding the signing of any Certificate or the passing of any accounts, by the Architect.

ADDITIONAL CONDITIONS OF CONTRACT

Notwithstanding anything contained herein above the following ADDITIONAL CONDITIONS shall be applicable for this contract / work.

1. PRICE VARIATION ADJUSTMENT (PVA):

The rates/ Percentage quoted by the bidder shall remain firm throughout the contract / construction period. PVA & PVA Clause mentioned elsewhere in these documents shall not be applicable.

2. WORKING SCHEDULE / BAR CHART:

Detailed working date schedule and bar chart for the work shall be prepared by the contractor and got approved from the Bank / Architect. A detailed flow chart of activities highlighting curing, setting time / period, pot life period / predecessor, successor & critical activities etc. shall also be prepared by the contractor for effective management of work and also to make a realistic bar chart / working date schedule.

3. RATES:

It may be noted that it is an item rate contract. Rates after applying K-factor on indicative price bids on the basis of amount quoted in reverse auction by successful bidder and accepted by the bank shall be for all levels/height and lead unless otherwise specified in the schedule of quantities and shall be inclusive of all man, labour, supervision, materials, tools, equipment, scaffoldings, water, electricity, taxes, insurances, arrangements, temporary works, over heads, collection & carting away & final disposal of rubbish & debris, regular cleaning of site etc. required to complete the works in all respect to the satisfaction of the architects / Bank and nothing additional or extra shall be paid on these accounts and / or on account of variation in rates / taxes and / or imposition of new tax / levy during currency of contract / work, except for the items, taxes, works etc. for which there is a specific mention for additional payment in these tender documents. The rates shall remain firm throughout the contract period.

4. BASIC RATE:

Wherever for any item of work basic rate of materials are specified, the materials of that basic rates as selected by the Bank/Architect at any commercial establishment/ seller of Ahmadabad or nearby centre, if such materials are not available at Ahmadabad, shall be procured and used by the contractor.

Basic rate of any material (Without processing) is the rate offered by seller against Bill and credit period not exceeding 15 days, including all applicable taxes etc (but excluding GST) ex- godown. Payments for procurement of materials shall be made by the contractor themselves. If the basic rate of any material actually used for the work is more or less than the basic rate given in schedule of quantities, in that case adjustments in the rate admissible to the contractor shall be modified by adding or subtracting, as the case is, from the accepted tender rates an amount equivalent to difference in the basic rates plus 15 % of difference of the basic rate.

5. BRANDED / FINISHING ITEMS:

Branded items such as tiles, construction chemicals, hardware, sanitary wares and other finishing items shall be used as per the samples selected and approved by the architects / Bank from the brands/makes mentioned in the tender document. If the contractor intend to use an equivalent substitute than, they have to produce necessary documentary evidences establishing the equivalency to the satisfaction of the architect/Bank and shall use the same only after approval of the architect.

6. INSURANCE

The contractor shall keep the Bank indemnify from all the claims arising out of damage to workman/person & property of Bank and/or third party and the SBI shall have right to

recover the cost of such damages /claim from any amount due to the contractor. If the claim amount exceeds the amount due to be paid to the contractor, the contractor shall immediately pay such excess amount to the Bank. Decision of the Bank regarding determination of the amount of claim /damage shall be final & binding to the contractor. Being a short period work, the Bank may not be able to check or verify the various insurance policies required to be taken by the contractor and trust that the contractor has obtained all such policies.

7. SITE CONDITION & WORKING HOURS.

The tenderer must visit the site and acquaint themselves with the site conditions. It must be noted that the work is to be carried out in the functional branch without hindering the normal functioning of the Branch. The work shall generally be carried out on holidays or after Banking hours only.

The work is to be carried out in running branch premise; therefore the work may be carried out day & night.

The contractor has to work in coordination with the other contractors and daily/weekly schedule of working shall be prepared in consultation with the Architects/Banks. Regular updating / modification of such schedule shall be required.

For normal functioning of the Bank/Branch the contractor shall be required to shift the furniture etc and/or relocate the existing and/or new loose and/or fix furniture and/or any other item of works and/or any such materials at new location at times. The contractor shall carry out all such activities with utmost priority and without any additional/extra cost to the bank. The tenderer shall quote the rates inclusive of all such activities/works as may be required as per site conditions. The rates quoted by the tenderer shall be inclusive of all such temporary/ semi-permanent works/activities.

8.GENERAL:

- a. Source of materials / samples / brands / makes etc. shall be got approved from the Architects /Bank before using. In case of deviations, decision of the Bank shall be final and binding and shall not be open for arbitration.
- b. The Architects have their specific role/duties/rights as defined in these tender documents However in the event of any dispute arising out of differences between the opinions of the Architects and also their role/duties/rights, the Banks' decision shall be final & binding on the Architects and the Contractor and shall not be open to arbitration.
- c. Any item mentioned in the BOQ with "TO THE SHAPE" will have measurement of onsite executed to the shape area only.
- d. The contractor's qualified & authorized representative shall remain on site during the entire execution process for coordination with various agencies/ Architect/Bank & execution of work
- e. Hidden measurement. It is contractor's responsibility to get the measurement checked immediately on completion of such items. This shall be done before finishing the same & before ceiling boarding done. The Architect shall be provided with such details well in advance so that the other work is not held up due to last moment action.
- f. MTC (Manufacturer Test certificate) Where ever applicable shall be arranged & submitted by the contractor.
- g. Water & Electricity, if available, shall be provided by the Bank at one point without any charges. However, if the water & electricity could not be provided by the Bank, the same shall be arranged by the contractor at their own cost within the quoted/accepted rate. Nothing extra shall be paid by the Bank on account of not providing the water & Electricity.
- h. Wherever the specifications are not specified in details the work shall be carried out as per CPWD specifications or Manufacturer's instructions or architects instructions depending upon the site conditions as directed by the Bank/ Architects.
- i. The contractor shall produce the bills / challans / documentary evidences and proof in respect of genuineness of materials used by him when so ever asked/demanded by the Architects/Bank.

TECHNICAL SPECIFICATIONS FOR CIVIL WORKS

General:

This specifications are for the work to be executed items to be supplied and materials to be used in the works as shown and defined on the drawings and described here in all under the supervision and to the satisfaction of the architect / employer.

The workmanship is to be the best available and to a high standard. Use must be made of specialist tradesmen in all aspects of the works, and allowance must be made in the rates for doing so.

The materials and items to be provided by the contractor shall be the best of their respective kinds, approved by the architect in accordance with any samples, which may be submitted for approval, and generally in accordance with the specification. Where materials or products are specified in this specification and/ or bill of quantities by the name of the manufacture or the brand trade name or catalogue references the contractor will be required to obtain the approval of the architect/ employer before using a material or product other than the specified. The contractor shall produce all invoices, vouchers or receipted accounts for any materials of called upon to do so by the architect.

Sample of all material are to be submitted to the architect for his approval before the contractor orders or delivers in bulk to the site. Also, the contractor will be required to submit specimen finishes to colors, fabrics etc. For the approval of the architect before proceeding with the works. Should it be necessary to prepare shop drawings, then four copies of such drawings shall be submitted for the approval of the architect who will retain to copies, all at the contractors expenses.

Materials

The materials shall be of the best-approved quality obtainable and shall comply with the respective Indian standard specification.

If directed, materials shall be tested in any approved testing laboratory and the test certificates in original shall be submitted to the architect and the entire charges for repeated testes, if ordered shall be borne by the constructor.

It shall be obligatory for the contractor to furnish certificate, it demanded by the architect, from manufacturer of the material supplier that the work has been carried out by using their material and as per their recommendations.

All materials supplied by the employer / any other specialist firm shall be properly stores and the contractor shall be responsible for its safe custody until they are required on the works and till the completion of work.

Unless otherwise shown on the drawings or mentioned in the "Schedule of Quantities" or special specifications, the quality of materials, workmanship, dimensions etc., shall be as specified herein under.

The contractor without any extra cost for carrying out field-tests on materials shall provide all equipment and facilities.

Unless mentioned specifically, all materials used in the construction shall conform to the relevant Indian standards published by bureau of Indian standards.

The contractor whenever in doubt should get the materials approved by the architect, before use. A sample of approved material should be deposited with the architect.

Test certificates from the laboratory approved by the architect will have to be furnished, if so directed by him. The contractor will pay all costs for the same.

For special items to be used, the manufacturer's instruction of handling and installation shall be strictly adhered to. The contractor shall obtain, the guarantee certificate from the manufacturer and pass on the same to the owner.

Materials if supplied by the owner, shall be properly stored in the safe custody of the contractor. The same shall be carefully used and shall be properly preserved till the work is completed and handed over to the owner. Proper accounts of such materials will be maintained and will be presented for inspection and physical verification as and when requested by the owner.

Timber:

Timber generally is to be the best of its kind, well and properly seasoned, of mature growth, free from worm holes large loose or dead knots or other defects and sawn die square and will not suffer warping, splitting or other defects through improper handling.

The wood is to be Steam beach weighting not less than 45 lbs per cubic foot with moisture content not exceeding 12% to 14%. The moisture content of timber shall be determined according to method described in paragraph 4 of is: 287 for "maximum permissible moisture content of timber used for different purpose in different zones".

In measuring cross-sectional dimensions of the frame pieces tolerance up-to 1.5 mm shall be allowed for each planned surface.

Good quality Steam beach wood:

Steam beach wood be of good quality and well seasoned. It shall have uniform color, reasonably straight grains and shall be free from large, loose dead knots, cracks, shakes, warp, twists, bends, borer, holes or defects of any kind. No individual hard and sound knot shall be more than 1 cm. In diameter and aggregate area of all knots shall not exceed ½ % of the area of the piece. It shall be close grained and there shall not be less than 6 growth rings per 2.5 cm width.

Good quality Steam beach wood:

Steam beach wood shall be of good quality and well seasoned. It shall have uniform color reasonably straight grains and shall be free from large, loose, dead knots, cracks, shakes, warp, sound knot shall be more than 2.5 cm. In diameter and aggregated area of all knots shall not exceed 1% of the area of the piece. There shall not be less than 4 growth rings per 2.5 cm width.

Timber is to be cut to the required sizes and lengths as soon as practicable after the works are begun and stored under cover so that the air will circulate freely around it. Joinery is to be prepared, immediately after the placing of the contract, framed up (but not bonded) and stored until required for fixing in position, when it is to be bonded and wedged up. Any portions that warp or develop shakes or other defects are to be replaced before wedging up. The whole of the work is to be framed and finished in a proper and workman like manner, in accordance with the detailed drawings, and fitted with all necessary motifs straps, belts screws etc. Running bounded joints are to be cross-tongued with teak onguese and where over 1-1/2% thick double cross tongued. Joiner's work generally is to be finished with fine

class papered surfaces unless otherwise specified.

Templates boxes and moulds shall be accurately set out and rigidly constructed so as to remain accurate during the time they are in use.

Grounds are to be clean shown, free from large knots, splayed as required, plugged and fixed to walls etc. At 1'-6" centers.

Wood plugs are to be put cut on the twist. Patent wall plugs or plastic filling may be used in lieu of wood plugs with the approval of the architect.

All unexposed surfaces of timber e.g. walls ceilings, backings fillets backs of doors frames backs of doors frames, cupboard framing, grounds etc. Are to be treated with two coats of approved timber preservative like soigné, kirticite, term seal or castral or vacuum pressure impregnated with and approved water soluble timber preservative before fixing or bedding.

Timber shall be well seasoned and of the best quality Indian teak of specified species. Timber shall be considered as well seasoned, if its moisture content does not exceed the following limits.

- (1) timber for frames. 14%
- (2) timber for planking, shutters etc. . . 12%

The moisture content of timber shall be determined according to method described in paragraph 4 of is 287 for "maximum permissible moisture content of timber used for different purposes in different climatic zones".

In measuring cross-sectional dimensions of the frame pieces tolerance up-to 1.5mm shall be allowed for each planed surface.

Carpentry & Joinery:

The carpenter and joiner shall include the finishing of all labor, materials, equipment, and appliances required to complete the work including the installation of hardware as per the drawing. The timber shall be of the quality as described on the drawings or in the bills of quantities, shall be seasoned and uniform in texture, free from fungal growths, knots, waness, open shake borer holes, rot, decay, discoloration, soft or spongy spots, holes, rot, decay, discoloration, soft or spongy spots, hollow pockets, patch or box heart and all other defects.

Skilled workmen, using proper tools, shall carry out all the carpenter's work. All joints shall be securely nailed without splitting the wood. Wherever it is necessary the members shall be lapped or joining by g.i. staples or extra wood blocks. All joints and nailing shall be done in neatness, and shall be approved by the architects. All assembly is exactly at right angles.

