



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

SBIIMSPL, CIRCLE OFFICE, SBI, LOCAL HEAD OFFICE, THIRD FLOOR,  
BANDRA KURLA COMPLEX, BANDRA(E), MUMBAI- 400051

**PART – A: TECHNICAL BID**

**TENDER ID: MUM202009025**

**TENDER FOR PROPOSED CIVIL WORKS OF STATE BANK OF INDIA'S RBO NASHIK AT  
GROUND FLOOR, BSNL CTTC BUILDING, D ROAD, MIDC SATPUR, NASIK - 422 007**

**TENDER SUBMITTED BY:**

**NAME** :

**ADDRESS** :

**GSTIN NO.** :

**DATE** :

**ARCHITECT**



**NARENDRA SARDESHPANDE & ASSOCIATES**  
Architects

43, "Shreekul", Flat No. 2, Ground Floor, United Western Housing Society, Near Tathawade Garden, Karvenagar, Pune - 411 052  
Telephone: (020) 25454297 E-mail : nsapune1@gmail.com

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**NOTICE INVITING TENDERS**  
**TENDER ID: MUM202009025**

**TENDER FOR PROPOSED CIVIL WORKS OF STATE BANK OF INDIA'S GROUND FLOOR,  
RBO NASHIK AT BSNL CTTC BUILDING, D ROAD, MIDC SATPUR, NASIK - 422 007**

SBIIMS, Circle Office, Mumbai on behalf of SBI, LHO, Mumbai invites “online percentage rate E-tender” for captioned work from the SBIIMS eligible empaneled contractors under appropriate category. Empaneled contractors who receive NIT from the SBIIMS /Architects are only entitled to quote for this tender.

Details of the tenders are as under:

Sr.No.	Particulars	Details
1	Name of work	<b>Tender For Proposed Civil Works Of State Bank Of India's RBO Nashik at Ground Floor, BSNL CTTC Building, D Road, MIDC Satpur, Nasik - 422 007</b>
2	Nature of Work	Civil Work
3	Time allowed for completion	<b>45 Days</b>
4	Cost of Tender document cum Tender Processing Fee (Non-refundable)	<b>Rs.3000/- (Rupees Three Thousand Only)</b>  This Non-Refundable amount to be paid only through <b>SB Collect Payment Portal</b> available in SBI's online Banking site i.e. <a href="https://www.onlinesbi.com">https://www.onlinesbi.com</a>  After successful payment, submit a print of the receipt carrying a Reference no. along with the tender application.  For further details, refer <b>annexure- 'A'</b> (page no. 50) enclosed.
5	Earnest Money Deposit	<b>Rs.22,000/- (Rupees Twenty Two Thousand Only)</b> by means of Demand Draft / Pay Order (Valid for a period of 90 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favor of SBI Infra Management Solutions Pvt. Ltd. and payable in Mumbai.
6	Initial Security Deposit (ISD)	2% of contract amount (EMD will be returned on receipt of ISD). The successful bidder(s) shall be responsible to deposit Initial security deposit @ 2% of the Contract Value by way of demand draft in favour of SBI, payable at Mumbai within 10 days from the date of receipt of “Letter of Intent” from SBIIMS.  The SBIIMS/ SBI may consider accepting ISD in the form of Bank Guarantee issued by any Scheduled Bank in the format supplied/approved by the SBIIMS within its sole discretion but the same cannot be considered as a right of the bidder.

M/s NSA architects

Signature of Contractor with Seal



7	Additional security Deposit	In case L-1 bidder quotes abnormally low rates (i.e.10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfillment of contract. Such ASD could be in the form of FDR / Bank's guarantee in the Bank's name as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion
8	Date of availability of tender documents on Service Provider's website	
	<b>(a) Technical Bid</b>	<b>24.09.2020 to 05.10.2020</b> Available at M/s e-Procurement Technologies Ltd., our Service Provider's portal <a href="https://etender.sbi/">https://etender.sbi/</a>
	<b>(b) Price Bid</b> ( <u>only to those bidders who qualify in Technical Bid.</u> )	<b>From 06.10.2020 to 09.10.2020</b> Available at M/s e-Procurement Technologies Ltd., our Service Provider's portal <a href="https://etender.sbi/">https://etender.sbi/</a>
9	Last date & time for submission of EMD and cost of tender document cum processing Fee	<b>05.10.2020 by 03:00 PM</b> Note: It is sole responsibility of the bidder to ensure submission of their EMD and Cost of tender document cum processing by stipulated date and time at specified address failing which they will not be allowed to participate in E-Tendering
10	Address for submission of EMD and cost of tender document cum processing fee.	The V.P. & Circle Head, SBIIMSPL, Circle Office State Bank of India, 3 <sup>rd</sup> Floor, Local Head Office, Bandra Kurla Complex, Bandra(E), Mumbai-400051.
11	Date and Time of opening of Online Technical Bid	<b>05.10.2020 by 03:30 PM</b>
12	Last date & time for submission of Online Technical bid	<b>05.10.2020 by 03:00 PM</b> at Service Provider's portal <a href="https://etender.sbi/SBI/">https://etender.sbi/SBI/</a>
13	Date and Time of opening of Online Price Bid	<b>09.10.2020 by 03:30 PM</b>

14	Date and time for submission of Online Price Bid <u>by the bidders qualified in Technical Bid.</u>	<b>09.10.2020 till 03:00 PM</b> at Service Provider's portal <a href="https://etender.sbi/SBI/">https://etender.sbi/SBI/</a>
15	Defects Liability period	One year from the date of virtual completion of work.
16	Liquidated Damages	0.50% per week subject to max. 5% of contract amount for delay in completion of work.
17	Validity of offer	90 days from the date of opening of Price-bid
18	Value of Interim Certificate	No advance on materials / plant / machinery or mobilization advance shall be paid under any circumstances
19	<b>Submission of Technical Bid (Hard Copy)</b>	<ol style="list-style-type: none"> <li>Contractors shall Download the entire Technical Bid to get acquainted with the terms and conditions and <b><u>shall upload compulsorily the pages numbered from 01 to 09 of the technical bid</u></b> without fail in the e-tendering portal after putting the signature and seal. Failing to upload as stated above, the tender will be rejected.</li> <li>However, <b>L1 Bidder</b> should submit the whole technical bid spirally bound securely and in serial order containing all pages duly signed with company seal and date to this Office within 7 days of receipt of confirmation. Failure to submit the hardcopy of Technical Bid may render the bidder disqualified.</li> </ol>
20	<b>Submission of Price Bid</b>	<p>i. In case of Percentage Rate Tenders, contractor shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in <b>Schedule of Quantities</b>; he will be willing to execute the work.</p> <p>The tender submitted shall be treated as invalid if: -</p> <ol style="list-style-type: none"> <li>The contractor does not quote percentage above/below on the total amount of tender or any section/ sub head of the tender.</li> <li>The percentage above/below is not quoted in figures &amp; words both on the total amount of tender or any section/ sub head of the tender.</li> <li>The percentage quoted above/below is different in figures &amp; words on the total amount of tender or any section/ sub head of the tender.</li> </ol> <p>Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which</p>

		<p>contain any other conditions of any sort including conditional rebates, will be summarily rejected.</p> <ul style="list-style-type: none"> <li>ii. The intending bidders shall be asked to quote their offers in terms of "specific Percentage numerical value" (only up to two decimal places) above (+) / below (-) / at par with the Total Estimated Cost published for the project, he will be willing to execute the work.</li> <li>iii. After taking into account the Percentage Rebate/Addition Offered by all the bidders over the Estimate Cost, "Net Tender Value" of each bidder shall be evaluated (Mostly by the online system itself) and the bidder offering Lowest Tender Amount for projects pertaining to Procurement Purchase Contract and Highest Tender Amount for Sales Contracts shall be declared as "Successful Bidder".</li> <li>iv. The "Percentage Offer" shall be uniformly applicable to each and every item including all sections/ sub sections/sub heads of the Tender.</li> <li>v. In case, the Lowest Tendered Amount (i.e. Estimated cost +/- Percentage Bid quoted) of two or more contractors is same, such lowest contractors will again be asked to submit sealed /online "Revised +/- Percentage (%) offers" on the original Estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted shall, in no case, be higher than the percentage quoted during their initial offer for the project. The lowest tender shall be decided on the basis of revised offers.</li> <li>vi. The process of online re-bidding amongst Two or more contractors offering same rates shall continue till L-1 bidder is discovered.</li> <li>vii. Incase, any of such contractor(s) (quoted same tender amount during initial bidding or subsequent re-bidding) refuses to submit revised offer, it shall be treated as "withdrawal of tender" by the Contractor before acceptance. The earnest money of such contractors shall be forfeited.</li> <li>viii. In case all the lowest contractors those have quoted same tendered amount, refuse to participate in online revised bidding process for the project, the EMD of such Contractors shall be forfeited and the tenders shall be re-invited for the project.</li> <li>ix. The Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process for the said project.</li> </ul>
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21	<p><b><u>e-Tender Service Provider Contact persons:</u></b> Primary Contact Numbers: - M:- 9081000427, 9904407997 1. Jaymeet Rathod: 079-68136829, <a href="mailto:jaymeet.rathod@eptl.in">jaymeet.rathod@eptl.in</a> 2. Vinayak Khambe: 079-68136835, <a href="mailto:vinayak.k@eptl.in">vinayak.k@eptl.in</a> 3. Nadeem Mansuri: 079-68136853, <a href="mailto:nadeem@eptl.in">nadeem@eptl.in</a> 4. Nandan Valera: 079-68136843, <a href="mailto:nandan.v@eptl.in">nandan.v@eptl.in</a> 5. Hemangi Patel: 079-68136852, <a href="mailto:hemangi@eptl.in">hemangi@eptl.in</a> 6. Kanchan Kumari: 079-68136820, <a href="mailto:kanchan.k@eptl.in">kanchan.k@eptl.in</a> 7. Deepak Narekar: 079-68136863, <a href="mailto:deepak@eptl.in">deepak@eptl.in</a> 8. Anshul Juneja: 079-68136840, <a href="mailto:anshul.juneja@eptl.in">anshul.juneja@eptl.in</a> 9. Salina Motani: 079-68136831, <a href="mailto:salina.motani@eptl.in">salina.motani@eptl.in</a> 10. Devang Patel: 079-68136859, <a href="mailto:devang@eptl.in">devang@eptl.in</a> Alternate Contact No.: Riddhi Panchal: 079-40270506, 8460518168, <a href="mailto:riddhi.panchal@auctiontigher.net">riddhi.panchal@auctiontigher.net</a></p>
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22. No conditions other than mentioned in the tender will be considered, and if given they will have to be withdrawn before opening of the price-bid.

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

24. Tenders received without EMD and Cost of Tender Documents shall be summarily rejected and such tenders shall not be allowed to participate in the online price bidding process.

25. 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.

26. For any clarifications regarding E-Tendering procedure, System requirements etc. please contact M/s E-Procurement Technologies Limited, Ahmedabad, whose address is mentioned in the NIT.

Yours Faithfully,

For  
M/S. NSA architects

Mr. Narendra Sardeshpande  
Architect

M/s NSA architects

Signature of Contractor with Seal

**INSTRUCTIONS TO THE BIDDERS**

**1.0 Scope of work**

Sealed Tenders are invited by M/s. NSA architects, Pune for and on behalf of SBIIMS, for and behalf of SBI / SBIIMSPL for Proposed Civil Works Of State Bank Of India's RBO Nashik at Ground Floor, BSNL CTTC Building, D Road, MIDC Satpur, Nasik - 422 007

**1. Site and its location**

The proposed work is to be carried out at **BSNL Building, Satpur (MIDC), Nasik** for State Bank of India.