Finish woodwork and joinery including doors shall be surfaced with straight without any warp of bow and shall have smooth, well-planned faces at right angles to each other. The frame members shall be planned on the three sides exposed at right angles to each other.

All joinery work shall be securely mortised and tanned with synthetic resin conforming to I.S. 851-1957. Heads, posts, transoms, mullions of door and window frames shall be made out of single pieces of timber only. The heads and posts shall be thought - tanned into the mortises of not less than 1/2". Solid wood panels of not less than 5" and not more than 8" in width shall be used and jointed together with tongue and groove joint.

All interior wood finish doors, cabinetwork shall be smoothly traded and sanded after erection, until all defects are entirely removed. Assembled door frame without sills shall be

fitted with temporary stretchers. All exposed wood and plywood shall be straight-grained method grain and color and shall be approved by the architects. Interior wood finished doors cabinets and other fixed wooden equipments shall be properly installed, level plumb and true. But joints shall be avoided wherever possible; if unavoidable the joint shall be leveled. All exterior angles shall be mitered. Adjoining interior woodwork shall match and harmonies. All woodwork in contact with masonry shall be painted with bitumen paint or red oxide paint.

Joints:

All joints will be standard, mortised and tenon, dovetail, dowel, cross-halved, metered, tongued and grooved and rebated. Nailed or glued but joints, will not be permitted exceptional cases, ailed but joints will not be accepted. All joints shall be smeared with white lead.

Whenever solid wood is specified it shall be as per I.S.I. and of good quality. The type of wood shall be got approved before collecting the same on site. Fabrication of wooden members shall be started only after approval. It shall be free from large, loose, dead or cluster knots, flows, shakes, wraps, bends or any other defect. It shall be uniform in substance and of straight fibers as far as possible. It shall be free from rats, decay, harmful fungi and other dejects of nature which will affect the strength, durability of it usefulness for the purpose for which it is required. The color of wood shall be uniform as far as possible. The scantlings planks etc. Shall be seen in straight lines and planes in the direction of grain and have uniform thickness.

Plywood:

Plywood for general purpose shall confirm I.S. 303 MR grade & I.S. 710 B.W.P. / marine grade as specified. It shall be formed with 0.8 mm. Thicknesses commercial face veneers and 1.5 mm. Thicknesses. Intermediate veneers in two opposite grain direction shall be 1:1. The moisture content shall not be more than 12.5% by mass. It shall either be kit ply make or other equivalent approved make. Where B.W.P. grade is specified it should be boiling waterproof confirming to I.S. standards.

The plywood for general purpose shall conform to is I.S. 303 MR grade & I.S. 710 B.W.P. / marine grade as specified Cementing together thin boards or sheets of wood into panels makes plywood. There is always an odd number of layers 3,5,7,9 ply etc. The plies are placed so that grain of each layer is right angle to the grain in the adjacent layer.

According to is I.S. 303 MR grade & I.S. 710 B.W.P. / marine grade as specified the plywood for general purpose shall be of three grades namely I.S. 303 MR grade & I.S. 710 B.W.P. / marine grade as specified depending upon the adhesives used for bonding and veneers, and it will be further classified into six types namely aa, ab, ac, bb, bc and cc based on the quality of the two face, each face being of three kinds namely, a, b and c.

I.S. 303 MR grade & I.S. 710 B.W.P. / marine grade as specified formed with 0.8 mm. Thickness commercial face veneers and 1.5 mm. Thick intermediate veneers in to two opposite grain direction. The moisture content shall not be more than 12.5 % by mass. Where B.W.P. grade is specified it should be boiling waterproof conforming to Indian standards.

Laminates:

All the laminate to be used shall be of 1.0 mm (or 1.5 mm or 0.5 mm where specified) thickness in approved the color and shade as approved and specified by the architect. It shall be matt finish manufactured by recommended makes as per sample shown by the consultant unless otherwise specified. It shall satisfy all the I.S.I. standards for melamine coated laminated fiber board's before the use of such fiberboard laminated. The contractor shall have to take approval of the department of each sheet of the laminates.

Fixtures & Fastenings:

The fixtures and fastening, that is, butt hinges, tend 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.

They shall be of S.S., S.S. brush finish, iron, brass, aluminum, chromium plated iron, and chromium plated brass, copper oxidized iron, copper oxidized brass or anodized aluminum as specified.

The fixtures shall be heavy type. The fixtures and fastenings shall be smooth finished and shall be such as will ensure ease of operation.

The samples of fixtures and fastening shall be got approved as regards quality and shape before providing them in position. Brass and anodized aluminum fixtures and fastenings shall be bright finished.

Screws, nails, bolts will be of brass or other non-corrosive metal. In hardware, they will match the finish of the hardware item. Nails, in a finished surface shall be neatly punched and the hole filled with wood filler matching the finish. Screws in a finished surface will be round head, raised head or sunk beneath the surfaces and the hole plugged with a wood plug with matching color and grain of the wood surface as directed.

S.S. fittings should be proper polish finished.

Screws, nails, bolts, will be of brass or non-corrosive metal. In hardware, they will match with the hardware items.

Nails, in a finished surface shall be neatly punched and the holes filled with wood filler matching the finish. Screws, in a finished surface will be round head, raised head or sunk beneath the surfaces and the hole plugged with a wood plug with matching color and grain of the wood surface, unless especially detailed

Hardware:

Hinges, locks, latches, door tracks etc. Shall be as specified and as far as possible, by the manufacturer specified. In any variation of this quality of the substitute shall be equal to or better than the original specified, and the samples shall be submitted to the architect for prior approval.

Hardware and metals:

The hardware throughout shall be of approved brand and supply well made and equal in every respect to the samples deposited with the architect. The contractor may be required to produce and provide samples from many different sources before the architect is able to make the decision and he should allow in his rates for doing so.

Fittings generally shall have a brass finish or powder coated finish unless otherwise specified and should be suitable for their intended purposes.

Screws are to match the finish of the article to be fixed and to be rounded or flat headed or counter sunk as required.

Cover up and protect the brass or powder coated surfaces with a thick grease or other suitable material, renew as necessary and subsequently clean off and clear away on completion

All steel, brass, bronze, aluminum and stainless steel articles shall be submitted to a reasonable test for strength. If so required by the architect at the contractors expenses.

Door closers:

The overhead door closer shall be of standard make as listed by the architect. The overhead door closer shall be of color as approved by the architect. Fixing of the overhead door closer shall be done by and experienced worker preferable from the principal supplier of the item.

After successful installation of the overhead door closer the same shall be checked for speed of door closing. The contractor shall make necessary adjusted operating mechanism as per manufacturer's guidelines to arrive at most suitable operating speed. The selected operating speed should remain constant on all repeated operations. If an overhead door closer is found to lose its adjusted operating speed often during warranty period then the shall have to be replaced with a new piece without charging any extra.

In case of a steel frame door the overhead door closer shall have to be mounted on a special plate supplied by the manufacturer. No extra payment shall be due for such mounting plate.

The rate shall include all materials, labor, required civil work etc. Complete and shall be paid per no. Of overhead door closers installed.

Paints:

Lime for lime wash, dry distemper, oil bound distemper, cement primer, oil paint, enamel paint, flat oil paint, plastic emulsion paint, anti-corrosive primer, red lead, water-proof cement paint shall be from an approved manufacturer and shall conform to the latest Indian standard for various paints. Ready mixed paints as received from the manufacturer without any admixture shall be used, except for addition of thinner, if recommended by the manufacturer. However, if ready mixed paint of specified shed or tint is not available then only ready mixed paint with approved strainer will be allowed. In such a case, the contractor shall ensure that the shade of the paint so allowed shall be uniform.

All the paints shall met with following general requirements:

Paint shall not show excessive setting in a freshly opened full can and shall easily be redispersed with a paddle to a smooth homogeneous state. The paint shall show no curdling, levering, cracking or color separation and shall be free from lumps and skins.

Paint as received shall brush easily; possess good leveling properties and show no running or sagging tendencies.

The paint shall not skin within 48 hours in a three quarters filled closed container.

The paint shall dry to a smooth uniform finish free from roughness, grit, unevenness and other imperfections.

General: wherever scaffolding is necessary, it shall be double scaffolding.

The surface shall be thoroughly brushed free from mortar droppings, and foreign matter. All steel work shall be cleaned of loose rust, mill scales, etc. So as to expose the original surface. All broken edges, cracks, loose-plaster and wavy surface shall be brought up either by patch plasterwork or by plaster of Paris.

All materials viz. Dry distemper, oil bound distemper, oil paint, flat oil paint, synthetic enamel paint, plastic emulsion paint, cement primer, red lead and other primers and metallic paints shall conform to respective i.s. specifications and shall be obtained from approved

manufacturers.

Painting - Flat / Plastic emulsion etc.:

Ready mixed flat oil paint, plastic emulsion paint, ready mixed synthetic enamel paint, aluminum paint, etc. Shall be brought in original containers and in sealed tins, if for any reason thinner is necessary, the brand and quality of thinner recommended by the manufacturer or as instructed by the architect shall be used.

The surface shall be prepared as specified above and a coat of approved primer shall be applied. After 24 hours drying, approved or specified quality paint shall be applied evenly and smoothly. Filler putty coating may be given to give a smooth finish. Each coat shall be allowed to dry out thoroughly and then lightly rubbed down with sand paper and cleaned of dust before the next coat is applied. Number of coats shall be as specified in the item and if the finish of the surface is not uniform, additional coats as required shall be applied to get good and uniform finish at no extra cost. After completion no hair marks from the brush or clogging of paint puddles in the corners of panels, angles or moldings etc. Shall be cleaned of stains.

Pigmented priming coat (emulsion thinned with water) followed by three or more finishing coats of plastic emulsion paint. Pasted filler to be applied after every coat exempting the final finishing coat and sanded. When the final coat is applied, if directed the surface shall be rolled with a roller or if directed, it shall be stippled with a stippling brush.

Enamel paints

Oil paints shall be of first quality and of the specified color and shade, and as approved. The ready mixed paints shall be only used. However, if ready mixed paint of specified shade or tint is not available while ready mixed paint with approved strainer will be allowed. In such a case, the contractor shall ensure that the shade of the paint so allowed shall be uniform.

All the paints shall meet with the following general requirements:

Paint shall not showed excessive setting in a freshly opened full can and shall easily be redisbursed with a paddle to a smooth homogeneous stage. The paint shall show no curdling levering, caking or color separation and shall be free from lumps and skins.

Paint as revived shall brush easily; possess good leveling properties and show no running or sagging tendencies.

The paint shall not skin within 48 hours in a three quarters filled closed container.

The paint shall dry to a smooth uniform finish free from roughness, grit, unevenness and other imperfections.

Ready mixed paint shall be used exactly as received from the manufacturers and generally according to their instructions and without any admixtures what so ever.

French polish:

The French polish of required tint and shape shall be prepared with the below mentioned ingredients and other necessary material:

- (i) denatured spirit of approved quality
- (ii) chandras
- (iii) shellac
- (iv) pigment

The French polish so prepared shall conform to is 348.

French polishing:

French spirit polish shall be an approved make conforming to i.s.: 348. If it has to be prepared on site, dissolving 0.7 kg shall make the polish. Of best shellac in 4.5 liters of mentholated spirit without heating. To obtain required shade pigment may be added and mixed.

Surface shall be cleaned. All unevenness shall be rubbed down smooth with sand paper and well dusted. Knots, if visible, shall be covered with a preparation of red lead and glue. Resinous or loose knots and gaps shall be filled with seasoned timber pieces and made level with rest of the surface. Holes and indentations on surface shall be filled with putty made of whiting and linseed oil. Surface shall be given a coat of filler made of 2.25 kg. Of whiting in 1.5 liter of mentholated spirit. When it dries, surface shall again be rubbed down perfectly smooth with sand paper and wiped clean.

Piece of clean fine cotton cloth and cotton wool made into shape of pad shall be used to apply polish. The pad shall be moistened with polish and rubbed hard on the surface applying the polish sparingly but uniformly and completely over the entire surface. It shall be allowed to dry and another coat applied in the same way. To give CIVIL coat the pad shall be covered with a fresh piece or clean fine cotton cloth, slightly damped with mentholated spirit and rubbed lightly and quickly with a circular motion, till the finished surface attains uniform texture and high glass.

Wax polishing:

Wax polish shall either be prepared on site or obtained ready made from market. Polish made on the state shall be prepared from a mixture of purr bees wax, linseed oil, turpentine oil and varnish in the ration or 2:1 ½:1: ½ by weight. The bee's wax and the boiled linseed oil shall be heated over a slow fire. When the wax is completely dissolved the mixture shall be cooled till it is just warm, and turpentine oil and varnish added to it in the required proportions and the entire mixture is well stirred.

Surface shall be prepared as described under "French polishing" except that the final rubbing shall be done with sand paper, which has been slightly moistened with linseed oil.

Mixture or polish shall be applied evenly, with a clean cloth pad in such a way that no blank patches are left, and rubbed continuously for half an hour. When the surface is quite dry a second coat shall be applied in the same manner and rubbed continuously for an hour or until the surface is dry. Final coat shall then be applied and rubbed for two hours or more if necessary, until the surface has assumed a uniform glass and is quite dry showing no sign of stickiness when touched. Glass rubbing must be continuous and with uniform pressure and frequent change is direction.

Glass:

All glass shall be of best quality, free from flaws, specks, bubbles, veins, smokes, air holes blisters and other defects. The thickness and kind of glass to be used shall be as mentioned in the item or as shown in detailed drawing. The thickness of glass panel shall be uniform. All glass shall be of approved make by the architect and conforming to is 3548.

All glass shall be float glass of the best quality, free from specks, bubbles, smokes, veins, air holes, blisters and other defects. The kind of glass to be used shall be as mentioned in the item or specification or in the special provisions or as shown in detailed drawings thickness of glass panel shall be uniform. All glass to be approved manufacture complying with is: 3548-1966 or as per approved quality and sample.

The compound for glazing to metal is to be special non-hardening compound manufacture for the purpose and of 9 brands and quality approved the interior designer.

In cutting glass, proper allowance shall be made for expansion. Each square of glazing to be

in one whole sheet and after cutting the edges to be properly filled.

On completion, clean all glass inside and out, replace all cracked scratched or broken panes and leave in good condition to the satisfaction of the architect.

The contractor shall furnish all labor, materials, and equipments required for the installation of glass and glazing items.

The glass shall be of the type, quality and substance specificity in the bills of quantities.

In case of the glass being supplied by the owners, the contractor shall take the delivery of the glass at site and shall be responsible for proper handling and stacking. We shall insure glass against theft, fire, etc.

The contractor shall replace at his own expense all broken, damaged or disfigured glass caused in the execution of the work of faulty installation, before the virtual completion of the work.

Patterned or translucent glass shall be 4 mm. In thickness and shall be approved by the architects. Sheet glass shall be in 5 mm. In thickness. Wired glass shall be 6 mm. In thickness.

The putty used for glazing metal door, window or ventilator shall conform to I.S. 420:1953.

Before installation of the glass, the contractor shall ensure against the following:

All glazing rebates shall be square, putty, true in plane, clear, dry and free of dust. The frames shall be adjusted before glazing. The weight of the glass in side hung casement causes it to drop slightly on its hinges. Before glazing it shall be set in slightly high position in its frame. Glass edges shall be clean and cut to the exact size, chipped or damaged edges shall be rejected. Sashes shall be glazing in the closed position and shall not be open till the putty is set.

The glass shall be set in teak wood beading or metal glazing chips and so installed to achieve water lightness.

The platter glass shall be bedded on strips of leather or felt turned over the two sides of the glass to form packing between the glass and the metal coating. The ground glass shall be getting with smooth surface outside.

Glazing large panes of glass, or when heavy wind pressure is experienced, glazing bead may be used instead of front putty. In this case putty shall be applied to the face of the bead, which is in contact with glass. Putty would also be necessary, at the back.

Beads shall be of timber, rustproof steel or aluminum and shall have mitered corners. The position and size of the bead may depend on the thickness of glass used. The beads shall be fixed with screws 0" apart.

On completion of the job, all glass shall be thoroughly cleaned. All paint or other marks to be removed.

SPECIFICATION FOR WORKMANSHIP

Painting And Polishing: Various Readymade Paints:

The surface to be painted shall be cleaned and all cracks, holes and surface defects shall be repaired with plaster of Paris. All irregularities shall be sand papered and wiped clean.

The surface so prepared must be dry and free from dust.

The priming coat shall be applied over in the manner recommended by the manufacture in case of special paint. When no priming coat is specified by the manufacturer, putty composed of powered whitening chalk mixed with double polished linseed oil of required workable consistency shall be applied to prepare a good, hard background in case of undecorated surfaces. The surface shall be then rubbed down again with a fine grade sand paper and made smooth.

The paint shall be of 1st quality and of specified color and shade and as approved.

Ready mixed paint as received from the manufacturer without any admixture shall be used, except for addition of thinner, if recommended by the manufacturer. However, if ready mixed paint of specified shade or tint is not available while ready mixed paint with approved strainer will be allowed. In such a case, the contractor shall ensure that the shade of the paint so allowed shall be uniform.

Polishing To Wood Work:

Woodwork to be polished shall be finished smooth with plane. It shall then be rubbed smooth with medium and fine sand papers. In no case sand paper shall be rubbed across the grains. All holes, cracks, open joints and small defects if all allowed to remain by the architect shall be stopped with putty made from pure whiting mixed to the proper consistency with linseed oil.

Polish shall be applied in very thin coats with special fine haired varnishing brushes. Before applying first coat after stopping, the wood surface shall be rubbed down lightly with a fine sand paper taking care to rub along the grains and to leave the color even. The number of coats shall be as specified in the item.

Measurement:

No separate measurement and payment shall be made for such finishing work. The cost of such finishing shall be included in the rate of related item of woodwork. But if the item is to be carried out independent item of measurement shall be as per is 1270.

Melamine polishing to wood work:

All unevenness shall be rubbed down to smooth with sand paper and surface shall be cleaned of dust.

The wood to be polished should be first painted with filler composed of a mixture of whiting and mentholated spirit to obtain a good glass surface. The surface shall be again rubbed down for making perfectly smooth with sand paper.

The number of coats of melamine polish shall be as specified in the item. On the woodwork a pad of woolen cloth covered by fine cloth shall apply a thin coat of melamine polish. The pad shall be moistened with polish and rubbed on a surface in a series of overlaying circles, applying the polish uniformly over the entire area to give even surface. A trace of linseed oil on the face of pad facilitates this operation. The surface shall be allowed to dry and the remaining coats shall be applied in the same manner to finish off. The pad shall be covered with a fresh piece of clean fine cloth, slightly damped with mentholated spirit and rubbed lightly and quickly with circular motion.

The finished surface shall have uniform texture and high glass. The melamine polish shall be applied with spray gun and even coating shall be applied to get the very good quality of finishes.

Measurement:

No separate measurement and payment shall be made for such finishing work. The cost of such finishing shall be included in the rate of related item of woodwork. But if the item is to be carried out independent item of measurement shall be as per IS 1270.

SPECIFICATIONS FOR PLUMBING DRAINAGE & SANITARYWARE**SCOPE OF WORK**

Work under this section shall consist of furnishing all materials & labour necessary and required to completely install all sanitary fixtures, chromium plated fittings and accessories as required by the drawings specified hereinafter and given in the Bill of Quantities.

Without restricting to the generality of the foregoing the sanitary fixtures shall include the following:-

Sanitary fixtures

Chromium plated fittings

Porcelain or stainless steel sinks

Accessories e.g. towel rails, toilet paper holders, coat hooks etc.

Whether specifically mentioned or not, all fixtures and appliances shall be provided with all fixing devices, nuts, bolts, screws, hangers as required.

All exposed pipes within toilets and near fixtures shall be chromium plated brass or copper unless otherwise specified.

GENERAL REQUIREMENTS

Sanitary fixtures shall be of the best quality approved by the Architect / Consultant / PM / Client. Wherever particular makes are mentioned, the choice of selection shall remain with the Architect / Consultant / PM / Client.

All fixtures and fittings shall be provided with all such accessories as are required to complete the item in working condition whether specifically mentioned or not in the Bill of Quantities, specifications, drawings. Accessories shall include proper fixing arrangement, brackets, nuts, bolts, screws and required connection pieces.

Fixing screws shall be half round head chromium plated brass screws with C.P. washers where necessary.

Contractor shall furnish without cost all such accessories and fixing devices that are necessary and required but not supplied along with the Plumbing Fixtures & CP Fittings by the manufacturers as a part of the original and standard supply.

All fittings and fixtures shall be fixed in a neat workmanlike manner true to level and heights shown on the drawings and in accordance with the manufacturer's recommendations. Care shall be taken to fix all inlet and outlet pipes at correct positions. Faulty locations shall be made good and any damage to the finished floor, tiling or terrace shall be made good at Contractor's cost.

Contractor seal all fixtures fixed near wall, marble and edges. With an approved type of poly- sulphide sealant appropriate for its application.

EUROPEAN W.C

European W.C. shall be wash down or siphoned type wall mounted set flushed by means of dual flush Cistern systems which will be an integral part of the wall system. Framework, walling and finishing will not form a part of the contractor's work. Where applicable flush pipe / bend shall be connected to the W.C. by means of a suitable rubber adapter. Wall hung W.C. shall be supported by C.I. floor mounted chair.

Each W.C. set shall be provided with a plastic seat shall be with rubber buffers and chromium plated hinges.

Plastic seat shall be so fixed that it remains absolutely stationary in vertical position without falling down on the W.C. Each W.C. shall be suitable for flushing in low volume of water 5-6 liters.

Flushing Cistern shall be provided with all internal flushing mechanism, 15 mm dia ball cock with unbreakable polythene float and overflow pipe. Any frame work required for fixing cistern has to be provided by the contractor.

LAVATORY BASIN

Lavatory basins shall be white glazed vitreous china of size, shape and type specified in the Schedule of Quantities.

Each basin shall be provided with brackets and clips of approved and securely fixed. Placing of basins over the brackets without secure fixing shall not be accepted.

Each basin shall be provided with 32 mm dia C.P. waste with overflow, pop-up waste or rubber plug and chain as specified in the Bill of Quantities, 32 mm dia C.P. brass bottle trap with C.P pipe to wall and flange.

Each basin shall be provided with Pillar Tap as specified in the Bill of Quantities.

Basins shall be fixed at proper heights as shown on drawings. If height is not specified, the rim level shall be 79 cms or as directed by Engineer-in-charge.

SINKS

Sinks shall be white glazed fireclay or vitreous china or stainless steel or any other material as specified in the Bill of Quantities.

Each sink shall be provided with brackets of approved and securely fixed. Counter top sinks shall be fixed with suitable brackets or clips as recommended by the manufacturer. Each sink shall be provided with 40 mm dia C.P. waste with chain and plug as given in the Bill of Quantities. Fixing shall be done as directed by Engineer-in-charge.

Supply fittings for sinks shall be mixing fittings or C.P. taps as specified in the Bill of Quantities.

URINALS

Urinals shall be flat back type white glazed vitreous china of size, shape and type specified in the Bill of Quantities.

Bowl urinals shall be provided with 15 mm dia C.P spreader, 40mm dia stainless steel domical waste and C.P. cast brass bottle trap with pipe and wall flange, and shall be fixed to wall by C.I. brackets and C.I. wall clips as recommended by manufacturers complete as directed by Owner's Site Representative. Urinals shall be fixed with C.P. brass screws and shall be provided with 32 mm dia domical waste leading to urinal's trap.

Flush pipes shall be G.I. pipes concealed in wall chase but with chromium plated bends at inlet and outlet or as given in Bill of Quantities. Urinals shall be flushed by means of brass ball valves.

Waste pipes for urinals shall be uPVC pipes. Waste pipes may be exposed on wall or concealed in chase as directed by the Specifications.

URINAL PARTITIONS

Urinal partitions shall be white glazed vitreous china, marble, granite or any other material selected by the Owner's Site Representative. The same shall be fixed by Contractor executing the finishing work. The exact location shall however be co oriented by the Plumbing Contractor.

Urinal partitions shall be fixed at proper heights with C.P. brass bolts, anchor fasteners and M.S. Clips as recommended by the manufacturer and directed by Owner's Site Representative

ACCESSORIES

Contractor shall install all chromium plated and porcelain accessories as shown on the drawings or directed by the Engineer-in-charge.

All C.P. accessories shall be fixed with C.P. brass half round head screws and cup washers in wall with rowel plugs or nylon sleeves and shall include cutting and making good as required or directed by Engineer-in-charge.

Recessed porcelain accessories shall be fixed in walls and set in cement mortar 1:2 (1 cement: 2 coarse sand) and fixed in relation to the tiling work as per Interior Designer's drawings.