**2.0 Tender documents**

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

**Instructions to bidders**

**General conditions of Contract**

**Special conditions of Contract**

**Additional specifications**

**Drawings**

**Price bid A**

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;

- a) Price Bid
- b) Technical specifications
- c) Drawings
- d) Special conditions of contract
- f) General conditions of contract
- g) Instructions to Bidders

2.3 The tender documents are not transferable.

**3.0 Site Visit**

3.1 The bidder must obtain himself on his own responsibility and his own expenses all information and data that may be required for the purpose of filling this tender document and enter into a contract for the satisfactory performance of the work. The bidder is requested satisfy himself regarding the availability of water, power, transport and

M/s NSA architects

Signature of Contractor with Seal



communication facilities, the character quality and quantity of the materials, labour, the law and order situation, climatic conditions local authorities requirement, traffic regulations etc.

The bidder 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 bidders are requested to submit the Earnest Money of **Rs.22,000/- (Rupees Twenty Two Thousand Only)** by means of Demand Draft / Pay Order (Valid for a period of 90 Days from the last date of submission of the tender) from any Scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. and payable in Mumbai.

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 clause 4.1 above shall be rejected.

4.3 No interest will be paid on the EMD.

4.4 EMD of unsuccessful bidder will be refunded within 30 days of award of Contract.

4.5 EMD of successful bidder will also be returned on receipt of Initial Security Deposit.

#### 5.0 **Initial/ Security Deposit**

The successful bidder will have to submit a sum equivalent to 2% of accepted tender value in favour of SBI within a period of 15 days of acceptance of tender. EMD will be returned on receipt of Initial security Deposit.

#### 6.0 **Security Deposit**

6.1 Total security deposit shall be 5% of contract value. Out of this 2% of contract value is in the form of Initial Security Deposit (ISD) which includes the EMD. Balance 3% shall be deducted from the running account 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 Security Deposit (TSD) including ISD reaches to 5% of contract value. The 50% of the Total Security Deposit shall be paid to the contract on the basis of Architect's certifying the virtual completion. The balance 50% would be paid to the contractors after the defects liability period as specified in the contract.

#### 6.2 **Additional Security Deposit**

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfillment of contract. Such ASD could be in the form of FDR / Bank's guarantee in the Bank's name as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

6.3 No interest shall be paid to the amount retained by the Bank as Security Deposit & Additional Security Deposit.





## 7.0 Signing of contract Documents

The successful bidder shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within 30 days from the receipt of intimation of acceptance of the tender by the Bank. However, the written acceptance of the tenders by the Bank will constitute a binding agreement between the Bank and successful bidder 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 respect accordance with the terms of contract within a period of **45 days** from the date of award of work.

## 9.0 Validity of tender

Tenders shall remain valid and open for acceptance for a period of 90 days from the date of opening price bid. If the bidder withdraws his/her offer during the value period or makes modifications in his/her original offer which are not acceptable to Bank without prejudice to any other right or remedy the Bank shall be at liberty forfeit the EMD.

## 10.0 Liquidated Damages

The liquidated damages shall be 0.50% per week subject to a maximum of 5% of contract value.

## 11.0 Rate and prices:

### 11.1 In case of percentage rate tender

11.1.1 The bidders shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in **Schedule of Quantities**; he will be willing to execute the work.

11.1.2 The tender submitted shall be treated as invalid if: -

- a. The contractor does not quote percentage above/ below on the total amount of tender or any section/ sub head of the tender.
- b. The percentage above/below is not quoted in figures & words both on the total amount of tender or any section/ sub head of the tender.
- c. The percentage quoted above/below is different in figures & words on the total amount of tender or any section/ sub head of the tender.

11.1.3 Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates, will be summarily rejected.

11.1.4 The intending bidders shall be asked to quote their offers in terms of "specific Percentage numerical value" (only up to two decimal places) above (+) / below (-) / at par with the Total Estimated Cost published for the project, he will be willing to execute the work.

11.1.5 After taking into account the Percentage Rebate/ Addition Offered by all the bidders over the Estimate Cost, "Net Tender Value" of each bidder shall be evaluated (Mostly by the online system itself) and the bidder offering Lowest Tender Amount for projects pertaining to Procurement Purchase Contract and Highest Tender Amount for Sales Contracts shall be declared as "Successful Bidder".



- 11.1.6 The "Percentage Offer" shall be uniformly applicable to each and every item including all sections/ sub sections/sub heads of the Tender.
- 11.1.7 In case, the Lowest Tendered Amount (i.e. Estimated cost +/- Percentage Bid quoted) of two or more contractors is same, such lowest contractors will again be asked to submit sealed /online "Revised +/- Percentage (%) offers" on the original Estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted shall, in no case, be higher than the percentage quoted during their initial offer for the project. The lowest tender shall be decided on the basis of revised offers.
- 11.1.8 The process of online re-bidding amongst Two or more contractors offering same rates shall continue till L-1 bidder is discovered.
- 11.1.9 In case, any of such contractor(s) (quoted same tender amount during initial bidding or subsequent re-bidding) refuses to submit revised offer, it shall be treated as "withdrawal of tender' by the Contractor before acceptance. The earnest money of such contractors shall be forfeited.
- 11.1.10 In case all the lowest contractors those have quoted same tendered amount, refuse to participate in online revised bidding process for the project, the EMD of such Contractors shall be forfeited and the tenders shall be re-invited for the project.
- 11.1.11 The Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process for the said project.
- 11.1.12 **The rate quoted shall be firm and shall include all costs, allowances etc. except G.S.T, which shall be payable / reimbursed at actuals.**
- 11.1.13 The SBIIMS reserve their rights to accept any tenders, either in whole or in part or may entrust the work in phases or may drop the part scope of work at any stage of the project or get the works done through another contractor at the cost of the accepted bidder within its sole discretion without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.
- 11.1.14 In case it is decided by the SBIIMS to reduce the scope of work at any stage of the project, the contractor shall not be entitled to raise any claim / compensation on account of reduction in scope of work. Also, the SBIIMS may consider for increase in scope of similar work in other buildings in phases but within a reasonable time interval and the contractor shall be bound to execute the same within the stipulated time period and as per rates quoted by them in this tender without any claim for price escalation.

**LETTER OF UNDERTAKING**

To,  
The V.P. & Circle Head,  
SBIIMSPL, Circle Office  
State Bank of India,  
Local Head Office,  
Bandra Kurla Complex,  
Bandra(E), Mumbai-400051.

Dear Sir,

Having examined the drawings, specification, design and schedule of quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto as affecting the tender, I/We hereby offer to execute the works specified in the said memorandum at the rates mentioned in the attached Schedule of Quantities and in accordance in all respects with the specifications, design, drawings and instructions in writing referred to in conditions of tender, the Articles of Agreement, Special Conditions, Schedule of Quantities and Conditions of Contract and with such materials as are provided for by, and in all other respects in accordance with such conditions so far as they may be applicable.

**MEMORANDUM**

(a)	Description of work	Tender for Proposed Civil Works Of State Bank Of India's Ground Floor, RBO Nashik at BSNL CTTC Building, D Road, MIDC Satpur, Nasik - 422 007
(b)	Earnest Money	<b>Rs.22,000/- (Rupees Twenty Two Thousand Only)</b> by means of Demand Draft / Pay Order (Valid for a period of 90 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. and payable in Mumbai.
(c)	Time allowed for completion of the Works from Seven day after the date of written Order or date of handing over of the site (Whichever is later) to commence the work	<b>45 Days (1.5) months</b>

- 1) Should this tender be accepted, I/we hereby agree to abide by and fulfill the terms and provisions of the said conditions of contract annexed hereto so far as may be applicable or in default thereof to forfeit and pay to SBIIM, the amount mentioned in the said contract.
  - 2) I / We have deposited a sum of **Rs.22,000/- (Rupees Twenty Two Thousand Only)** of the total tender amount as Earnest Money with the SBI Infra Management Solutions Pvt. Ltd. on behalf of SBI which amount is not to bear any interest. Should I / We fail to execute the Contract when called upon to do so I / We do hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd. on behalf of SBI.
  - 3) I/ We have read and understood various clauses of this tender and hereby submit our specific undertaking and concurrence in terms clause 6.2 of "Instruction to bidder" to deposit
- M/s NSA architects

Signature of Contractor with Seal



**Additional Security Deposit (ASD)** of required amount as provided for in this tender and within the stipulated period, in case, my/our tender is found too low (i.e. beyond 10% of the estimated cost), as a performance guarantee for due fulfilment of our contractual obligation for the project.

Further, under any circumstances, whatsoever, if I/We fail to comply the same including compliance of any such other conditions of tender within the stipulated time. I /We hereby, authorized SBIIMS to cancel my/Our tender, to forfeit my EMD/ISD/ASD and to take further necessary action as deemed fit including debaring our firm from participating in SBIIMS/ SBI future tenders/de-paneling etc.

- 4) I/ We understand that as per terms of this tender, the SBIIMS may consider accepting our tender in part or whole or may entrust the various work proposed in phases. We, therefore, undertake that we shall not raise any claim/ compensation in the eventuality of Bank/SBIIMS deciding to drop any of the work from the scope of work of this tender at any stage during the contract period. Further, we also undertake to execute the work entrusted to us in phases on our approved rates and within stipulated time limit without any extra claim for price escalation as also provided for in the clause 11.1.14“Instructions to Bidders” of this tender.
- 5) I/ We, hereby, also undertake that, we will not raise any claim for any escalation in the prices of any of the material during the currency of contract/execution/completion period including authorized extended contract period, if any.

6) Our Bankers are:

i)

ii)

The names of partners of our firm are:

i)

ii)

Name of the partner of the firm

Authorised to sign

Or

(Name of person having Power of Attorney to sign the Contract.

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

Yours faithfully,

Signature of Contractors.

Signature and addresses of Witnesses

i)

ii)



**(A) Contact Information**

<b>E-Procurement Technologies Ltd.</b>	<b>State Bank of India</b>
<p>B-704, Wall Street - II, Opp. Orient Club, Nr. Gujarat College, Ahmedabad - 380 006. Gujarat State, India</p> <p>Tel.: +91 79 61200 579   580   567   569   566</p> <p>Mr.Samjad Khan E-mail : samjad@auctiontiger.net Contact No : 9879996111 / 9265871720</p>	<p>The V.P. &amp; Circle Head, SBIIMSPL, Circle Office State Bank of India, Local Head Office, Bandra Kurla Complex, Bandra(E), Mumbai-400051.</p> <p>Officer Name :Nitheesh C J Department :SBIIMSPL Contact No :022-26445656 E-mail :nitheesh.ncj@sbi.co.in</p>



**(B) SAMPLE BUSINESS RULE DOCUMENT**

**ONLINE E-TENDERING FOR PROPOSED CIVIL WORKS OF STATE BANK OF INDIA'S  
GROUND FLOOR, RBO NASHIK AT BSNL CTTC BUILDING, D ROAD, MIDC SATPUR,  
NASIK - 422 007.**

**(A) Business rules for E-tendering:**

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

**(B) Terms & conditions of E-tendering:**

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

1. E-tendering shall be conducted by SBIIMS through M/s. E-Procurement Technologies Ltd., on pre-specified date. While the Contractors shall be quoting from their own offices/ place of their choice, Internet connectivity and other paraphernalia requirements shall have to be ensured by Contractors themselves. In the event of failure of their Internet connectivity, (due to any reason whatsoever it may be) it is the bidders' responsibility. In order to ward-off such contingent situation bidders are requested to make all the necessary arrangements/ alternatives such as back-up power supply whatever required so that they are able to circumvent such situation and still be able to participate in the E-tendering successfully. Failure of power at the premises of Contractors during the E-



tendering cannot be the cause for not participating in the E-tendering. On account of this the time for the E-tendering cannot be extended and SBIIMS is not responsible for such eventualities.