FINAL INSTALLATION

The contractor shall install all sanitary fixtures and fittings in their position in accordance with approved trial assemblies and as shown on drawings. The installation shall be completed with all supply and waste connections. The connection between building and piping system and the sanitary fixtures shall be through proper unions and flanges to facilitate removal/replacement of sanitary fixtures without disturbing the built in piping system. All unions and flanges shall match in appearance with other exposed fittings.

Fixtures shall be mounted rigid, plumb and to alignment. The outlets of water closet pans and similar appliances shall be examined to ensure that outlet ends are butting on the receiving pipes before making the joints. It shall be ensured that the receiving pipes are clear of obstruction. When fixtures are being mounted, attention shall be paid to the possibility of movement and settlement by other causes. Overflows shall be made to ensure that the necessary anchoring devices have been provided for supporting water closets, wash basins, sinks and other appliances.

PROTECTION AGAINST DAMAGE

The contractor shall take every precaution to protect all sanitary fixtures against damage, misuse, cracking, staining, breakage and pilferage by providing proper wrapping and locking arrangement till the completion of the installation. At the time of handing over, the contractor shall clean, disinfect and polish all the fixtures and fittings. Any fixtures and fittings found damaged, cracked chipped stained or scratched shall be removed and new fixtures and fittings free from defects shall be installed at his own cost to complete the work.

MEASUREMENT

Sanitary fixtures and accessories shall be counted by numbers in the unit given in the Bill of Quantities. Rates for all items shall be inclusive of cutting holes and chases and making good the same, C.P Brass screws, nuts, bolts and any fixing arrangements required and recommended by manufacturers, testing and commissioning.

SPECIFICATIONS FOR SOIL, WASTE, VENT & RAINWATER PIPES & FITTINGS

SCOPE OF WORK

Work under this section shall consist of furnishing all labor, materials, equipment and appliances necessary and required to completely install all soil, waste, vent rain water pipes and fittings as required by the drawings, and given in the Bill of Quantities.

Without restricting to the generality of the foregoing, the soil, waste, vent pipes system shall include the following:-

Horizontal soil, waste and vent pipes, and fittings, joints, clamps, connections to fixtures.

Floor and urinal traps, cleanout plugs, inlet fittings.

Testing of all pipe lines.

GENERAL REQUIREMENTS

All materials shall be new of the best quality conforming to specifications and subject to the approval of Engineer-in-charge.

Pipes and fittings shall be fixed truly vertical, horizontal or in slopes as required in a neat workmanlike manner.

Pipes shall be fixed in a manner as to provide easy accessibility for repair and maintenance and shall not cause obstruction in shafts, passages etc.

Pipes shall be securely fixed to walls and ceilings by suitable clamps intervals specified.

Access doors for fittings and clean outs shall be so located that they are easily accessible for repair

and maintenance. Any access panel required in the civil structure, false ceiling or marble cladding etc. shall be clearly reported to the Owner in the form of shop drawing so that other agencies are instructed to provide the same well in advance.

SOIL, WASTE & VENT PIPES

The Soil & Waste Pipe System above ground has been planned as a "two pipe system" as defined in IS: 5329 having separate pipes for waste for kitchen sinks, bath tubs, showers, washbasins, condensate drains and floor drains and is approved by Engineer-in-charge.

Vertical soil & waste stacks shall be connected to a horizontal Soil and Waste Pipe as shown on the drawings.

Toilet layouts have been so arranged that the W.C. outlets shall be with "P" trap above ground.

JOINTING

The jointing of the pipes to the fittings shall be done as per the manufacturer's instructions /recommendation. The rubber ring socket fittings and pipes shall be jointed as follows:

Clean the outside of the pipes spigot end and the inside of the ceiling groove of the fitting. Apply the lubricant uniformly to the spigot end, sealing ring and pass the spigot end into the socket containing sealing ring until fully home. Mark the position of the socket edge with pencil or felt open on the pipe, then withdraw the pipe from the socket by approximately 10 mm. to make the pipe fully fitted to the fitting. The horizontal pipes on the wall shall be fixed with M.S. fabricated clamps with necessary provisions to take care the expansion and contraction in PVC pipes. The spacing of the clamps shall be at the intervals of 1.5 meter to 2 meter depending on the requirement of the supporting arrangements.

FIXING

All vertical pipes shall be fixed by Galvanized clamps and galvanized angle brackets truly vertical. Branch pipes shall be connected to the stack at the same angle as that of the fittings. No collars shall be used on vertical stacks. Each stack shall be terminated at top with a cowl (terminal guard).

Horizontal pipes running along ceiling shall be fixed on galvanized structural adjustable clamps of special design shown on the drawings or as directed. Horizontal pipes shall be laid to uniform slope and the clamps adjusted to the proper levels so that the pipes fully rest on them.

Contractor shall provide all sleeves, openings, hangers, inserts during the construction. He shall provide all necessary information to the building Contractor for making such provisions in the structure as necessary. All damages shall be made good to restore the surfaces.

CLAMPS

All pipe clamps, supports and hangers shall be galvanized. Factory made Pre-fabricated clamps shall be preferred. Contractor may fabricate the clamps of special nature and galvanize them after fabrication but before installation. All nuts, bolts, washers and other fasteners shall be factory galvanized.

Clamps shall be of approved designs and fabricated from M.S. flats (which shall be galvanized after fabrication) of thickness and sizes as per drawings or contractor's shop drawings. Clamps shall be fixed in accordance to manufacturer's details/shop drawings to be submitted by the contractors.

When required to be fixed on RCC columns, walls or beam they shall be fixed with approved type of galvanized expansion anchor fasteners (Dash fasteners) of approved design and size according to load.

Structural clamps e.g. trapeze or cluster hangers shall be fabricated by electro-welding from M.S. Structural members e.g. rods, angles, channels flats as per Contractors shop drawing shall be galvanized after fabrication. All nuts, bolts and washers shall be galvanized.

Galvanized slotted angle/channel supports on walls shall be provided wherever shown on drawings. Angles/channels shall be of sizes shown on drawings or specified in Bill of Quantities. Angles/channels shall be fixed to brick walls with bolts embedded in cement concrete blocks and to RCC walls with anchor fasteners mentioned above. The spacing of support bolts on support members fixed horizontally

shall not exceed 1 m.

TRAPS

Floor traps

Floor traps where specified shall be siphon type full bore P or S type uPVC/triplus having a minimum 50 mm or more than that which is more deep seal. The trap and waste pipes when buried below ground shall be set and encased in cement concrete blocks firmly supported on firm ground or when installed on a sunken RCC structural slab. The blocks shall be in 1:2:4 mix (1 cement : 2 coarse sand : 4 stone aggregate 20 mm nominal size).

Contractor shall provide all necessary shuttering and centering for the blocks. Size of the block shall be 30x30 cms of the required depth.

Floor Trap inlet

Bath room traps and connections shall ensure free and silent flow of discharging water. Where specified, Contractor shall provide a special type of floor or manhole inlet fitting fabricated from uPVC/triplus pipe without, with one, two or three inlet sockets welded on side to connect the waste pipe or joint between waste and inlet socket shall be solvent cement. Floor trap inlet and the traps shall be set in cement concrete blocks where varied in floors as specified without extra charge. Floor trap for the shower cubicle shall suit site and as per the approval of Engineer-in-charge.

Floor Trap Grating Floor and urinal traps shall be provided with 100 -150mm square or round Stainless Steel gratings as approved with frame and rim of approved design and shape or as specified in the Bill of Quantities approved by the Engineer-in-charge.

Cleanout Plugs

Clean out plug for Soil, Waste or Rainwater pipes laid under floors shall be provided near pipe junctions bends, tees, "Ys" and on straight runs at such intervals as required as per site conditions. Cleanout plugs shall terminate flush with the floor levels. They shall be threaded and provided with key holes for opening. Cleanout plugs shall be Cast Brass suitable for the Pipe dia. With screwed to a G.I. socket. The socket shall be drip seal to the drain pipes.

WASTE PIPE FROM APPLIANCES

Waste pipe from appliances e.g. washbasins, sinks and urinals shall be of uPVC pipes in Toilets, kitchens, pantries, Equipments and service areas where so required, and as given in the Bill of Quantities or shown on the drawings.

All pipes shall be fixed in gradient towards the connection to stack or drains. Pipes inside all toilets shall be in chase unless otherwise shown on drawings. Where so required and shown on drawings or directed by the Engineer-in-charge.

ENCASING IN CEMENT CONCRETE

Encasing of pipes is required to provide stability to the line and prevent its damage during construction.

Soil and waste pipes under floor

Pipes lay in sunken slabs and in wall chases (when cut specially for the pipe) shall be encased in cement concrete 1:2:4 mix (1 cement: 2 coarse sand: 4 stone aggregate 12 mm size) 75 mm in bed and all round. When pipes are running well above the structural slab, the encased pipes shall be supported with suitable cement concrete pillars of required height at intervals of 1.8 m.

Cutting And Making Good

Contractor shall provide all holes cut outs and chases in structural members necessary and required for the pipe work as building work proceeds. Wherever cut outs , holes are left in the original construction, they shall be made good with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 stone aggregate 20 mm nominal size) or cement mortar 1:2 (1 cement: 2 coarse sand) and the surface restored as in original condition.

Sleeves/ Cut-Outs

Contractor shall utilize all cut out and sleeves provided during construction to prevent breaking. The annular space between the pipe and the sleeve shall be filled up with approved type of fire retardant sealant. When sleeves are misplaced or inaccurately located contractor shall make the holes in the wall or structural members at his own cost but only with the prior permission of the Engineer-in-charge.

TESTING

Testing procedure specified below apply to all soil, waste and vent pipes above ground.

Entire drainage system shall be tested for water tightness and smoke tightness during and after completion of the installation. No portion of the system shall remain untested. PVC pipes and fittings shall be tested for three meters of water head the openings of the pipes shall be sealed for the section to be tested. The water pressure shall be maintained for maximum of one hour. The Engineer shall examine carefully all the joints for leakage. Contractor must have adequate number of expandable rubber bellow plugs, manometers, smoke testing machines, pipe and fitting work test benches and any other equipment necessary and required to conduct the tests.

All materials obtained and used on site must have manufacturer's hydraulic test certificate for each batch of materials used on the site.

Measurements

Rates quoted for all items shall be inclusive of all work and items given in the Specifications and Bill of Quantities.

Rates are applicable for the work in basements, underground, floors, in shafts at ceiling level area for all depths and building up to 45 m in height.

Rates are inclusive of cutting holes and chases in RCC and masonry work where no sleeves or cut outs have been provided during construction and making good the same.

Rates are inclusive of pre testing, on site testing, of the installations, materials and commissioning of the works.

Pipes (unit of measurement linear meter to the nearest centimeter).

Soil, waste, vent, anti-siphon age, rain water pipes, shall be measured net when fixed correct to a centimeter including all fittings along its finished length.

G.I./C.I./uPVC pipes shall measure per running meter correct to a centimeter for the finished work which shall include fittings e.g. bends, tees, elbows, reducers, crosses, sockets, nipples and nuts. The length shall be taken along center line of the pipes and fittings. All pipes and fittings shall be classified according to their diameter, method of jointing and fixing substance, quality, and finish. The diameters shall be nominal diameter of internal bore. No allowances shall be made for the portions of pipe length entering the sockets of the adjacent pipe or fittings.

All supports required to support the pipes from slab/ceiling/i/c dash fasteners, M.S. structural, slotted angles/channels including support bolts and nuts embedded in masonry walls and hangers etc shall be included in the item rate of pipe including the item of work given below:-

Expandable anchor fasteners

Galvanizing of all supports and hangers

Cutting holes in walls, ceiling of floors and making good where permitted

Nuts, bolts and washers for fixing and assembling

Wooden/PVC pipe saddles for vertical or horizontal runs

Cement concrete around pipes shall be measured along the center of the pipe line measured per linear meter and include any masonry supports ,shuttering and centering cutting complete as described in the

relevant specifications.

Fittings (excluding pipe fittings) (Unit of measurement by numbers)

Urinal traps, trap gratings, hoppers, cleanout plugs khurras shall be measured by number per piece and shall include all items described in the relevant Specifications and Bill of Quantities.

SPECIFICATION FOR WATER SUPPLY SYSTEM

SCOPE OF WORK

Work under this section consists of furnishing all labour, materials equipment and appliances necessary and required to completely install the water supply system as required by the drawings, specified hereinafter and given in the Bill of Quantities.

Without restricting to the generality of the foregoing, the water supply system shall include the following:-
Distribution system from main vertical stack to all fixtures and appliances for cold & hot water.

Pipe protection and painting.

Control valves

GENERAL REQUIREMENTS

All materials shall be new of the best quality conforming to specifications. All works executed shall be to the satisfaction of the Engineer-in-charge.

Pipes and fittings shall be fixed truly vertical, horizontal or in slopes as required in a neat workmanlike manner.

Short or long bends shall be used on all main pipe lines as far as possible. Use of elbows shall be restricted for short connections.

Pipes shall be fixed in a manner as to provide easy accessibility for repair and maintenance and shall not cause obstruction in shafts, passages etc.

Pipes shall be securely fixed to walls and ceilings by suitable clamps at intervals specified.

Clamps, hangers and supports on RCC walls, columns & slabs shall be fixed only by means of approved made of expandable metal fasteners inserted by use of power drills.

All pipe clamps, supports, nuts, bolts, washers shall be galvanized MS steel throughout the building. Painted MS clamps & MS nuts, bolts & washers shall not be accepted.

Valves and other appurtenances shall be so located as to provide easy accessibility for operations, maintenance and repairs.

MATERIAL

CPVC pipes, fittings & valves

CPVC Pipes - All pipes within toilets, kitchen/ pantry (in Wall Chases) shall be cPVC. The pipes from 15mm to 50mm dia. (copper tube size) shall be as per ASTM D- 2846 requirements. They shall be of the nominal diameter (nominal bore) specified on the description of the item. The sockets shall be designated by the respective nominal bores of the pipes for which they are intended.

Pipe Fittings

Fittings for PVC pipes shall include couplings, tees, reducers, nipples, unions, bushes. The fittings shall be of perfect size and should be as per CTS (Copper tube size).

Jointing material

All-purpose cement solvents should not be used. Solvent cement manufactured as per ASTM F – 493 only shall be used.

Pipe threaded joints will be made by applying suitable grade of TEFLON tape used for drinking water supply.

Pipe Fittings

The fittings shall be of perfect size and should be as per ITS (Iron tube size) the fitting should be as per the specifications of ASTM D 2467.

All pipes shall be fixed in accordance with layout and alignment shown on the drawings. Care shall be taken to avoid air pockets. PVC pipes inside toilets shall be fixed in wall chases well above the floor. No pipes be run inside a sunken floor as far as possible. Pipes may be run under the ceiling or floors and other areas as shown on drawings

Pipe Supports

All pipes clamps, supports, hangers, rods, pipe supports, nuts bolts & washers shall be factory made galvanized Mild Steel or alternatively galvanized after fabrication to suit site requirements.

Clamps

Galvanized iron pipes in shafts and other locations shall be supported by GI. clamps of design approved by Engineer-in-charge. Pipes in wall chases shall be anchored by iron hooks, Pipes at ceiling level shall be supported on structural clamps fabricated from M.S. structural as described above. Pipes in typical shafts shall be supported on slotted angles/channels as specified elsewhere.

Anchor Fasteners

All pipes supports, hangers and clamps to be fixed on RCC walls, beams, columns, slabs and masonry walls 230mm thick and above by means of galvanized expandable anchor fasteners in drilled holes of correct size and model to carry the weight of pipes. Drilling shall be made only by approved type of power drill as recommend and approved by manufacturer of the anchor fasteners. Failure of any fastening devices shall be the entire responsibility and contractor shall redo or provide additional supports at his own cost. He shall also compensate the owner for any damage that may be caused by such failures.

Unions

Contractor shall provide adequate number of unions on all pipes to enable easy dismantling later when required. Unions shall be provided near each gunmetal valve, stop cock, or check valve and on straight runs as necessary at appropriate locations as required and/or directed by Engineer-in-charge.

Flanges

Flanged connections shall be provided on pipes as required or where shown on the drawings, all equipment connections as necessary and required or as directed by Connections shall be made by the correct number and size of GI nuts, bolts & washers with 3 mm thick gasket. Where hot water or steam connections are made insertion gasket shall be of suitable high temperature grade and quality approved by Bolt hole dia for flanges shall conform to match the specification for G.M. sluice valve to I.S. 778. And C.I. butterfly valve to IS: 13095.

Trenches

All water supply pipes below ground shall be laid in trenches with a minimum cover of 60 cms.

Joining Of CPVC/ UPVC Pipes

The procedures described in ASTM D-2855 shall be followed for making joints. The pipes and fittings shall be cleaned and cleared of all foreign matter before being laid. Care should be taken that all pipes and fittings are properly jointed so as to make the joints completely water tight and pipes are kept at all-time free from dust and dirt during fixing. Burr from the joint shall be removed while joining the pipes. After lying the open ends of the pipes shall be temporarily plugged to prevent access of water, soil or any other foreign matter. The tubing should make contact with the socket wall 1/3 to 2/3 of the way into

the fitting socket. Avoid too much of cement coat otherwise it will clog the water. In case of cement joint allow to set for 10 to 20 min.

INSULATION

All hot water pipes shall be insulated with elastomeric closed shells circular pipes.

All insulation material shall be elastomeric closed shells foam has a high diffusion resistance factor that prevent excessive water diffusion that gives longer lifetime of material.

The insulation material having the property of resistance of fire i.e. in case of fire these materials do not drop and do not spread flames.

All insulation material as per din 1988/7 (standard for drinking water pipe installation and for avoiding corrosion damage and scale formation).

The thermal conductivity of material at 0 deg. C = 0.035 w/(m.K). Temperature resistance of material between -45 deg. C to +116 deg. C. The Thickness of insulation pipes as follows:

Size of pipes	Application of pipes	Location	Thickness of Material (mm)	Type of Section
15 mm to 40mm	Hot water supply	Concealed	6 mm	Tube Section
15 mm to 100 mm	Hot water supply	Exposed	9 mm	Tube Section

VALVES:

BALL VALVES

Valves up to 40 mm dia. shall be screwed type Brass Ball Valves with stainless steel balls, spindle, Teflon seating and gland packing tested to a hydraulic pressure of 20 kg/cm², and accompanying couplings and steel handles.(to BS 5351)

Butterfly Valves : Valves 40 mm dia and above shall be cast iron butterfly valve to be used for isolation. The valves shall be bubble tight, resilient seated suitable for flow in either direction and seal in both direction with accompanying flanges and steel handle.

Butterfly valve shall be of best quality conforming to IS: 13095.

Non Return Valve (Slim Type)

Where specified non return valve (wafer type) shall be provided through which flow can occur in one direction only.

Each Butterfly and Slim Type Swing Check (NRV) Valve shall be provided with a pair of flanges screwed or welded to the main line and having the required number of galvanized nuts, bolts and washers of correct length.

Air Relief Valve

Where specified air relief valve shall be provided through which air trapped in the system can be relieved automatically.

Each air relief valve shall be provided with an isolation ball valve used to the main line. The air relief valve shall be of Cast Iron body and conforming to IS 14845; single air valve small orifice type.

TESTING

All pipes, fittings and valves after fixing at site, shall be tested by hydrostatic pressure of 1.5 times the working pressure or 20 kg/cm² whichever is more.

Pressure shall be maintained for a period of at least two hours without any drop.

A test register shall be maintained and all entries shall be signed and dated by Contractor (s) and Engineer-in-charge.

In addition to the sectional testing carried out during the construction, Contractor shall test the entire installation after connections to the overhead tanks or pumping system or mains. He shall rectify all leakages and shall replace all defective materials in the system. Any damage done due to carelessness, open or burst pipes or failure of fittings, to the building, furniture and fixtures shall be made good by the Contractor during the defects liability period without any cost.

After commissioning of the water supply system, Contractor shall test each valve by closing and opening it a number of times to observe if it is working efficiently. Valves which do not effectively operate shall be replaced by new ones at no extra cost and the same shall be tested as above.

Measurement

All pipes above ground shall be measured per linear meter (to the nearest cm) and shall be inclusive of all fittings e.g. coupling, tees, bends, elbows, unions, flanges and U clamps with nuts, bolts & washers fixed to wall or other standard supports. No allowance shall be made for the portions of pipe length entering the sockets of the adjacent pipe or fittings.

All supports required to support the pipes from slab/ceiling/i/c dash fasteners. M.S. structural, slotted angles/channels including support bolts and nuts embedded in masonry walls and hangers etc shall be incl. in the item rate of pipe including the item of work given below:-

Expandable anchor fasteners

Galvanizing of all supports and hangers

Cutting holes in walls, ceiling of floors and making good where permitted

Nuts, bolts and washers for fixing and assembling

Wooden/PVC pipe saddles for vertical or horizontal runs

Jointing with Teflon tape, white lead and insertion gasket of appropriate temperature grade. Cutting holes, and chases in walls, floors, any pipe support required for pipes below ground & making good the same.

Excavation, back filling, disposal of surplus earth and restoring the ground & floor in original condition.

VALVES

Gunmetal, cast iron, butterfly and non-return valves and puddle flanges shall be measured by numbers and shall include wheels/caps, GI nuts, bolts, washers and insertion gasket.

Painting / Pipe Protection/Insulation

Painting / pipe protection / insulation for pipes shall be measured per linear metre over finished surface and shall include all valves and fittings for which no deduction shall be made. No extra payment shall be made for fittings, valves or flanges.

Water Supply System

Contractor should study the site plan and water supply system diagram for an overview of the system. It is proposed to provide dual flushing cistern/dual flush valve for all WCs.

UPVC/CPVC PIPES AND FITTINGS

UPVC/ CPVC Plain/Solvent Joint Pressure Pipes shall conform to IS 4985:2000 and IS: 15778 respectively, and Moulded fittings as per IS : 7834 & fabricated fittings IS: 10124.

Precautions:- Water Hammer :

All uPVC Plastic piping systems be designed and constructed to avoid excessive Water Hammer. Water hammer can cause damage and failure to pipe, valves and fittings within the piping system.

Threaded Connections :

Use a quality grade thread sealant. Do not use substances that could cause stress cracking to plastic. Major attention must be given while making plastic thread joints. 1 to 2 turns beyond finger tight is generally all that is required to make a sound plastic connection unnecessary over tightening will cause damage to both pipes & fittings. Also give proper attention while selecting the threaded fittings, as some fittings with NPT threads & some fittings with BSP threads are available, to give more versatility to customer NPT threads are not compatible with BSP threads.

Seal & Gasket Lubricants :

Some Lubricants, including vegetable oils are known to cause stress cracking in thermoplastics materials. A mild soap or commercially available pipe gasket lubricants suitable for uPVC is recommended where lubrication is required for installation or maintenance service (especially with Flange joints). Choice of lubricant is at the discretion of the installer.

Support System:

Adequate supports for any piping system is a matter of great importance. In practice, support spacing are a function of pipe size operating temperatures, the location of heavy valves or fittings and the mechanical properties of the pipe material. To ensure the satisfactory operation of a ASTRAL Aquarius+ uPVC piping system, the location and type of hangers should be carefully considered. Hangers should not compress, distort, cut or abrade the piping. All piping should be supported with an approved hanger at intervals sufficiently close to maintain correct pipe alignment and to prevent sagging or grade reversal. Pipe should also be supported at all branch ends and at all changes of direction. Support trap arms as close as possible to the trap.

(1) Concentrated loads should be supported directly so as to eliminate high stress concentrations. Should this be impractical then the pipe must be supported immediately adjacent to the load.

(2) In systems where large fluctuations in temperature occur, allowances must be made for expansion and contraction of the piping system. Since changes in direction in the system are usually sufficient to allow for expansion and contraction hangers must be placed so as not to restrict this movement.

(3) Since plastic pipe expands or contracts approximately five times greater than those of steel, hangers should not restrict this movement.

(4) Hangers should provide as much bearing surface as possible. To prevent damage to the pipe, file smooth any sharp edges or burrs on the hangers or supports.

(5) Support spacing for horizontal piping systems is determined by the maximum operating temperature the system will encounter. The piping should be supported on uniform centers with supports that do not restrict the axial movement.

(6) For vertical lines, it is recommended that an engineer should design the vertical supports according to the vertical load involved.

Bib cock and Stop cock :

A bib cock is 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.

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 best Indian make. They shall be polished bright.

Ceramic Flushing Cistern:

The ceramic 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 outer dia. of 32 mm. The outlet 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./uPVC inlet pipes and overflow pipe 20 mm dia. inlet and outlet shall be provided.

Tolerances:

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

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

The thickness of fittings and their socket and spigot dimensions shall confirm 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.

Nahni trap:

Nahni trap shall be of cast iron / pvc 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, chips and other flaws or any other kind of defects which affect serviceability. The size of nahni trap shall be having inlet 100mm dia. & outlet 75 mm dia. or as specified and shall be of self cleansing design.