2. M/s. E-Procurement Technologies Ltd., shall arrange to train your nominated person(s), without any cost to you. They shall also explain you all the Rules related to the E-tendering. You are required to give your compliance on it before start of bid process.
3. BIDDING CURRENCY AND UNIT OF MEASUREMENT: Bidding will be conducted in Indian currency & Unit of Measurement will be displayed in Online E-tendering.
4. BID PRICE: The Bidder has to quote the rate as per the Tender Document provided by SBIIMS their appointed Architects.
5. VALIDITY OF BIDS: The Bid price shall be firm for a period specified in the tender document and shall not be subjected to any change whatsoever.
6. Procedure of E-tendering:
  - i. **Online E-tendering:**
    - (a) The NIT & Technical bid 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 herein above through SBIIMS approved Service Provider.
    - (c) The Price-Bid shall be made available online by the Service Provider wherein the contractors will be required to fill-in their percentage above/below the estimated cost.
    - (d) The Contractors are advised not to wait till the last minute to submit their online item-wise quote in the price bid to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.
    - (e) It is mandatory to all the bidders participating in the price bid to quote their rates for each and every item.
    - (f) In case, contractor fails to quote their rates for any one or more tender items, their tender shall be treated as **"Incomplete Tender"** and shall be liable for rejection.
7. LOG IN NAME & PASSWORD: Each Bidder is assigned a Unique User Name & Password by M/s. E-Procurement Technologies Ltd. The Bidders are requested to change the Password after the receipt of initial Password from M/s. E-Procurement Technologies Ltd. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.
8. BIDS PLACED BY BIDDER: Bids will be taken as an offer to execute the work as specified. Bids once made, cannot be cancelled / withdrawn and the Bidder shall be bound to execute the work at the quoted bid price. In case the L-1 Bidder backs out or fail to complete the work as per the rates quoted, SBIIMS shall at liberty to take action as deemed necessary including de-paneling such contractors and forfeiting their EMD.
9. At the end of the E-tendering, SBIIMS will decide upon the winner. SBIIMS decision on award of Contract shall be final and binding on all the Bidders.



10. SBIIMS shall be at liberty to cancel the E-tendering process / tender at any time, before ordering, without assigning any reason.
11. SBIIMS shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.
12. Other terms and conditions shall be as per your techno-commercial offers and other correspondences till date.

13. OTHER TERMS & CONDITIONS:

- The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.
- The Bidder shall not divulge either his Bids or any other exclusive details of SBIIMS to any other party.
- SBIIMS decision on award of Contract shall be final and binding on all the Bidders.
- SBIIMS reserve their rights to extend, reschedule or cancel any E-tendering within its sole discretion.
- SBIIMS or its authorized service provider M/s. E-Procurement Technologies Ltd. shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.
- SBIIMS or its authorized service provider/s. E-Procurement Technologies Ltd. is not responsible for any damages, including damages that result from, but are not limited to negligence.
- SBIIMS or its authorized service M/s. E-Procurement Technologies Ltd. will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc.

N.B.

- All the Bidders are required to submit the Process Compliance Statement (Annexure II) duly signed to M/s. E-Procurement Technologies Ltd..
- **All the bidders are requested to ensure that they have a valid digital signature certificate well in advance to participate in the online event.**

**SIGNATURE OF THE CONTRACTOR  
WITH SEAL**



**(C) ANNEXURE- I**

**PROCESS TO DECIDE THE WINNER I.E. L-1 BIDDER:**

The following example will clarify the process to be followed by the SBIIMS Pvt. Ltd. in the proposed e-tendering to decide the winner i.e. L-1:

**Illustrative Example:**

- The Price Bids shall be submitted by the various bidders in the following format:

S.No.	Item description	Quantity	Unit	Rate Per Unit (in Rupees) ***	Amount (In Rupees) ***
(1)	(2)	(3)	(4)	(5)	(6)
1	ABC	6	Sq. mt.	100.00	600.00
2	EFG	1	Sq. mt.	50.00	50.00
3	HIJK	2	Sq. mt.	75.00	150.00
4	MNOP	3	Sq. mt.	100.00	300.00
<b>Total Estimated Tender amount (sum of Items 1 to 4) denoted by (A)</b>					<b>1100.00</b>
<b>Percentage rate above/ below the estimated cost</b>					<b>(+/-) X %</b>

- 

\*\*\* The prices and amount mentioned in the above table are only meant for "Illustration" and the same has no relevance to the actual Price Bid required to be quoted by the bidders.



**(D) Process Compliance Statement (Annexure II)**

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

To,  
E-Procurement Technologies Ltd. (Auction Tiger)  
B-704 Wall Street - II,  
Opp. Orient Club,  
Nr. Gujarat College, Ahmedabad - 380 006.  
Gujarat State, India

Sub: **Tender for** Proposed Civil Works Of State Bank Of India's Ground Floor, BSNL CTTC Building, D Road, MIDC Satpur, Nasik - 422 007

Dear Sir,

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the Tender document

**This letter is to confirm that:**

- 1) The undersigned is authorized representative of the company.
- 2) We have studied the Commercial Terms and the Business rules governing the Reverse Auction as mentioned in RFP of SBI as well as this document and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We confirm that SBI and ETL shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the e-auction platform due to loss of internet connectivity, electricity failure, virus attack, problems with the PC, any other unforeseen circumstances etc. before or during the tendering event.
- 5) **We also confirm that we have a valid digital signature certificate issued by a valid Certifying Authority.**
- 6) We also confirm that we will mail the price confirmation / break up of our quoted price as per Annexure III & Annexure IV within 24 hours of the completion of the bid/ reverse auction and the format as requested by SBI/ETL.
- 7) We, hereby confirm that we will honor the Bids placed by us during the E-tendering/ auction process.

With regards,

Date:

Signature with company seal

Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

**Scan it and send to this Document on [sujith@eptl.in](mailto:sujith@eptl.in)**

M/s NSA architects

Signature of Contractor with Seal



**(E) Price Confirmation Letter (Annexure III)**

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

To,  
E-Procurement Technologies Ltd. (Auction Tiger)  
B-704, Wall Street - II,  
Opp. Orient Club,  
Nr. Gujarat College, Ahmedabad - 380 006.  
Gujarat State, India

Sub: **Final Price Quoted During E-tendering for Proposed Civil Works Of State Bank Of India's Ground Floor, RBO Nashik at BSNL CTTC Building, D Road, MIDC Satpur, Nasik - 422 007**

Online Price Bid Date:

Dear Sir,

We confirm that we have quoted.

-----

Thanking you and looking forward to the valuable order from SBI.

Yours sincerely,

For \_\_\_\_\_

Name:

Company:

Date:

Seal:

**Scan it and send to this Document on [sujith@eptl.in](mailto:sujith@eptl.in)**



**(F) Price break up (Annexure IV)**

Detailed Price Break up as per tender document



## **GENERAL CONDITIONS OF CONTRACT**

### **1.0 Definitions: -**

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

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

1.1.1 ‘SBIIMS’ shall mean SBI Infra Management Solutions Pvt. Ltd. (Service Provider) having its Head Office, State Bank of India, Premises & Estate Department, Local Head Office, BandraKurla Complex, Bandra (E), Mumbai 400051 and includes the client’s representatives, successors and assigns.

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

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

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

5. ‘Engineer’ shall mean the representative of the Architect/consultant.

6. ‘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.

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

8. “Month” means calendar month.

1.1.9 “Week” means seven consecutive days.

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

11. “SBIIMS’s Engineer” shall mean The Civil / Electrical Engineer in - charge of the Project, as nominated by the V.P. and Circle Head, SBI Infra Management Solutions Pvt. Ltd.

M/s NSA architects

Signature of Contractor with Seal



12. The following shall constitute the Joint Project Committee (herein under referred to as JPC) for assessing and reviewing the progress of the work on the project and to issue instructions or directions from time to time for being observed and followed by the Architects Site Engineer /PMC and other consultants / contractors engaged in the execution of the project.
- i) Vice President – Circle Head / Vertical Head of SBIIMS
  - ii) SBIIMS Engineer (Civil and Electrical) in-charge of the Project, as may be nominated by the M.D. & C.E.O., SBI Infra Management Solutions Pvt. Ltd.
  - iii) Concerned partner / proprietor of the Architects and their Resident Architect Member.

## **CLAUSE**

### 1.0 **Total Security Deposit**

Total Security deposit comprise of

Earnest Money Deposit

Initial security deposit

Retention Money

#### a) **Earnest Money Deposit -**

The bidder shall furnish EMD of **Rs.22,000/- (Rupees Twenty Two Thousand Only)** in the form of Demand draft or banker's cheque drawn in favour of SBIInfra Management Solutions Pvt. Ltd., on any Scheduled Bank. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful bidder shall be refunded soon after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the bidder revokes his tender at any time the period when he is required to keep his tender open acceptance by the SBIIMS or after it is accepted by the SBIIMS the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the work within the stipulated time. EMD of successful bidder shall also be refunded on receipt of ISD.

#### b) **Initial Security Deposit (ISD)**

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

## **ADDITIONAL SECURITY DEPOSIT / PERFORMANCE GUARANTEE**

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfillment of contract as performance guarantee. Such ASD could be in the form of FDR / Bank's guarantee in the Bank's name as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the



bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

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

c) **Retention Money: -**

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

2.0 **Language**

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

3.0 **Errors, omissions and discrepancies**

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

- i) Between scaled and written dimension (or description) on a drawing, the latter shall be adopted.
- ii) Between the written or shown description or dimensions in the drawings and the corresponding one in the specification the former shall be taken as correct.
- iii) Between written description of the item in the specifications and descriptions in bills of quantities of the same item, the former shall be adopted:
  - a) In case of difference between rates written in figures and words, the rate in words shall prevail.
  - b) Between the duplicate / subsequent copies of the tender, the original tender shall be taken as correct.

4.0 **Scope of Work:**

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



other materials therefore the removal and / or re-executed of any work executed by him. The dismissal from the work of any person engaged thereupon.

5.0 i) **Letter of Acceptance:**

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

ii) **Contract Agreement:**

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

6.0 **Ownership of drawings:**

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

7.0 **Detailed drawings and instructions:**

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

The work shall be executed in conformity therewith and the contractor prepare a detailed program schedule indicating therein the date of start and completion of various activities on receipt of the work order and submit the same to the SBIIMS through the Architect/consultant

7.1 **Copies of agreement**

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

8.0 **Liquidated damages:**

If the contractor fails to maintain the required progress in terms of clause 28/29 of GCC or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion, without justification in support of the cause of delay, he may be called upon without prejudice to any other right of remedy available under the law to the SBIIMS on account of such breach to pay a liquidated damage at the rate of 0.50% of the contract value which subject to a maximum of 5% of the contract value.





## 9.0 **Materials, Appliances and Employees**

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

## 10.0 **Permits, Laws and Regulations:**

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

## 11.0 **Setting out Work:**

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the Architect / consultant before proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved by, the Architect / consultant the contractor shall be responsible for the same and shall his own expenses rectify such error, if so, required to satisfaction of the SBIIMS

## 12.0 **Protection of works and property:**

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

He shall take adequate care and steps for protection of the adjacent properties. The contractor shall take all precautions for safety and protections of his employees on the works and shall comply with all applicable provisions of Govt. and local bodies' safety laws and building codes to prevent accidents, or injuries to persons or property on about or adjacent to his place of work. The contractor shall take insurance covers as per clause 24.0 at his own cost. The policy may be taken in joint names of the contractor and the SBIIMS and the original policy may be lodged with the SBIIMS

## 13.0 **Inspection of work:**

The SBIIMS / Architect / Consultant or their representatives shall at all reasonable times have free access to the work site and / or to the workshop, factories, or other places where materials are lying or from where they are obtained and the contractor shall give every facility to the SBIIMS/Architect/consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. No person unless



authorized by the SBIIMS/ Architect /Consultant except the representative of Public authorities shall be allowed on the work at any time. The proposed work either during its construction stage or its completion can also be inspected by the Chief Technical Examiner's Organization a wing of Central Vigilance commission.