The nahni trap shall be quality approved by the Engineer-in-charge and shall generally confirm to the relevant Indian Standards.

The Nahni trap provided shall be with deep seal, minimum 50 mm. except at places where trap with deep seal can not be accommodated. S.S./ PVC Perforated cover shall be provided on the trap of appropriate size.

Gully Trap:

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

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

Each gully trap shall have one C.I. grating 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 x 300 mm. the cover weighting 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.

Glaze stone ware pipe and fittings:

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 the whole thickness, of a close even texture, free from air blows, fire blisters, crack and other imperfections, which effect the serviceability. The inner and outer surfaces shall be smooth and perfectly glazed. The pipe shall be capable to withstand pressure of 1.5 m lead without showing sign of leakage. The thickness of the wall shall not be less than 1/12th 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.

18MM CEMENT PLASTER INCLUDING WATERPROOFING COMPOUND ON EXTERNAL SURFACES :**Scope of work:**

This shall include providing and laying double coat average 18 mm thick comprising first layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) and top layer 6mm thick cement plaster (1 cement : 3 coarse sand) with approved waterproofing compound (Sikka / DrFixit / Basf or equivalent) @ 2%, by weight of cement on external wall surfaces or facades. The junctions of RCC and masonry shall be fixed with chicken mesh with a minimum overlap of 100 mm in all directions and curing complete.

The fineness modulus of the sand shall not be less than 2.5 mm.

Sand for Plaster- Sand shall consist of natural sand, crushed stone sand or crushed gravel sand or a combination of any of these. Sand shall be hard durable, clean and free from adherent coating and

organic matter and shall not contain the amount of clay, silt and fine dust more than as specified in relevant Indian standards .

Water Proofing Compound

Integral cement water proofing compound conforming to IS 2645 and of approved brand and manufacture, enlisted by the Engineer-in-Charge shall be used.

Where so specified, water proofing material of approved quality shall be added to the mixture in accordance with the manufacturer's specification stating the quantity of water proofing material in liters or kg per 50 kg of cement.

Appearance - Opaque liquid

Density @20 degree Celsius : 1.05 +/- 0.02 kg/ltr

pH : alkali

Chloride : nil

Storage : 24 months when kept unopened and away from frost.

Areas of Application:

External masonry walls, parapet walls, all shafts inner side etc.

Features & Benefits:

- Corrosion - Chloride-free hence no chances of corrosion of reinforcement bars. Water seepage - As an effective pore filler, helps to fill capillaries and pores to prevent water seepage.
- Consistency - Makes the mix cohesive and denser, hence the concrete & plaster has reduced permeability.
- Setting & strength - Does not affect the setting time and strength. Of the cured concrete.
- Compatibility – Compatible with all types & grades of cements.

Method of Application:

- Hand mixing of mortar not allowed, else otherwise specified and prior approval of Architect / Engineer-in-charge.
- Machine Mixing: Charge the Cement & sand as per the mix design into concrete mixer & mix for one minute. Add dosage of liquid waterproofing compound for every 50 kg bag of cement & mix for one minute.
- Add the measured quantity of potable water as per W/C ratio and mix for 2-3 minutes to a lumps free homogeneous concrete. Place the mixed cement mortar to the locations as specified. For exterior plasters procedure is to be carried from top to ground level.
- Cure the concrete / mortar surface as per regular practices of water curing.

Health & Safety Precautions

- Use rubber hand gloves & safety goggles, while using Powder Waterproof.
- In case of contact with skin, wash with plenty of water.
- Keep out of reach of children's.

The contractor shall bring the materials to the site in their original packing. The containers will be opened and the material mixed with dry cement in the proportion by weight, recommended by the manufacturers or as specifically described in the description of the item. Care shall be taken in mixing, to see that the water proofing material gets well and integrally mixed with tied from the cement and does not run out separately when water is added.

Mode of Measurement:

- a. Length and breadth shall be measured correct to a cm and its area shall be calculated in square meters correct to two places of decimal.
- b. The measurement of wall plaster shall be taken between the walls or partitions (the dimensions before the plaster shall be taken) for the length and from the top of the floor or skirting to the ceiling for the height. Depth of coves or cornices if any shall be deducted.
- c. Deductions in measurements, for opening etc. will be regulated as follows: 1) No deduction will be made for openings or ends of joists, beams, posts, girders, steps etc. upto 0.5 sqm in area and no additions

shall be made either, for the jambs, 2) soffits and sills of such openings. The above procedure will apply to both faces of wall. 3) Deduction for opening exceeding 0.5 sqm but not exceeding 3 sqm each shall be made for reveals, jambs, soffits sills, sills, etc. of these openings. When both faces of walls are plastered with same plaster, deductions shall be made for one face only. 4) When two faces of walls are plastered with different types of plaster or if one face is plastered and other is pointed or one face is plastered and other is un-plastered, deduction shall be made from the plaster or pointing on the side of the frame for the doors, windows etc. on which width of reveals is less than that on the other side but no deduction shall be made on the other side. Where width of reveals on both faces of wall are equal, deduction of 50% of area of opening on each face shall be made from area of plaster and/or pointing as the case may be. (iii) For opening having door frame equal to or projecting beyond thickness of wall, full deduction for opening shall be made from each plastered face of wall. For opening exceeding 3 sqm in area, deduction will be made in the measurements for the full opening of the wall treatment on both faces, while at the same time, jambs, sills and soffits will be measured for payment.

Rate : The rate shall include the cost of all cleaning, surface preparation, labour, material, scaffolding, curing, finishing etc., involved in all the operations described above.

9.00 TECHNICAL SPECIFICATIONS FOR WATERPROOFING

Scope of work :

The work covered under this specification consists of providing and treating terraces, balconies, basements, toilets and overhead tanks with modern specialized waterproofing treatments, seamless PU application etc. strictly in accordance with these specifications and relevant drawings to protect and guard building against any type of water seepage or leakage.

General :

1. All surfaces to be applied shall be cleaned by water blasting, sandblasting, wire brushing, scraping or any other suitable means to remove dirt, grease, moss, moulds etc. A suitable algacide / fungicide solution shall be used to remove algae/ fungus.
2. Other cracks that are subjected to only minimal movement shall be raked out where necessary. These cracks shall be prepared with Hitchens formwork 122 or a similar epoxy repair mortar.
3. Where cracks are to be structural, a structural engineer shall be consulted and the structure assessed.
4. Large holes and defects shall be repaired by plastering or screeding or using approved epoxy repair mortar.
5. All spalled concrete and plaster must be repaired by appropriate methods prior to the installation of the waterproofing system.
6. The guarantee for water proofing treatment for 10 years in prescribed format approved by the Architect / Bank must be given by the specialized agency which shall be signed by the contractor in token of his overall responsibility. The guarantee for waterproofing treatment in the prescribed format shall also cover horizontal expansion joint and vertical expansion joint.

General Requirements:

Waterproofing treatment being a specialized job, calls for thorough knowledge of the advanced waterproofing techniques, compounds, chemicals, processes to be dealt with and the environmental conditions, in order to give effective treatment and lasting protection to the property undergoing treatment. It is therefore imperative that the works of waterproofing treatment should be got executed through specialized agencies only. The specialized agency should be preferably an expertise and reputed agency in modern waterproofing treatments and shall have sufficient experience of carrying out similar works of magnitude envisaged in this tender.

Testing and Guarantee:

1. The contractor shall test the surface where waterproofing treatment is provided for the bone dry condition by filling with water inside the depressed plastered portion. No wet patches or leaks shall appear on the surrounding plastered walls or at the underside of the slabs. The testing shall be carried out to the entire satisfaction of the Engineer-in-charge. The contractor shall furnish guarantee in the Performa for the waterproofing treatment for maintaining the underside of the water proofed surface in bone dry condition for a period of 10 years. During this period, contractor shall attend to all leakages,

defects etc. if noticed, free for cost, starting his work of checking up and rectification within a week's time from the date of receipt of information about such leakages etc. by him.

2.The contractor shall test the surface by ponding water over roof for minimum seven days period to the entire satisfaction of the Engineer-in charge. Alternately, the curing of the finished surface done by ponding of water on the entire surface for seven days, can also be used for testing water tightness. After a period of two months, once again the roof should be ponded with water to check its efficiency of waterproofing treatment against leakage. The contractor shall furnish guarantee in the Performa specified for the waterproofing treatment provided by them to maintain the underside of the roof in bone dry condition for a minimum period of ten years. During this period, the contractor shall be liable to attend all the leakages, defects etc. if noticed, free of cost, starting his work of checking and rectification within a week's time from the date of receipt of intimation of such leakages etc. by him.

3.The tank will thereafter be got filled into the full height immediately and water stored for a minimum period of seven days so as to observe any leakages / defects for necessary compliance by the waterproofing contractor. In the case of tanks whose external faces are exposed, the requirements of the test shall be deemed to be satisfied if the external faces shown no sign of leakage and remain apparently dry over the period of observation of seven days after allowing a seven day's period for absorption after filling the tank for full height. If the structure does not satisfy the conditions of test, the period of test may be extended for a further period of seven days and if specified limit is then reached, the structure may be considered a satisfactory. Suitable remedial measures shall be taken by the contractor at his own cost till the test as specified above is carried out satisfactorily. In the case of tanks whose external faces are exposed or can be left exposed prior to testing all leakages, wet patches and the like, shall be marked out on the outside of walls during test. The tank shall then be dewatered and the defects made good by grouting, waterproofing, plastering etc. as necessary to the entire satisfaction of the Engineer-in-charge, at no extra cost. The tank shall again be tested for leakage after rectification. The work shall not be accepted unless the water tightness is established.

4.Back filling in case of underground sump and waterproofing the roof where specified, shall be carried out after testing and rectification of defects. The completion certificate shall not be given unless the test for water tightness as described above is carried out to the entire satisfaction of the Engineer-in-charge. After a period of two months after the tank is left dry, once again the tank should be filled with water to check the efficiency of the waterproofing treatment done. If there is any leakage or wet patches, the same shall be rectified, with no extra cost, by the contractor.

Mode of measurement :

1.The length and breadth of the surface area shall be measured to two places of decimals of a meter from the finished surface of wall and parapet and cubic contents where ever required to be worked out with average thickness of coba/ fill provided. Vatas shall not be measured separately.

2.No deduction shall be made for W.C. pans, pipes etc. in the measurement.

3.Measurement for payment of waterproofing treatment shall be as per actual area covered by waterproofing treatment as provided at site. No deduction shall be made for inlet, outlet, scour connection, by out the same shall be finished as required.

Rate :

The rate quoted shall include all the cost of materials, labour, transportation, testing of water tank for water tightness, furnishing necessary guarantee for waterproofing so provided, all as detailed above.

Fabrication work for Fire Staircase

Scope of Work :

The work covered by this specification consists of supplying, fabricating, assembling, and fixing in position of structural steel in MS Pipes, sections, I-beams, grating, frames, guard bar, ladders, brackets, gates etc complete in strict accordance with these specifications and the applicable drawings.

Materials : All structural steel shall be of standard sections as marked on the drawings and shall be free of scale, blisters, laminations, cracked edges and defects of any sort. All structural steel and electrodes shall comply in all respects with relevant I.S. codes.

Workmanship :

All workmanship shall be of first class quality in every respect to get greatest accuracy to ensure that all parts will fit together properly on erection. All ends shall be cut true to planes. They must fit the abutting surfaces closely. All stiffeners shall fit tightly at both ends. All holes in plates and section between 12mm and 20 mm thick shall be punched to such diameter that 3mm of metal is left all around the hole to be cleaned out to correct size by reamer. The base connection shall be provided as shown on drawings and the greatest accuracy of workmanship shall be ensured to provide the best connections. Figured dimensions on the drawings shall be taken.

Shop Drawing :

The shop drawings of structural steel based on contract drawings shall be submitted to the Engineer-in-charge. The necessary information for fabrication, erection, painting of structure etc. must be furnished immediately after acceptance of the Architect / Engineer in charge.

Painting :

Providing and applying Epoxy paint of approved make and desired shade, including the surface preparation (with emery paper 180 and wipe clean) by thoroughly cleaning all dust, dirt, applying red oxide oil primer and applying primer, again sand papering leveling rubbing the surface, to be free from undulation/ waviness, applying 1st coat of Epoxy paint & 2nd coat of Epoxy paint. Painting should be carried out on dry surfaces free from dust, scale etc. The paint shall be approved by the Engineer-in-charge.