#### 14.0 **Assignment and subletting**

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

#### 15.0 **Quality of materials, workmanship & Test**

All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with Architect/consultant instructions and shall be subject from time to time to such tests as the Architect/consultant may direct at the place of manufacture or fabrication or on the site or an approved testing laboratory. The contractor shall provide such assistance, instruments, machinery, labor, and materials as are normally required for examining measuring sampling and testing any material or part of work before incorporation 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 the signed by the Architect / Consultant for identification and shall be kept on record at site office until the completion of the work for inspection / comparison at any time. The Architect/Consultant shall take reasonable time to approve the sample. Any delay that might occur in approving the samples for reasons of its not meeting the specifications or other discrepancies inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials / equipment etc. shall be to the account of the contractor.

##### iii) **Cost of tests**

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

##### iv) **Costs of tests not provided for**

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



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

#### 16.0 **Obtaining information related to execution of work**

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

#### 17.0 **Contractor's Superintendence**

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

#### 18.0 **Quantities**

- i) 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 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 Measurement Book (M.B.) Should the contractor not attend or neglect or omit to depute his representative to take measurements, the measurements recorded by the representative of the Architect / consultant shall be final. All authorized extra work, omissions and all variations made shall be included such measurement.

#### 20.0 **Variations**

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



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

## 21.0 Valuation of Variations

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

- a) (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 priced herein.  
  
(ii) Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ.
- b) 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.
- c) 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.
- d) 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.
- e) 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.

M/s NSA architects

Signature of Contractor with Seal



### 23.0 **Virtual Completion Certificate (VCC)**

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

- a) Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor's labour equipment and machinery.
- b) Demolish, dismantle and remove the contractor's site office, temporary works, structure including labour sheds/camps and constructions and other items and things whatsoever brought upon or erected at the site or any land allotted to the contractor by the SBIIMS not incorporated in the permanent works.
- c) Remove all rubbish, debris etc. from the site and the land allotted to the contractor the SBIIMS and shall clear, level and dress, compact the site as required by the SBIIMS
- d) Shall put the SBIIMS in undisputed custody and possession of the site and all land allot by the SBIIMS
- e) Shall hand over the work in a peaceful manner to the SBIIMS
- f) All defects / imperfections have been attended and rectified as pointed out by the Architects to the full satisfaction of SBIIMS

Upon the satisfactory fulfillment by the contractor as stated above, the contractor is entitled to apply to the Architect / consultant is satisfied of the completion of work. Relative to which the completion certificate has been sought, the Architect/ consultant shall within fourteen (14) days of the receipt of the application for completion certificate, issue a VCC in respect of the work for which the VCC has applied.

This issuance of a VCC shall not be without prejudice to the SBIIMS's rights and contractor liabilities under the contract including the contractor's liability for defects liability nor shall the issuance of VCC in respect of the works or work at any site be construction as a waiver of any right or claim of the SBIIMS against the contractor in respect of or work at the site and in respect of which the VCC has been issued.

### 24.0 **Work by other agencies**

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

### 25.0 **Insurance of works**

- 25.1 Without limiting his obligations and responsibilities under the contract the contractor shall insure in the joint names of the SBI / SBIIMS and the contractor against all loss of damages from whatever cause arising other than the excepted risks, for which he is responsible under the terms of contract and in such a manner that the SBIIMS and contractor are covered for the period stipulated vide clause of GCC and are also covered

M/s NSA architects

Signature of Contractor with Seal



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.

- a) 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.
- b) 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.
- c) Such insurance shall be affected with an insurer and in terms approved by the SBIIMS which approval shall not be unreasonably withheld and the contractor shall whenever require produce to the Architect / consultant the policy if insurance and the receipts for payment of the current premiums.

#### 25.2 **Damage to persons and property**

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

- a) The permanent use or occupation of land by or any part thereof.
- b) The right of SBIIMS to execute the works or any part thereof on, over, under, in or through any lands.
- c) Injuries or damages to persons or properties which are unavoidable result of the execution or maintenance of the works in accordance with the contract
- d) Injuries or damage to persons or property resulting from any act or neglect of the SBIIMS their agents, employees or other contractors not being employed by the contractor or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents such part of the compensation as may be just and equitable having regard to the extent of the responsibility of the SBIIMS, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

#### 25.3 **Contractor to indemnify SBIIMS**

The contractor shall indemnify the SBIIMS against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision sub-clause 25.2 of this clause.

#### 25.4 **Contractor's superintendence**

The contractor shall fully indemnify and keep indemnified the SBI/SBIIMS against any action, claim, or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claim





made under or action brought against SBIIMS in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expenses to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the SBIIMS if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Architect / consultant in this behalf.

## 25.5 **Third Party Insurance**

25.5.1 Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 24.0 of GCC shall insure against his liability for any material or physical damage, loss, or injury which may occur to any property including that of SBIIMS, or to any person, including any employee of the SBIIMS, by or arising out of the execution of the works or in the carrying out of the contract, otherwise than due to the matters referred to in the provision to clause 24.0 thereof.

### 25.5.2 **Minimum amount of Third-Party Insurance**

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

25.6 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.

## 25.7 **Accident or Injury to workman:**

25.7.1 The SBIIMS shall not be liable for or in respect of 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 SBIIMS or their agents, or employees. The contractor shall indemnify and keep indemnified SBIIMS against all such damages and compensation, save and except as aforesaid, and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

### 25.7.2 **Insurance against accidents etc. to workmen**

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



### 25.7.3 Remedy on contractor's failure to insure

If the contractor fails to effect and keep in force the insurance referred to above or any other insurance which he may be required to effect under the terms of contract, then and in any such case the SBIIMS may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the SBIIMS as aforesaid from any amount due or which may become due to the contractor, or recover the same as debt from the contractor.

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

### 26.0 Commencement of Works:

The date of commencement of the work will be reckoned as the date, fifteen days from the date of award of letter by the SBIIMS

### 27.0 Time for completion

Time is essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a period of **45 days** from the date of commencement. If required in the contract or as directed by the Architect / consultant. The contractor shall complete certain portions of work before completion of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

### 28.0 Extension of time

If, in the opinion of the Architect/consultant, the work be delayed for reasons beyond the control of the contractor, the Architect/consultant may submit a recommendation to the SBIIMS to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the SBIIMS through the Architect' Consultant in writing at least 30 Days before the expiry of the scheduled time and while applying for extension of time he shall furnish the reason in detail and his justification if any', for the delays. The Architect/consultant shall submit their recommendations to the SBIIMS in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the provision of liquidated damages as stated under clause 8.0 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.

### 29. 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 thereupon 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 will he be entitled to raise any claims arising out of such directions.

### 30.0 **Work during nights and holidays**

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

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

### 31.0 **No compensation or restrictions of work**

If at any time after acceptance of the tender SBIIMS shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not required the whole or any part of the work to be carried out. The Architect / consultant shall give notice in writing that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise what so ever on account of any profit or advantage which he might have derived from the execution of the Work fully but which he did not derive in consequence of the foreclosure 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 bona-fide brought to the site of the work by the contractor and rendered surplus as a result of the abandonment, curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the Architect / Consultant shall have in such cases the option of taking over all or any such materials at their purchase price or a local current rate whichever is less.

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

### 32.0 **Suspension of work**

- i) 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 thereof for 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.

### 33 **Action when the whole security deposit is forfeited**

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

- a) To rescind the contract (of which rescission notice in writing to the contractor by - Architect / consultant shall be conclusive evidence) and in which case the security, deposit of the contractor shall be forfeited and be absolutely at the disposal of SBIIMS
- b) To employ labour paid by the SBIIMS and to supply materials to carry out the work, or part of the work, debiting the contractor with the cost of the labour and materials cost of such labour and materials as worked out by the Architect/consultant shall final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract certificate of Architect /consultant as to the value of work done shall be final conclusive against the contractor.
- c) 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 f any money due to him by SBIIMS under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or sufficient part thereof.

In the event of any of above courses being adopted by the SBIIMS the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any engagements or make any advances on account of, or with a view to the execution of the work or the performance of the contract and in case 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 be entitled to be paid the value so certified.

M/s NSA architects

Signature of Contractor with Seal

### 34.0 Owner's right to terminate the contract

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

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

- a) has abandoned the contract; or
- b) has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the SBIIMS through the Architect / consultant written notice to proceed, or
- c) has failed to proceed with the works with such diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or has failed to remove the materials from the site or to pull down and replace work within seven days after written notice from the SBIIMS through the Architect / Consultant that the said materials were condemned and rejected by the Architect/consultant under these conditions; or has neglected or failed persistently to observe and perform all or any of the acts matters or things by this contract to be observed and performed by the contractor for seven days after written notice shall have been given to the contractor to observe or perform the same or has to the detriment of good workmanship or in defiance of the SBIIMS or Architect's / consultant's instructions to the contrary subject any part of the contract. Then and in any of said cases the SBIIMS and or the Architect / consultant, may not withstanding any previous waiver, after giving seven days' notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the SBIIMS or the Architect / consultant or the obligation and liabilities of the contractor the whole of which shall continue in force as fully as if the contract had not been determined and as if the works subsequently had been executed by or on behalf of the contractor. And, further the SBIIMS through the Architect / consultant their agents or employees may enter upon and take possession of the work and all plants, took scaffoldings, materials, sheds, machineries lying upon the premises or on the adjoining lands or roads use the same by means of their own employees or workmen in carrying on and completing the work or by engaging any other contractors or persons to the work and the contractor shall not in any was interrupt or do any act, matter or thing to prevent or hinder such other contractor or other persons employed for complement and finishing or using the materials and plant for the works.

When the works shall be completed or as soon thereafter as convenient the SBIIMS or Architect / consultant shall give a notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within 14 days after receive thereof by him the SBIIMS sell the same by publication, and after due publication, and



shall, adjust the amount realized by such auction. The contractor shall have no right to question any of the act of the SBIIMS incidental to the sale of the materials etc.

### 35.0 Certificate of payment

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

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

The Architect / consultant shall have power to withhold the certificate if the work or in part thereof is not carried out to their satisfaction.

The Architect / consultant may by any certificate make any corrections required previous certificate.

The SBIIMS shall modify the certificate of payment as issued by the Architect / consultant from time to time while making the payment

The contractor shall submit interim bills only after taking actual measurements and properly recorded in the Measurement Book (M. B.)

The Contractor shall not submit interim bills when the approximate value of work done by him is less than Rs. 10.00 Lakh.

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

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

### 36.0 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:

- i) 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 contract or raise any dispute, the contractor shall forthwith give notice in writing of his claim, or dispute to The M.D.& C.E.O. SBIIMS Pvt.



Ltd., Head Office, Raheja Chambers, Free Press Journal Marg, Mumbai and endorse a copy of the same to the Architect, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the contractor shall not be entitled to raise any claim nor shall the Bank 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 M.D & C.E.O. SBIIMS Pvt. Ltd., Head Office 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 M.D & C.E.O. SBIIMS Pvt. Ltd., Head Office in writing in the manner and within the time aforesaid.

## **B. Settlement of Disputes and Arbitration**

The M.D & C.E.O. SBIIMS Pvt. Ltd., Head Office 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 M.D & C.E.O. SBIIMS Pvt. Ltd., Head Office / Submit his claims to the conciliating authority namely the V.P & Circle Head, SBIIMS, S.B.I., Premises & Estate Department, L.H.O., Bandra Kurla Complex, Bandra, Mumbai 400051. For conciliation along with all details and copies of correspondence exchanged between him and the V.P. & Circle Head (Premises & Estate).

- i) If the conciliation proceedings are terminated without settlement of the disputes, the contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned M.D. & C.E.O. of the SBIIMS for appointment of an arbitrator to adjudicate the notified claims falling which the claims of the contractor shall be deemed to have been considered absolutely barred and waived.
- ii) Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the contractor as aforesaid and all claims of the SBIIMS Pvt. Ltd shall be referred for adjudication through arbitration by the Sole Arbitrator appointed by the M.D. & C.E.O. and who will be of Deputy General Manager rank. It will also be no objection to any such appointment that the Arbitrator so appointed is a SBIIMS, Officer and that he had to deal with the matters to which the Contract relates in the course of his duties as SBIIMS, Officer. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid by the said M.D. & C.E.O. of the SBIIMS Pvt. Ltd. Such person shall be entitled to proceed with the reference from the stage at which it was let by his predecessor.

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

It is also a term of this contract that no person other than a person appointed by such Chief General Manager as aforesaid should act as arbitrator.

The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any or any accordance modification or reenactment thereof and the rules made there under.

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



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

### 37.0 **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.

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

### 38.0 **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.

### 39.0 **Treasure Trove etc.**

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

### 40.0 **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.





#### 41.0 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 SBIIMS Pvt. Ltd/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

#### 42.0 Force Majeure

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

42.2 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.

42.3 From the date of occurrence of a case of force majeure obligations of the party affected shall be suspended during the continuance of any inability so caused. With the caused itself and inability resulting there from having been removed, the agreed time completion of the respective obligations under this agreement shall stand extended a period equal to the period of delay occasioned by such events.

42.4 Should one or both parties be prevented from fulfilling the contractual obligations by state of force majeure lasting to a period of 6 months or wore the two parties, shall each other to decide regarding the future execution of this agreement.

#### 43.0 Local laws, Acts Regulations:

The contractor shall strictly adhere to all prevailing labour laws inclusive at contract labour (regulation and abolition act of 1970) and other safety regulations. The contractors should comply with the provision of all labour legislation including the latest requirements of the Acts, laws, any other regulations that are applicable to the execution of the project.

- i) Minimum wages Act 1948 (Amended)
- ii) Payment of wages Act 1936 (Amended)
- iii) Workmen's compensation Act 1923 (Amended)
- iv) Contract labour regulation and abolition act 1970 and central rules 1971 (Amended)
- v) Apprentice act 1961 (amended)
- vi) Industrial employment (standing order) Act 1946 (Amended)
- vii) Personal injuries (Compensation insurance) act 1 963 and any other modifications
- viii) Employees' provident fund and miscellaneous provisions Act 1952 and amendment thereof
- ix) Shop and establishment act



- x) Any other act or enactment relating thereto and rules framed there under from time to time.
- xi) Prevailing Indian Electricity rules & act.

#### 44.0 Accidents

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

45.0 The contractor's shall be bound to comply the following provision in terms of **“Restrictions imposed by the Government of India, Ministry of Finance Department of Expenditure under Rule 144 (XI) of General Financial Rules 2017 vide their order no. F. No 6/18/2019/PPD dated 23rd July 2020”** as under;

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender ONLY if the bidder is registered with the Competent Authority (registration committee constituted by the Department for Promotion of Industry and Internal Trade).
- II. 'Bidder' (including the term 'bidder', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial judicial person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. 'Bidder from a country which shares a land border with India (such a country)' for this purpose means:
  - a. An entity incorporated, established or registered in such a country; or
  - b. A subsidiary of an entity incorporated, established or registered in such a country; or
  - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
  - d. An entity whose beneficial owner is situated in such a country; or
  - e. An Indian (or other) agent of such an entity; or
  - f. A natural person who is a citizen of such a country; or
  - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The beneficial owner for the purpose of (iii) above will be as under:
  - 1. In case of A Company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more judicial person, has a controlling interest or who exercises control through other means.

Explanation-

    - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five percent of shares or capital or profits of the company;
    - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their





shareholding or management rights or shareholders agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more judicial person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
  3. In case of an unincorporated association or body of Individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more judicial person, has ownership of or entitlement to more than fifteen percent of the property or the capital or profits of such association or body of individuals;
  4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
  5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person to do any act for another, or to represent another in dealings with third person.
- VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.
- VII. All bidders need to submit a declaration-cum-certificate (along with evidence) in this regard as per “**Annexure Q**”. Failure to submit such valid declaration-cum-Certificate will make the bid liable for rejection.”



## **SPECIAL CONDITION OF CONTRACT**

### **Scope of work**

1.0 The scope of work is to carry out for the Proposed Civil Works Of State Bank Of India's Ground Floor, RBO Nashik at BSNL CTTC Building, D Road, MIDC Satpur, Nasik - 422 007

2.0 Address of site

The site is located at **Satpur (MIDC), Nasik**

### **3.0 Dimensions and levels**

All dimensions and levels shown on the drawings shall be verified by the contractor and 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 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.

### **4.0 Notice of operation**

The contractor shall not carry out any important operation without the Consent in with from the Architect / consultant:

### **5.0 Construction records**

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

### **6.0 Safety of adjacent structures and trees**

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

### **7.0 Temporary works.**

Before any temporary works are commenced the contractor shall submit at least in advance to the Architect / consultant for approval complete drawings 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.

### **8.0 Water power and other facilities**

a) The rate quoted by the contractor shall include all expenses that are required for providing all the water required for the work and the contractor shall make his own

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Signature of Contractor with Seal



arrangements for the supply of good quality water suitable for the construction and good quality drinking water for their workers. If necessary, the contractor has to sink a tube well / open well and bring water by means of tankers at his own cost for the purpose. The SBIIMS will not be liable to pay any charges in connection with the above.

- b) The rate quoted in the tender shall include the expenses for obtaining and maintaining power connections and shall pay for the consumption charges as instructed.
- c) The contractors for other trades directly appointed by the SBIIMS shall be entitled to take power and water connections from the temporary water and power supply obtained by the contractor. However, the concerned contractor shall make their own arrangements to draw the supply and pay directly the actual consumption charges at mutually agreed rates between them. All municipal charges for drainage and water connection for Construction purposes shall be borne by the contractor and charges payable for permanent connections, if any, shall be initially paid by the contractor and the SBIIMS will reimburse the amount on production of receipts.
- d) The SBIIMS as well as the Architect / consultant shall give all possible assistance to the Contractor's to obtain the requisite permission from the various authorities, but the responsibility for obtaining the same in time shall be of the contractor.

#### 9.0 **Facilities for contractor's employees**

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

#### 10.0 **Lighting of works**

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

#### 11.0 **Firefighting arrangements**

- i) 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. This equipment shall be provided at suitable prominent and easily accessible place and shall be properly maintained.
- ii) Any deficiency in the fire safety or unsafe conditions shall be corrected by the contractor at his own cost and, to the approval of the relevant authorities. The contractor makes the following arrangements at his own cost but not limited to the following:
  - a) Proper handling, storage and disposal of combustible materials and waste.
  - b) Work operations which can create fire hazards.
  - c) Access for fire-fighting 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 house keeping.



**12.0 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.

**13.0 Temporary fencing/ barricading**

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

**14.0 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. -

**15.0 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 of.

**16.0 Contractor to verify site measurement**

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

**17.0 Displaying the name of the work**

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



## 18.0 **As built drawings**

- i) For the drawings issued to the contractor by the Architect / Consultant. The Architect Consultant will issue two sets of drawings to the Contractor for the items for some changes have been made. From the approved drawings as instructed by the SBIIMS / Architect / Consultant. The contractor will make the changes made on these copies and return these copies to the Architect / Consultant for their approval. In cases revision is required or the corrections are not properly marked the Architect / Consultant will point out the discrepancies to the contractor. The contractor will have to incorporate 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.
- ii) For the drawings prepared by the contractor

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

## 19.0 **Approved make**

The contractor shall provide all materials from the list of approved makes at his own cost and also appoint the specialized agency for the waterproofing anti-termite, aluminum doors and windows and any other 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/mock up.

## 20.0 **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

## 21.0 **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 contract. All of the aforesaid taxes, duties, levies, fees and charges shall be to the contractor's account and the SBIIMS shall not be required to pay any additional or extra amount on this account. Variation of taxes, duties, fees, levies etc. if any, till completion of work shall be deemed to be included in the quoted rates and no extra amount on this account. Variation of taxes, duties, fees, levies etc. if any, till completion of work shall be deemed to be included in the quoted rates and no extra claim on this account will in any case be entertained. If a new tax or duty or levy or cess or royalty or octroi is imposed under as statutory law during the currency of contract the same shall be borne by the contractor.

## 22.0 **Acceptance of tender**

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



**23.0 Photographs:**

- The Contractor shall at his own expense supply to the Architects with duplicate hard copies of large photographs not less than 25 cm. x 20 cm. (10" x 8") of the works, taken from two approved portions of each building, at intervals of not more than one months during the progress of the work or at every important stage of construction.
- In addition to above, the contractor shall be bound to submit adequate no. of site photographs along with each Running Bill for the project clearing showing major progress of work measured and claimed therein failing which the Architect/SBIIMS may consider returning the Bill to the contractor and no claim for delay on this account will be entertained.



## **ARTICLES OF AGREEMENT**

(On non-judicial Stamp Paper of Rs. 500/- or as per latest Govt. Rules)

ARTICLES OF AGREEMENT made the \_\_\_\_\_ date of \_\_\_\_\_ between SBIIMS PVT.LTD., on behalf of SBI, having its office at Mumbai hereinafter called "the Service Provider" of \_\_\_\_\_ the \_\_\_\_\_ One \_\_\_\_\_ Part \_\_\_\_\_ and \_\_\_\_\_

WHEREAS the \_\_\_\_\_ SBIIMS PVT.LTD. is \_\_\_\_\_ desirous of \_\_\_\_\_ and \_\_\_\_\_ has caused specifications describing the work to be done to be prepared by SBIIMS.

AND WHEREAS the said Drawings numbered \_\_\_\_\_ to \_\_\_\_\_ inclusive, the Specifications and the Schedule of Quantities have been signed by or on behalf of the parties hereto.

AND WHEREAS the Contractor has agreed to execute upon and subject to the Conditions set forth herein and to the Conditions set forth herein in the Special Conditions and in the Schedule of Quantities and Conditions of Contract (all of which are collectively hereinafter referred to as "the said conditions") the works shown upon the said Drawings and / or described in the said Specifications and included in the Schedule of Quantities at the respective rates therein set forth amounting to the sum as therein 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 in the manner set forth in the said Conditions, the Contractor shall upon and subject to the said Conditions execute and complete the work shown upon the said Drawings and described in the said Specifications and the priced Schedule of Quantities.
- 2) The Employer shall pay to the Contractor the said Contract 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 Architects" in the said Conditions shall mean the SBIIMS, or in the event of their ceasing to be the Architects for the purpose of this Contract for whatever reason, such other person or persons as shall be nominated for that purpose by the 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 Architects under this Contract shall be entitled to disregard or overrule any previous decisions or approval or direction given or expressed in writing by the outgoing Architects 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

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Signature of Contractor with Seal





Conditions and perform the Agreements on their part respectively in the said Conditions contained.

- 5) The Plans, Agreements 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 a contract to carry out the work in respect of the entire building complex 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 Contractor shall afford every reasonable facility for the carrying out of all works relating to civil works, installation of lifts, Telephone, electrical installations, fittings air-conditioning and other ancillary works in the manner laid down in the said Conditions, and shall make good any damages done to walls, floors, etc. after the completion of his work.
- 8) The SBIIMS reserves to itself the right of altering the drawings and nature of the work by adding to or omitting any items of work or having portions of the same carried out without prejudice to this Contract.
- 9) Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work soon after the Site is handed over to him or from 14<sup>th</sup> day after the date of issue of formal work order as provided for in the said Conditions whichever is later and to complete the entire work within **45 days** subject to nevertheless the provisions for extension of time.
- 10) All payments by the SBI under this Contract will be made only at Mumbai.
- 11) All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen at Mumbai and only the Courts in Mumbai shall have jurisdiction to determine the same.
- 12) That the several parts of this Contract have been read by the Contractor and fully understood by the Contractor.