Welding :

Welding shall be in accordance with IS 816-1969, IS 819-1957, IS 1024-1979, IS1261-1959, IS 1323-1982 and IS 9595-1980 as appropriate. For welding of any particular type of joint, welders shall give evidence of having satisfactorily completed appropriate test as described in any of IS 817-1966, IS 1393-1961, IS 7307 (part-I) –1974, IS 7310 (part-I) 1974 and IS 7318 (part-I) 1974 as relevant.

Type of Welding :

Arc welding (direct or alternating current) or Oxyacetylene welding may be used. Field welding may be used. Field welding shall be by D.C.

Note : On any straight weld the first run shall not ordinarily be deposited with a larger gauge electrode than No.8 S.W.G. For subsequent runs the electrode shall not be increased by more than two electrode size between consecutive runs.

Mode of Measurement : For payment purpose, polycarbonate sheet and fabrication work will be measured under separate items. Fabrication work will be measured in KG whereas area of polycarbonate sheet will be measured in Sqm. Overlapping of sheets will not be measured. No separate measurements shall be taken for welding, riveting, bolting, field connections etc. The rate shall include cost of all labour, materials, scaffolding, transport and also cost of welding, riveting and bolting, field connections if any all to complete the job as per specifications.

LIST OF APPROVED BRANDS / MAKES

One of the following make of the material shall be used. Please note that equivalent brands will be allowed only if below mentioned brands are not available / feasible. The contractor will have to get the sample approved from the Architect/ Bank's Engineer whose decision shall be binding on the contractor. The condition is also applicable for any material, not mentioned in the specification or schedule of work. No deviations are allowed in these even during/ after Tender.

1	Reinforcement Steel	JSW, TATA, SAIL or Equivalent
2	Structural Steel	JSW, JINDAL, TATA, SAIL or Equivalent
3	Ready Mix Concrete	Ultratech, ACC, Lafarge or Equivalent
4	Vitrified Tiles	Kajaria/ Somany/ H.R.Johnson/ NITCO or Equivalent
5	Ceramic wall Tiles	Kajaria/Somany/ H.R.Johnson/ NITCO or Equivalent
6	Ceramic floor Tiles (antiskid)	Kajaria/Somany/ H.R.Johnson/ NITCO or Equivalent
7	False Flooring	Unifloor/ Flexi Access Floor/ Armstrong or Equivalent
8	Wooden Laminated Flooring	Pergo/ Tiles/ Xylos/ Armstrong/ Vista/Green Panel or Equivalent
9	Aluminum Fittings	Jindal/ Hindalco/ MAAN or Equivalent
10	Aluminum Extrusion Sections	Jindal/ Hindalco/ MAAN or Equivalent
11	Commercial Plywood/MDF	Century/ Green/ Archid- Assam/zGreen Panel or Equivalent
12	Laminates (1.00mm thk.)	Greenlam / Century/ Aica/ Sonear/ Archid or Equivalent
13	Veneer	Century / Durian/ Sonear/ Archid/ Green or Equivalent
14	Drawer Sliding/ Patch Fittings	Earl Bihari (EBCO)/ Godrej/ Hettich/ Dorma or Equivalent
15	Floor Spring / Door Closer	Godrej / Hardwyn / Hyper/ Dorma/ Haffele or Equivalent
16	Flush Door	Century/ Archid/ Sonear/Green Panel or Equivalent
17	Texture Interior Paint	Sandtex Matt/ Dulux/ Berger/ Okios/ Asian or Equivalent
18	Readymade Computer Drawer	EBCO/ Hettich/ Blum or Equivalent
19	Paints	Asian/ Nerolac/ Berger/ Dulux or Equivalent
20	Cement paint	Snowcem/ Surfaced/ Durocem or Equivalent
21	Synthetic Enamel Paint	Asian/ Nerolac/ Berger/ Dulux or Equivalent
22	Acrylic Emulsion Paint (Interior and Exterior)	Asian/ Nerolac/ Berger/ Dulux or Equivalent
23	Glazing	Modi Tuff Glass/ Triveni Glass Ltd./ Indo Asahi

		Glass Co. Ltd./ Saint Gobain or Equivalent
24	Cement	Grade 43/53 of L&T/ A.C.C./ Ambuja/ Ultratech or Equivalent
25	Mineral Fibre False Ceiling	Armstrong/ Indian Gypsum Board/ Gypro or Equivalent
26	ACP Panels/ Sheets	Alubond/ ALU Decor/ Alstrong/ Alstone or Equivalent
27	Acrylic Sheets	Sanmati Acrylics/Acrylic Sheet India/ Acry Plus or Equivalent
28	Vertical/Roller blinds	Vista/ MAC/ DACK or Equivalent
29	PU Paint	Asian/ Berger/ ICI or Equivalent
30	Wall Paper	Elemento/ Marshel or Equivalent
31	Plumbing pipes	Astral/Supreme/Prince/Finolex or Equivalent
32	Bath & Toilet fitting	Jaquar/Hindware/Cera or equivalent
33	Micro-Concrete	Dr. fixit, Fosroc, Sika, Chryso or equivalent

PREAMBLE:

TO BE READ ALONG WITH DRAWINGS.

- 1. THE CONTRACTOR SHALL ENSURE TO COMPLETE ALL REPAIR WORKS STRICTLY IN ACCORDANCE WITH THE STRUCTURAL AUDIT REPORT (M/S SLIPTEC) AND THEIR DRAWINGS FORMING PART OF THIS TENDER.**
2. RATES BASED ON PERCENTAGE BASIS NEED TO BE QUOTED BOTH IN FIGURES AND WORDS.
3. ALL PAGES TO BE SIGNED AND STAMPED BY THE TENDERER.
4. THE RATE OF THE ITEMS SHALL BE APPLICABLE FOR ANY FLOOR LEVEL/ ANY NUMBER OF FLOORS, OR ANY QUANTITY.
5. THE SPECIFICATION OF THE ITEMS SHALL BE AS PER LATEST INDIAN STANDARD CODES UNLESS OTHERWISE SPECIFIED.
6. ALL MATERIALS SHALL BE AS PER APPROVED LIST AND SHOULD BE OF 1st QUALITY UNLESS OTHERWISE SPECIFIED.
7. THE RATES ARE INCLUSIVE OF ALL DUTIES AND TAXES (EXCEPT GST) OF ALL GOVERNMENT, MUNICIPAL OR ANY OTHER STATUTORY BODY APPLICABLE FROM TIME TO TIME.
8. RATES SHALL BE FOR ITEMS COMPLETE IN ALL RESPECTS AS PER DRAWING, INSTRUCTIONS AND APPROVAL OF THE ARCHITECT/ BANK'S ENGINEER.
9. THE QUANTITIES ARE APPROXIMATE AND TENTATIVE WHICH MAY VARY DURING COURSE OF EXECUTION. THE RATES QUOTED AGAINST PARTICULAR ITEM SHALL NOT BE CHANGED WITH VARIATION IN QUANTITIES.
10. MAKING OF ANY CUTOUT / OPENING FOR ELECTRICAL / AIR – CONDITIONING WIRING / FITTING IN ANY OF THE ITEM OF FALSE CEILING, PARTITIONS, PANELING MASONRY WORK ETC. AND FINISHING EDGES JAMBS / CILLS / SOFFITS OF THE OPENING SHALL NOT BE PAID EXTRA.
11. THE TENDERER SHALL VISIT THE SITE AND SHALL SATISFY HIMSELF AS TO CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. HE SHALL ALSO CHECK, ASCERTAIN THE LOCATIONS OF ANY EXISTING STRUCTURES OR EQUIPMENT OR ANY OTHER SITUATION WHICH MAY AFFECT THE WORK. NO EXTRA CLAIM AS A CONSEQUENCE OF IGNORANCE OR ON GROUND OF INSUFFICIENT DESCRIPTION WILL BE ALLOWED AT A LATER DATE.
12. THE QUOTED PRICE FOR ITEMS SHALL INCLUDE ALL ACCESSORIES, CONSUMMABLES ETC. AS REQUIRED TO MAKE THE ITEM COMPLETE IN ALL RESPECTS, COMPATIBLE WITH OTHER RELATED / ASSOCIATED ITEMS AND FULLY FUNCTIONAL.
13. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY ERROR, DIFFICULTY IN EXECUTION / DAMAGES INCURRED OWING TO DISCREPANCY IN DRAWINGS WHICH HAS BEEN OVERLOOKED BY HIM AND HAS NOT BEEN BROUGHT TO THE NOTICE OF THE ARCHITECT.
14. THERE ARE NUMBER OF ITEMS GIVEN IN THE TENDER WHERE IN BASIC RATES INCLUDING ALL TAXES EXPECTED HAS BEEN MENTIONED IN THE TENDER. THESE ITEMS SHALL BE PURCHASED BY THE CONTRACTOR FROM THE MARKET ONLY AFTER THE APPROVAL OF QUALITY AND RATES BY THE ARCHITECT.
15. CONTRACTOR SHALL APPOINT TECHNICALLY QUALIFIED FULL TIME SITE SUPERVISOR TO MONITORING THE DAY TO DAY PROGRESS OF WORK AT SITE ON THEIR OWN COST.

AGREED AND ACCEPTED ALL THE TERMS & CONDITIONS.

SIGNATURE OF CONTRACTOR
DATE:
SEAL:

BILL OF QUANTITY

(Refer annexed file/section in e-tender portal for detailed Bill of Quantities)

LEGEND	
SYMBOL	DESCRIPTION
	SOIL PIPE
	WASTE PIPE
	FLOOR TRAP 100x100mm WITH 125mm GRATING
	FLOOR DRAIN 100x50mm WITH 125mm GRATING
	DOM. WATER SUPPLY PIPE
	HOT WATER SUPPLY PIPE
	CONTROL VALVE

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 - All interior finishes must have a flame-spread rating and smoke density rating to meet or exceed local code requirements.

PROJECT:
SBI
TRAINING CENTER, NOIDA SECTOR-62.

ARCHITECT:
D. MOHAN
(CA/66/8517 COUNCIL OF ARCHITECTS)

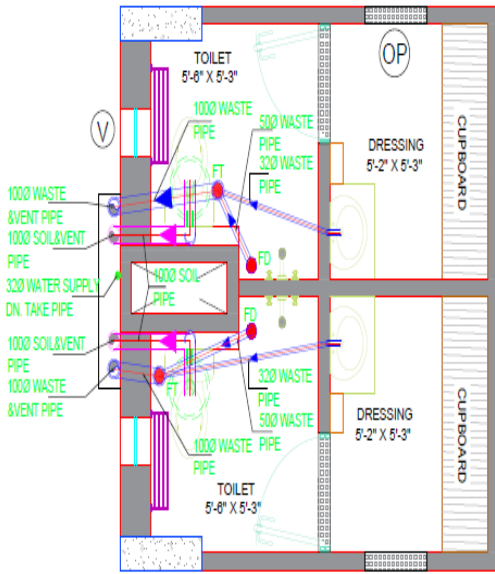
MOHAN & ASSOCIATES
Architects, Interior Designers & Valuers
202, Padma Tower-II Rajendra Place,
Delhi - 110008
(Mobile) : 7280068346
(Fax) : 0121-2767520
PHONE (O) : 011-43027886
E-mail : m.associatesdelhi@gmail.com

NOTE:
* EXISTING PLUMBING PIPES IN SHAFT WILL BE DISABLE.
* ALL NEW PLUMBING PIPES WILL BE SHIFTE ON EXTERNAL WALL.
* USE ONLY PVC GADOLE FOR EXTERNAL PIPES.
* DRAWINGS ONLY FOR TENDER USES.