IN WITNESS WHEREOF THE SBIIMS and the Contractor have set their respective hands to these presents and two duplicates hereof the day and year first herein above written.

SIGNATURE CLAUSE

SIGNED AND DELIVERED by the

\_\_\_\_\_ By the  
(Employer)

hand of Shri \_\_\_\_\_  
\_\_\_\_\_  
(Name and Designation)  
M/s NSA architects

(Signature of Employer)

Signature of Contractor with Seal



In the presence of:

1) Shri / Smt. \_\_\_\_\_

(Signature of Witness)

Address \_\_\_\_\_

\_\_\_\_\_  
(Witness)

SIGNED AND DELIVERED by the

\_\_\_\_\_ by the

(Contractor)

(Signature of Contractors)

In the presence of:

Shri / Smt. \_\_\_\_\_

(Signature of Witness)

Address \_\_\_\_\_

\_\_\_\_\_  
(Witness)



## **SAFETY CODE**

1. First aid appliances including adequate supply of sterilized dressing and cotton wool shall be kept in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases when the injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from the ground.
4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm. (clear) and the distance between two adjacent running shall not be more than 30 cm. When a ladder is used an extra mazdoor 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 facemasks 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.



**Annexure-A**

The steps involved in making the payment through SB Collect are as under:-

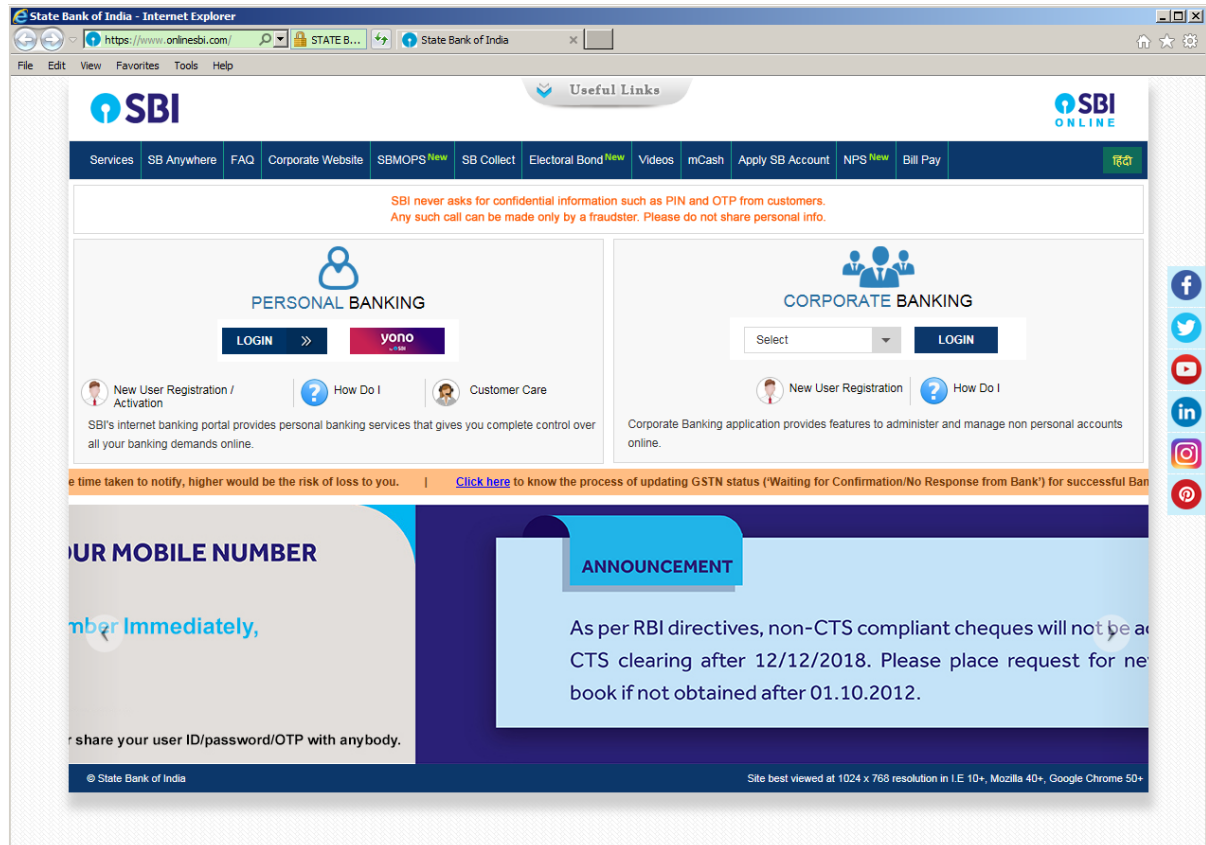
1. The Vendor needs to use SBI internet banking site <https://www.onlinesbi.com/>.
2. Select "**SB Collect**" from Top Menu, that will lead to the next page:
3. "**Proceed**" will lead to the next page:
4. Select "**All India**" in "State of Corporate / Institution" & Select "**Commercial Services**" in "Type of Corporate / Institution".
5. "**Go**" will lead to the next page:
6. Select "**SBI Infra Management Solutions**" in Commercial Services Name and "**Submit**"
7. Select "**Tender Application Fee**" in "Payment Category" and enter the "**Tender ID**" exactly as we preloaded with characters in Uppercase only in place of Circle Codes.
8. The next Page will be ready with few of the Preloaded Tender Details:
9. The Vendor will have to fill up the fields properly and upon making the payment a receipt will be generated with a Reference No.

**NOTE:** Any type of vendor, whether dealing with SBI or other bank can use this SB Collect facility. Even a contractor not dealing with any bank can use this portal and generate challan and deposit by cash in any SBI branch. The bank charges for cash deposit will be also borne by the vendor himself.



**Procedure for payment of Tender Fee through SB Collect payment portal:**

The portal link is available in SBI online banking site <https://www.onlinesbi.com/>.



Select "**SB Collect**" from Top Menu, that will lead to the next page:



The screenshot shows the 'Terms Used' section of the State Bank Collect website. It features the SBI logo and a navigation bar with 'Products & Services' and 'Know More'. The main banner includes icons for a house, a globe, and a laptop with 'PAYMENT ONLINE' text, and the heading 'STATE BANK COLLECT - A MULTI-MODAL PAYMENT PORTAL'. Below the banner, a 'DISCLAIMER CLAUSE' section lists several terms and conditions, including a checkbox for accepting terms. A 'Proceed' button is located at the bottom of the terms section. The footer contains the copyright notice '© State Bank of India' and links for 'Privacy Statement', 'Disclosure', and 'Terms of Use'.

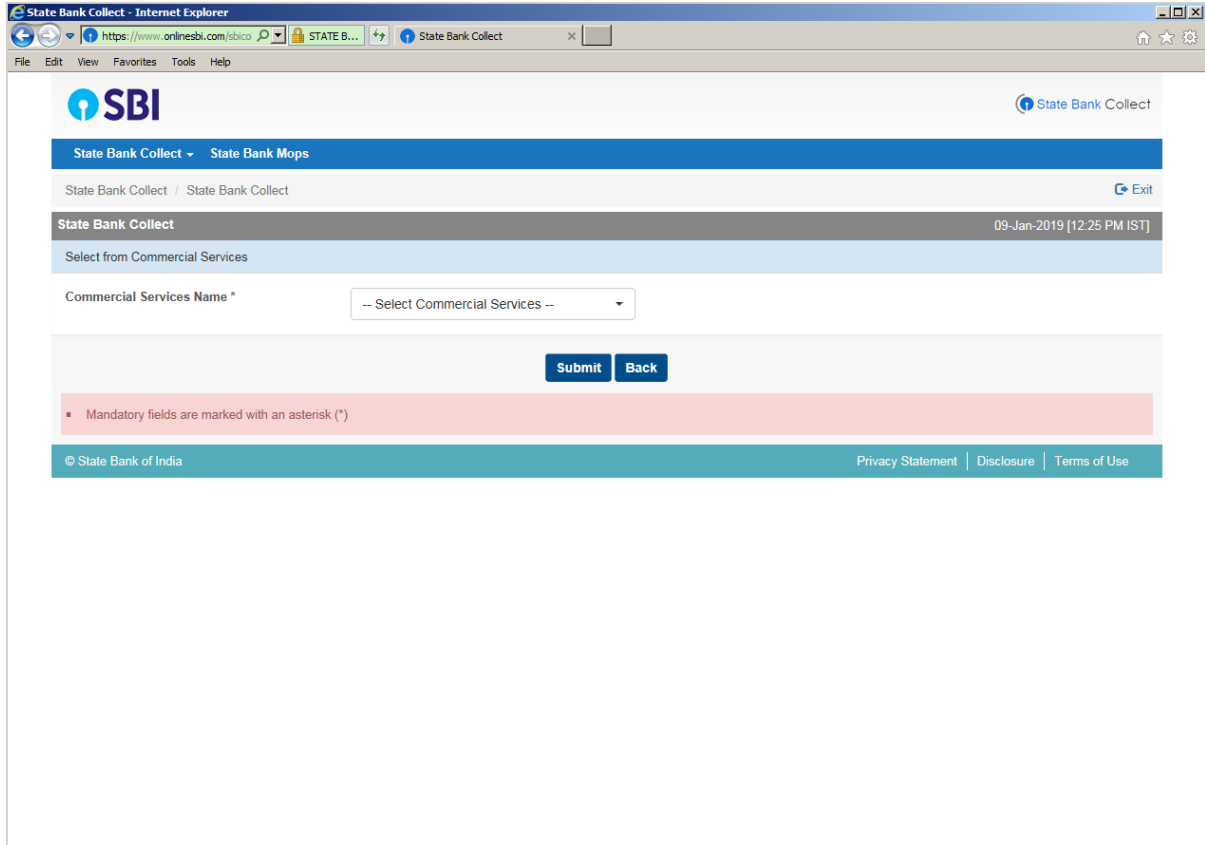
“Proceed” will lead to the next page:

The screenshot shows the selection page of the State Bank Collect website. It features the SBI logo and a navigation bar with 'State Bank Collect' and 'State Bank Mops'. The main content area has a breadcrumb trail 'State Bank Collect / State Bank Collect' and a timestamp '09-Jan-2019 [12:23 PM IST]'. Below this, there are two dropdown menus: 'State of Corporate / Institution \*' and 'Type of Corporate / Institution \*', both with '---- Select State ----' and '---- Select Type ----' respectively. A 'Go' button is positioned below the dropdowns. A red-bordered box contains two bullet points: 'Mandatory fields are marked with an asterisk (\*)' and 'State Bank Collect is a unique service for paying online to educational institutions, temples, charities and/or any other corporates/institutions who maintain their accounts with the Bank.' The footer contains the copyright notice '© State Bank of India' and links for 'Privacy Statement', 'Disclosure', and 'Terms of Use'.



Select "**All India**" in "State of Corporate / Institution " & Select "**Commercial Services**" in "Type of Corporate / Institution".

“Go” will lead to the next page:



Select "**SBI Infra Management Solutions**" in Commercial Services Name and “**Submit**”





State Bank Collect - Internet Explorer  
https://www.onlinesbi.com/sbico STATE B... State Bank Collect

SBI State Bank Collect

State Bank Collect / State Bank Collect Exit

State Bank Collect 09-Jan-2019 [12:28 PM IST]

SBI Infra Management Solutions Pvt Ltd  
Ground Floor, Raheja Chambers, Free Press Journal Marg, Nariman Point, Mumbai-400021

Provide details of payment

Select Payment Category \* -- Select Category --

Mandatory fields are marked with an asterisk (\*)

Enter Tender ID \*

Submit

- Mandatory fields are marked with an asterisk (\*)
- The payment structure document if available will contain detailed instructions about the online payment process.
- Date specified(if any) should be in the format of 'ddmmyyy'. Eg., 02082008

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Select **“Tender Application Fee”** in **“Payment Category”** and enter the **“Tender ID”** exactly as we preloaded with characters in Uppercase only in place of Circle Codes.

The next Page will be ready with few of the Preloaded Tender Details:



State Bank Collect - Internet Explorer  
https://www.onlinesbi.com/sbicol/ Identified... State Bank Collect

SBI State Bank Collect

State Bank Collect / State Bank Collect Exit

State Bank Collect 09-Jan-2019 [12:35 PM IST]

SBI Infra Management Solutions Pvt Ltd  
Ground Floor, Raheja Chambers, Free Press Journal Marg, Nariman Point, Mumbai-400021

Provide details of payment

Select Payment Category \* TENDER APPLICATION FEI

Tender ID \* MUM2019010005

Tender Name Corp 05

Open Date 06-01-2019

End Date 12-01-2019

Amount in Rupees \* 10000

Vendor Email ID

Vendor GST No \*

Vendor Mobile No \*

Vendor Name \*

Remarks

Please enter your Name, Date of Birth (For Personal Banking) / Incorporation (For Corporate Banking) & Mobile Number. This is required to reprint your e-receipt / remittance(PAP) form, if the need arises.

Name \*

Date Of Birth / Incorporation \*

Mobile Number \*

Enter the text as shown in the image \*  39E10

- Mandatory fields are marked with an asterisk (\*)
- The payment structure document if available will contain detailed instructions about the online payment process.
- Date specified(if any) should be in the format of 'ddmmYYYY'. Eg., 02082008

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The Vendor will have to fill up the fields properly and upon making the payment a receipt will be generated with a Reference No. Submit the printout of the Receipt, along with the Tender Application.



Declaration-Cum- Certificate on the Letter Head of Bidder Regarding Restrictions on Procurement From Bidders From A Country Or Countries, On Grounds Of Defence In India, Or Matters Directly Related Thereto, Including National Security.

**Restrictions under Rule 144 (XI) of General Financial Rules 2017 of Ministry of Finance, India order no. F. No 6/18/2019/PPD dated 23<sup>rd</sup> July 2020**

I/We have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India;

I/We, the bidder (Specify full name -----) certify that we are NOT from such a country OR, if from such a country, has been registered with Competent Authority.

I/We hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

(Signature of Authorised Signatory along with Seal)

Name of authorised signatory:

Designation of Authorised signatory:

List of Evidences enclosed:

1. Copy of certificate of valid registration with the Competent Authority (Score out if not applicable)
2. ....
3. ....
4. ....

Date:

Place:



**APPENDIX HEREINBEFORE REFERRED TO**

- 1) Name of the organization Offering Contract: The V.P. & Circle Head,  
SBIIMSPL,  
State Bank of India,  
Premises & Estate Department,  
Local Head Office,  
Bandra Kurla Complex,  
Bandra (E), Mumbai 400 051
  
- 2) Consultants : M/S NSA architects  
43, Shreekul, Flat No. 2,  
Ground Floor, United Western Hsg. Society,  
Karvenagar, Pune – 411 052  
  
TEL. NO. 020 2545 42 97 / 98220 720 16  
E-mail – nsapune1@gmail.com
  
- 3) Site Address : Satpur (MIDC), Nasik
  
- 4) Scope of Work : Civil Work
  
- 5) Name of the Contractor : -----  
-----  
-----
  
- 6) Address of the Contractor : -----  
-----  
-----
  
- 7) Period of Completion : 45 days from the date of  
Commencement
  
- 8) Earnest Money Deposit : Rs. 22000/- by means of  
Demand Draft / Pay Order (Valid for a  
period of 90 Days from the last date of  
submission of the tender) from any  
scheduled Nationalized Bank drawn in  
favour of SBI Infra Management  
Solutions Pvt. Ltd. and payable in  
Mumbai.
  
- 9) Retention Money : As per clause no. 11(a) of general  
Conditions
  
- 10) Defects Liability Period : Twelve Months from the date of  
Virtual Completion.
  
- 11) Insurance to be undertaken by the : 125% of Contract Value  
Contractor at his cost  
(Contractor's all risk policy)

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- 12) Liquidated damages : 0.5% of the Contract amount shown in the tender per week subject to max. 5% of the contract value or actual final bill value.
- 13) Value of Interim Bill (Min.) : **Rs. 10.00 Lakhs.**
- 14) Date of Commencement : 7 days from the date of acceptance letter is issued to the Contractor/ or the day on which the Contractor is instructed to take possession of the site whichever is earlier.
- 15) Period of Final Measurement : 2 Months from the date of Virtual Completion.
- 16) Initial Security Deposit : 2% of the Accepted Value of the Tender. (Clause No. 22)
- 17) Total Security Deposit : As per clause No. 11 a
- 18) Refund of initial Security Deposit Comprising of EMD and ISD. : 50% of the Security Deposit shall be refunded to the Contractor on completion of the work and balance refunded only after the Defect Liability Period is over.
- 19) Period for Honoring Certificate : 1. One Month for R.A. Bills  
2. The final bill will be submitted by the Contractor within one month of the date fixed for completion work and the Bill shall be Certified within 3 months from the date of receipt of final bill provided the bills are submitted with all pre-requisite documents/test reports etc. prescribed in the tender.

\_\_\_\_\_  
Signature of Bidder.

Date:



**INDEX**  
**PROFORMAS OF VARIOUS TESTS**

<b>TABLE NO.</b>	<b>DESCRIPTION</b>	<b>PAGE NO.</b>
1.	Record of Cement/Received/Used/Balance.	
2.	Proforma of Paint/Lead/CICO Register.	
3.	Bank for Reinforcement Bars Received.	
4.	Proforma for Register of Material of Site Account.	
5.	Proforma for Account of Secured Advance Register.	
6.	Proforma for Bulkage Test of Sand Register.	
7.	Proforma for Silt Test Register.	
8.	Proforma for Sieve Analysis of Fine Aggregate Register.	
9.	Proforma for Sieve Analysis of Coarse Aggregate Register.	
10.	Proforma for Slump Test Register.	
11.	Proforma of Cube Test Register.	
12.	Proforma for Hindrance to Work.	
13.	Proforma for Running A/c. Bill.	
14.	Account of Secured Advance if Admissible on Materials Held at Site by the Contractors	
15.	Memorandum for Payment.	



TABLE-I

**RECORD OF CEMENT RECEIVED / USED / BALANCE**

S. No.	Cement in stock Bags	Cement received (Bags)	Total Cement received (Bags)	Source from which received	Description of work where cement is used	Number of cement bags consumed	Balance in stock	Signature of Contractors Bank / Engineer
1	2	3	4	5	6	7	8	9





**RECORD OF PAINT / LEAD / CICO REGISTER**

Name of work :

Name of the Contractor :

Agreement No. :

Date of Receipt	Source Receipt with Ref. To S.O./Indent	Qty. Received	Progressive Total	Item of work for which issued with approx. qty. work done in case of paint only	Date of issues	Quantity issued	Qty. returned at the end of the day	Total issued	Delay Balance at hand	Contractors initials	Site Engineers initials
1	2	3	4	5	6	7	8	9	10	11	12

Register for bitumen should be maintained. The format will be similar to that for cement.



**BANK FOR REINFORCEMENT BARS RECEIVED**

Truck No.	Challan No.	Name of Supplier	Binding Wire	6mm dia.	8mm dia.	12m m dia.	16m m dia.	20m m dia.	25m m dia.	Total Received
1	2	3	4	5	6	7	8	9	10	11

Number of diameters given is only illustrative. Open more columns for other diameters wherever needed.



**PROFORMA FOR REGISTER OF MATERIAL AT SITE ACCOUNT**

Name of Work : Name of Article :  
Name of Contractor : Estimated Requirement :  
Agreement No. : Issue Rate :

Date of Receipt	Received from/Issued to (with Ret. to So/Indent)	Receipt	Issue	Balance	Initials of Contractor	Initial of Bank's/Architect's representative	Remark
1	2	3	4	5	6	7	8



**PROFORMA FOR REGISTER OF MATERIAL AT SITE ACCOUNT**

Name of Work :

Name of Contractor :

Agreement No. :

Description of Material	Qty.outstanding from previous Bill	Deduct Qty.utilised in works measured since previous bill	Qty.outstanding&Qty.brought to site since previous bill	Signature of Site Engineer	Signature of Contractor	Initial of Bank's/ Architect's representative	Remark
1	2	3	4	5	6	7	8

M/s NSA architects

Signature of Contractor with Seal



**PROFORMA FOR BULKAGE TEST OF SAND REGISTER**

Sr. .No.	Date of Test	Volume of dust sand in Cylinder inundated & stirred	Volume inundated Sand in Cylinder	Percentage of Bulkage	Signature of Site Engineer	Signature of Contractor	Initial of Bank's Architect's representative (Periodical)
1	2	3	4	5	6	7	8



**PROFORMA OF SILT TEST REGISTER**

Sr. No.	Date of Test	Height of Sand in Cylinder inundated & stirred	Height of Silt	Max percentage of silt as specified	Percentage of silt obtained	Signature of Site Engineer	Signature of Contractor	Initial of Bank's / Representative (Periodical)
1	2	3	4	5	6	7	8	9



**PROFORMA SIEVE ANALYSIS OF FINE AGGREGATE REGISTER**

Sr.No	Date of Test	Wt. of Material to be tested	Sieve as per I.S. designation	Wt. of Sand retained in sieve	%a retained in each sieve successively	Cumulative % retained in each sieve	F.M.	Signature of Site Engineer	Signature of Contractor	Signature of Banks/ Architect's representative & Remarks (Periodical)





TABLE-IX

**PROFORMA OF SIEVE ANALYSIS OF COARSE AGGREGATE REGISTER**

S. No.	Date of Testing	Wt. of Material to be tested	Nominal size of Aggregate	I.S. Sieve designation	Standard passing for graded aggregate. of nominal size	Test Result	Obtained passing	Signature of Site Engineer	Signature of Contractor	Signature of Banks/ Architect's representative & Remarks (Periodical)
1	2	3	4	5	6	7	8	9	10	11

**PROFORMA FOR SLUMP TEST REGISTER**

Sr N o.	Date of Testi ng	Type of work for which slump taken	Specified slump		Slump Obtained		Signature of Site Engineer	Signature of Contractor	Signature of Banks/ Architect's representative & Remarks (Periodical)
			When Vibrators are used	When Vibrators are not used	When Vibrators are used	When Vibrators are not used			
1	2	3	4	5	6	7	8	9	10

TABLE-XI

**PROFORMA OF CUBE TEST REGISTER**

Date of taking Cube + Lime	Sample No.	No. of Cubes taken	Specific marking of Cubes	Proportion of mixture	Description of work carried out	Signature of Engineer taking sample	Signature of Contractor	7/28 Days Testing				Permissible Compressive strength of Concrete / 28 Days / 7 days		Remarks on Test Report and No.	Remarks of Banks/ Architects representative Periodicals
								Date of Test	Test Result Kg/Sq.cm	Average Strength Kg. / Sq.cm	Standard strength Kg / Sq.cm.	7 Days	28 Days		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	



TABLE-XII

**PROFORMA FOR HINDRANCE TO WORK**

Name of Work : Date of Start of work :  
Name of Contractor : Period of Completion :  
Agreement No. : Dt. of Completion of work :

S.No.	Nature of Hindrance	Date of Occurrence of Hindrance	Date of which Hindrance was removed	Period of which Hindrance existed	Signature of Site Engineer	Signature of Bank / Architects Representative
1	2	3	4	5	6	7



**PROFORMA FOR RUNNING A/C BILL**

- i. Name of Contractor / Agency :
- ii. Name of Work :
- iii. Sl.No. of this Bill :
- iv. No. & Date of previous Bill :
- v. Reference to Agreement No. :
- vi. Date of Written order to commence :
- vii. Date of Completion as per Agreement :

S.No.	Item Description	Unit	Rate (Rs.)	As per Tender	
				Quantity	Amount (Rs.)
1	2	3	4	5	

Upto Previous R.A. Bill		Up Date (Gross		Present Bill		Remarks
Quantity	Amount (Rs.)	Quantity	Amount (Rs.)	Quantity	Amount (Rs.)	
6		7		8		9

Note: 1. If part rate is allowed for any items, it should be indicated with reasons for allowing such a rate.