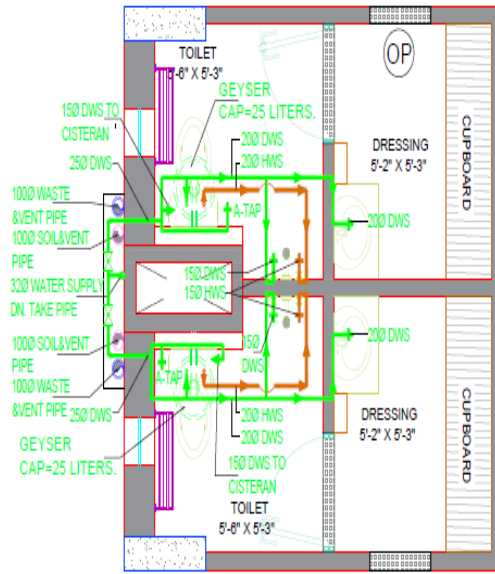
SUBJECT OF DRAWING:
HOSTEL BLOCK - TOILET PLUMBING LAYOUT

DESIGN BY: Ar. SHWETA JAIN	NORTH:
PROJECT COORDINATOR: Ar. ANKIT	
SCALE: N.T.S	DATE: 04.01.2024
DRAWN BY: SHRAVAN	ISSUE DT: 04.01.2024

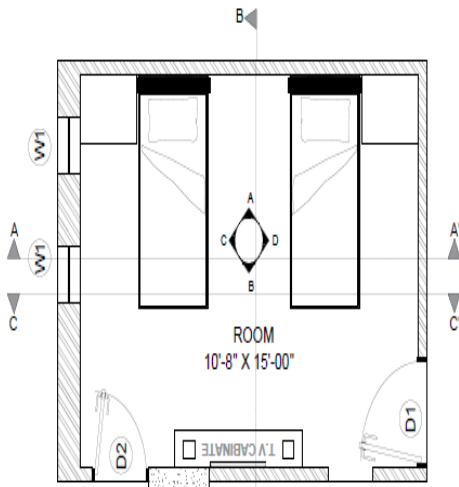
DRAWING No. : 14	REVISION No. : R_00	PAGE SIZE : A3
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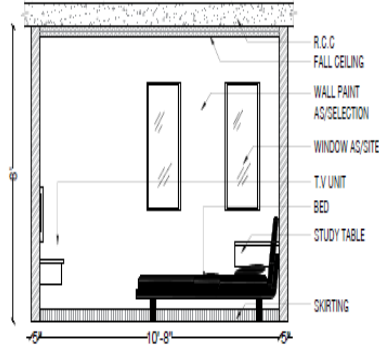
TOILET DETAIL FOR DRAINAGE SYSTEM



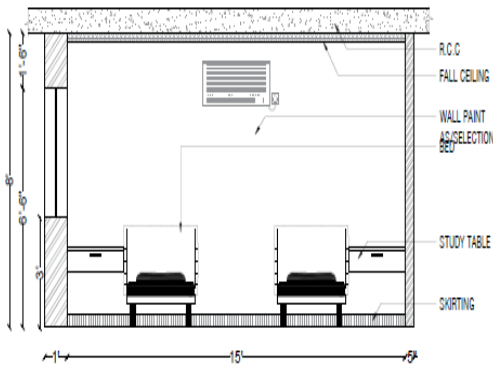
TOILET DETAIL FOR WATER SUPPLY SYSTEM



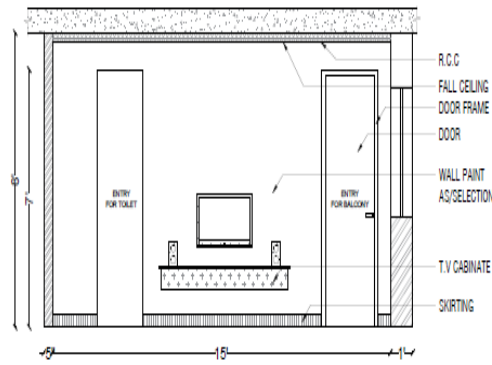
LAYOUT PLAN



SECTIONAL ELEVATION - BB'



SECTIONAL ELEVATION - AA'



ELEVATION - B

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PROJECT:

SBIL,
TRAINING CENTER, NOIDA SECTOR-62.

ARCHITECT:

D. MOHAN
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E-mail : m.associatesdelhi@gmail.com

LEGEND:

SUBJECT OF DRAWING:

HOSTEL BLOCK - BED ROOM SECTIONAL ELEVATION

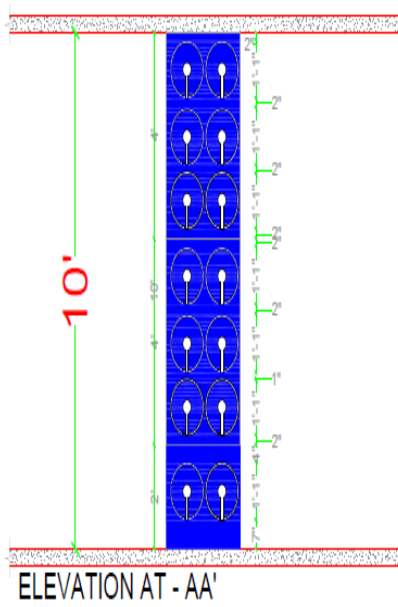
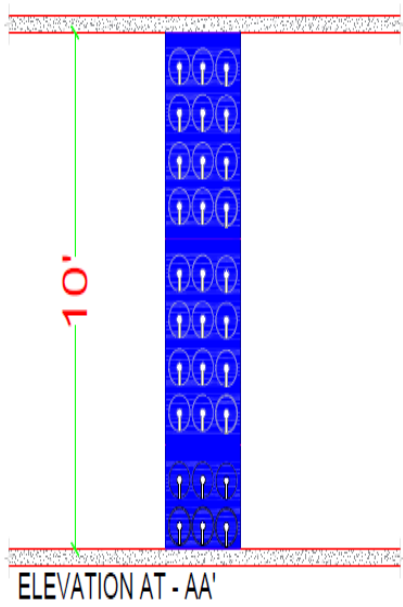
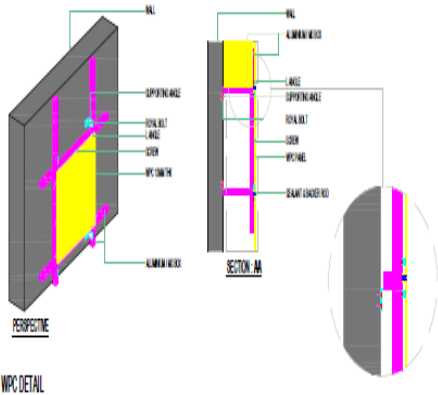
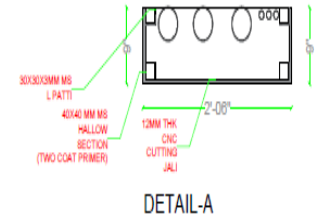
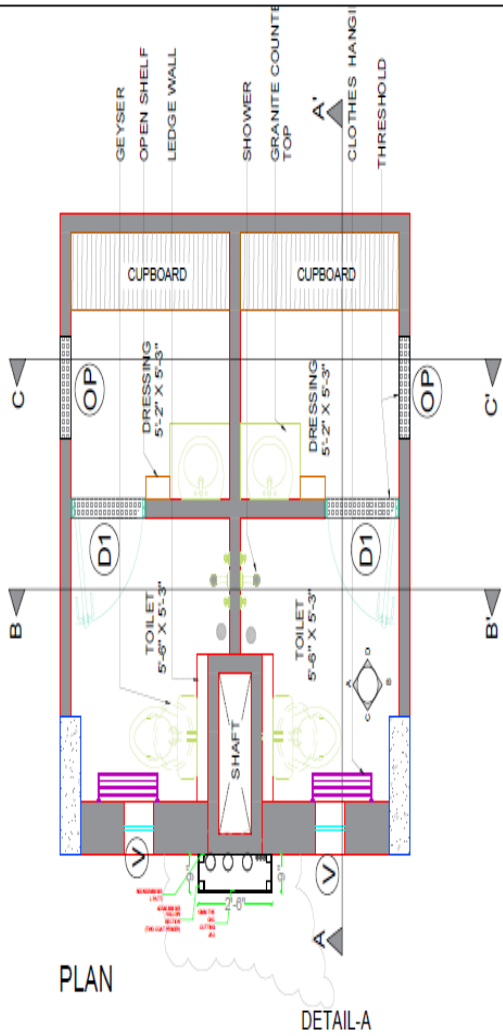
DESIGN BY: Ar. SHWETA JAIN NORTH:

PROJECT COORDINATOR: Ar. ANKIT

SCALE: N.T.S DATE: 29.12.2023

DRAWN BY: RAJ VANSH ISSUE DT: 29.12.2023

DRAWING No.: 01 REVISION No.: R_00 PAGE SIZE: A3



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PROJECT:
 SBI,
 TRAINING CENTER, NOIDA SECTOR-62.

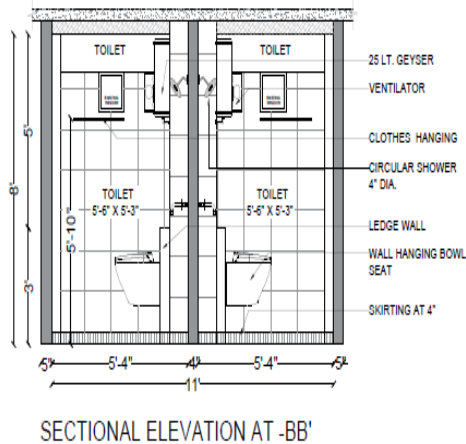
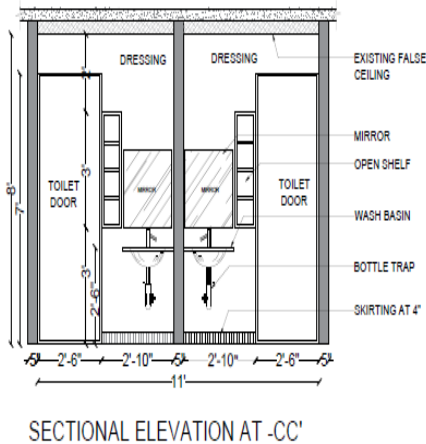
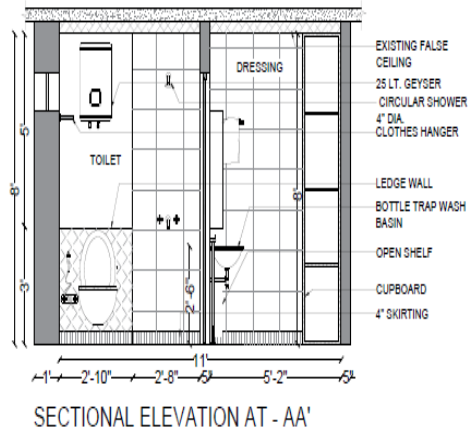
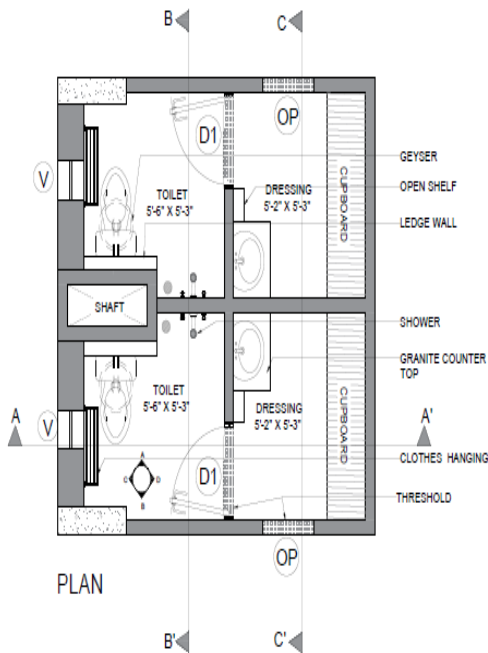
ARCHITECT:
 D. MOHAN
 (CA/85/8517 COUNCIL OF ARCHITECTS)

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 Architects, Interior Designers & Valuers
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 (Fax) : 0121-2767520
 PHONE (O) : 011-43027885
 E-mail : m.associatesdelhi@gmail.com

LEGEND:

SUBJECT OF DRAWING:
 HOSTEL BLOCK - OUTER SHAFT DETAILS

DESIGN BY: Ar. SHWETA JAIN	NORTH:
PROJECT COORDINATOR: Ar. ANKIT	
SCALE: N.T.S	DATE: 04.01.2024
DRAWN BY: ANKIT	ISSUE DT: 04.01.2024
DRAWING No.: 14	REVISION No.: R_00
PAGE SIZE:	A3



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PROJECT:

SBI,
TRAINING CENTER, NOIDA SECTOR-62.

ARCHITECT:

D. MOHAN
(CA/85/9517 COUNCIL OF ARCHITECTS)

MOHAN & ASSOCIATES

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PHONE (O) : 011-43027885

E-mail : m.associatesdelhi@gmail.com

LEGEND:

SUBJECT OF DRAWING :

HOSTEL BLOCK - TOILET SECTIONAL ELEVATION

DESIGN BY :	Ar. SHWETA JAIN	NORTH :
PROJECT COORDINATOR :	Ar. ANKIT	
SCALE :	N.T.S	DATE : 04.01.2024
DRAWN BY :	VINAY	ISSUE DT. 04.01.2024

DRAWING No. : 14	REVISION No. : R_00	PAGE SIZE :
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