\_\_\_\_\_  
 \_\_\_\_\_  
 Net Value since previous bill

2. If ad-hoc payment is made, it should be mentioned specifically.



**CERTIFICATE**

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

-----  
  
Signature and  
date of Contractor

-----  
  
Signature and  
date of Architects  
Representative (Seal)

-----  
  
Signature and  
date of Site Engineer

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

-----  
  
Architect

-----  
  
Signature and  
date of Site Engineer



**ACCOUNT OF SECURED ADVANCE, IF ADMISSIBLE ON  
MATERIALS HELD AT SITE BY THE CONTRACTOR**

S.No.	Item	Quantity	Unit	Amount	Remarks
1	2	3	4	5	6

Total value of materials at Site.

Secured Advance @ ----- of above value - B

**CERTIFIED:**

- (i) That the materials mentioned above have actually been brought by the Contractor to the site of the work and on advance on any quantity of any of this item is outstanding on their security.
- (ii) That the materials (are of imperishable nature) and are all required by the Contractor for use in the work in connection with the items for which rates of finished work have been agreed upon.

Dated Signature of  
Site Engineer  
Preparing the bill  
Rank -----

Date signature of  
Banks Architects-----  
(Name of the Architects)

-----  
Dated Signature of  
the Contractor

**MEMORANDUM FOR PAYMENT**

R/A BILL NO.

- |    |   |           |
|----|---|-----------|
| 1. | Total value of work done since previous bill (A)  | Rs. ----- |
| 2. | Total amount of secured advance due since Previous Bill (B)   | Rs. ----- |
| 3. | Total amount due since Previous Bill (C) (A+B)  | Rs. ----- |
| 4. | PVA on account of declaration in price of Steel, Cement and other materials and labour as detailed in separate statements enclosed. | Rs. ----- |
| 5. | Total amount due to the Contractor  | Rs. ----- |

**OBJECTIONS:**

- |      |   |           |
|------|---|-----------|
| i)   | Secured Advance paid in the previous R/A  | Rs. ----- |
| ii)  | Retention money on value of works as per accepted tenders upto date amount Rs.  | Rs. ----- |
|      | Less already recovered  | Rs. ----- |
|      | Balance to be recovered   | Rs. ----- |
| iii) | Mobilization Advance, if any  |           |
| (a)  | Outstanding amount (principal + interest) as on date  | Rs. ----- |
| (b)  | To be recovered in this bill  | Rs. ----- |
| iii. | Any other Departmental materials cost to be recovered as per contract, if any   | Rs. ----- |
| iv.  | Any other Departmental service charges to be recovered if any, as per contract (water, power etc.) enclose statement. | Rs. ----- |





Total Deduction as per contract (F) Rs. -----

Adjustments, if any ----- Rs. -----  
Amount less received by Contractor in  
----- R/A Bill (as per statement of  
Contractor)

P.V.A. Rs. -----

Total amount payable as per contract  
(E+F+G) Rs. -----

(Rupees ----- in  
words)

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

Date: -----

-----  
Signature of Architect  
with Seal

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

Date : -----

-----  
Signature of Owners  
Engineer

**STATUTORY DEDUCTION:**

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

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

Date: -----

-----  
Signature of the M.D. & C.E.O.

M/s NSA architects

Signature of Contractor with Seal

**LIST OF MATERIALS OF APPROVED BRAND AND THEIR MANUFACTURERS**

<b>S.N.</b>	<b>MATERIALS</b>	<b>APPROVED MANUFACTURERS</b>
1	<b>Laminate</b>	Archid, Aerolam, Greenlam, Century, Royal Touch
2	<b>Veneer</b>	Archid, Green, Century, Duro
3	<b>Plywood</b>	Archid Ply, Duro, Century, Greenply
4	<b>MDF Board</b>	Century MDF, Greenply MDF, Duratuff MDF, Archid MDF
5	<b>Flush Doors</b>	Archid, Duro, Century, Green
6	<b>Calcium Silicate</b>	Ramco Hilux, Yunion Board
7	<b>Aluminum Extruded Sections</b>	Jindal, Hindalco, Bharat, Maan
8	<b>Aluminum Fittings</b>	Jindal, Hindalco, Bharat, Maan
9	<b>Drawer Sliding Fittings</b>	Godrej, Hettich, Haffle
10	<b>Readymade Computer Drawer</b>	Godrej, Hettich, HaffleBlum
11	<b>Glazing</b>	Saint Gobain, Aasahi Float, Modi Guard
12	<b>Patch Fittings &amp; Locks</b>	Dorma, Godrej, Dorset
13	<b>Handles</b>	Godrej, Hettich, Haffle
14	<b>FRP Doors</b>	Godrej, Aditya FRP, Rawji FRP
15	<b>Mineral Fibre False Ceiling</b>	Armstrong
16	<b>Tapered Edge Gypsum Plain Board</b>	India Gypsum/ Gyproc
17	<b>Chemicals for Repair Work</b>	Krishna Conchem Products Pvt. Ltd., Sunanda Chemicals, BASF Chemicals.
18	<b>ACP Panels</b>	Aluco bond, ALU Décor, Alstrong, Alstone
19	<b>Acrylic Sheets</b>	Sanmati Acrylics, Acrylic Sheet India, Acry Plus
20	<b>Oil Bound Distemper</b>	Nerolac, Asian, Sherwin Willams Paints.
21	<b>Synthetic Enamel Paint</b>	Nerolac, Asian, Sherwin Willams Paints.
22	<b>Acrylic Emulsion paint</b>	Nerolac, Asian, Sherwin Willams
23	<b>Texturized Interior Paint</b>	Sandtex Matt, Dulux, Berger, Asian
24	<b>Cement Paint</b>	Snowcem/ Surfaced/ Durocem
25	<b>Wooden Flooring</b>	Pergo, Xylox, Armstrong, Vista
26	<b>False Flooring</b>	Unifloor, Armstrong, Flexi Access
27	<b>Vitrified Tiles</b>	Kajaria, Sempolo, Nitco, RAK
28	<b>Anti-skid Ceramic Tiles</b>	Kajaria, Bell Ceramics, Sempolo, RAK Ceramics
29	<b>Ceramic Wall Tiles</b>	Kajaria, Bell Ceramics, Sempolo, RAK Ceramics.
30	<b>Waterproofing Compound</b>	Sunanda, Pidilite, Roff Chemicals, BASF, Dr. Fixit,
31	<b>Cement (43/53 Grade), (OPC/PPC)</b>	Ultratech, A.C.C., Lafarge.
32	<b>CPVC Pipes</b>	Prince, Supreme, Astral
33	<b>PVC Waste Pipe</b>	Prince, Supreme, Astral
34	<b>Kitchen SS Sinks</b>	Nirali, Faber, Neelkant
35	<b>Sanitary Wares</b>	Makes: Parryware, Hindware, Cera
37	<b>Faucets</b>	Jaquar, Plumber, Cera



- NB.
- 1) The contractor should obtain prior approval from Employer / Consultants before placing order for any specific materials. Employer may / delete any of the makes or brands out of the above list.
  - 2) All materials should conform to relevant standards and codes of BIS.
  - 3) Materials with I.S.I. mark shall be used duly approved by the SBIIMS Engineer / Architect.

Note: - If any material is found to be not up to the mark, the contractor will have to produce original bills/certificate from the manufacturer or his authorized Distributor for authenticity and genuineness of the material for consideration and as per make approved by the SBIIMS. The same will not be considered for payment.



### **MODE OF MEASUREMENT**

1. Unless otherwise stated, all pipes shall be measured net, length as laid and measured overall fittings, such as bends, junctions, etc., and given in running meters. The length shall be taken along the center line of the pipes and fittings.
2. Length of fittings viz, taps, valves, traps etc., which are paid under appropriate items shall not be re-measured under linear measurements as enumerated above.
3. Soil waste and vent pipes shall be measured along the center line of the stack including the connecting bends/tees to W.C. Pan, Nahani trap, etc. and shall be paid as enumerated above.
4. W.C. Pans, Lavatory basins, Sinks, drain boards, Urinals, Mirrors, Glass shelf Toilet paper Holder, shall be measured by number and shall include all accessories as enumerated in detail specification under each item.
5. Unless otherwise specified, all types of taps, valves, etc., shall be measured by number and paid separately.
6. Manholes, inspection Chambers, Gully traps, etc. shall be constructed according to detail specification and measured by number and paid separately. The depth of Manhole shall mean the vertical distance from the top of the Manhole cover to the outgoing invert of the main drain channel.
7. Water meter shall include Y strainer and other appurtenances required by the local bodies and shall include brick masonry chamber, etc., as per detailed specifications and item shall be measured by number and paid for accordingly or as per schedule of quantity.

---00--

## **SECTION – A: MATERIALS**

- 1) Material shall be of best approved quality obtaining and they shall comply with the respective Indian Standard Specification.
- 2) Samples of all materials shall be got approved before placing order and the approved sample shall be deposited with the Architect.
- 3) In case of non-availability of materials in metric sizes the nearest size in FPS units shall be provided with prior approval of the Architects for which neither extra will be paid nor shall any rebates be recovered.
- 4) If directed, materials shall be tested in any approved Testing Laboratory and the test certificates in original shall be testing including charges for repeated tests, if ordered, shall be borne by the Contractor.
- 5) It shall be obligatory for the Contractor to furnish certificate, if deemed by the Architects, from manufacturer or the material supplier that the work has been carried out by using their material and as per their recommendations.
- 6) All materials supplied by the Employer / any other Specialist Firms shall be properly stored and the Contractor shall be responsible for its safe custody until they are required on the works and till the completion of the work.
- 7) Unless otherwise shown on the Drawings or mentioned in the “Schedule of Quantities” or special specification, the quality of materials, workmanship, dimensions, etc., shall be as specified as hereunder.
- 8) All equipment and facilities for carrying out field tests on materials shall be provided by the Contractor without any extra cost.

a) **Cement:**

Cement shall comply in every respect with the requirements of the latest publications of IS: 269 and unless otherwise specified ordinary Portland Cement shall be used.

The weight of ordinary Portland Cement shall be taken as 1440 kg. per cu.m. (90 lbs. per c.ft.). Cement shall be measured by weight and in whole bags, and each undisturbed and sealed 50 kg. bag being considered equivalent to 35 liters (1.2 c.ft.) in volume care should be taken to see that each bag contains full quantity of cement. When part bag is required cement shall be taken by weight or measured in measuring boxes.

No other make of cement but that approved by the Architects will be allowed on works and the source of supply will not be changed without approval of Architect in writing. Test certificates to show that cement is fully complying the specifications shall be submitted to the Architects and notwithstanding this, the Architect may at his discretion, order that the cement brought on site and which he may consider damaged or of doubtful quality for any reason whatsoever, shall be re-tested in an approved testing laboratory and fresh certificates of its soundness shall be produced.

Cement ordered for re-testing shall not be used for any work pending results of re-test.

Cement shall be stored in weather-proof shed with raised wooden plank flooring to prevent deterioration by dampness or intrusion of foreign matter. It shall be stored in such a way as to allow the removal and use of cement in chronological order of receipt i.e., first received being used first used. Cement deteriorated and or clotted shall not be used on the work but shall be removed at once from the site. However, allowing use of warehouse set cement shall be determined by the Architects.



b) **Lime:**

Lime shall comply in every respect with the requirements of IS: 712 and shall be made from approved lime stone or kankar and properly burnt. It shall be free from excess of unburnt kankars or lime stone ashes or other extraneous materials and shall be stored in weather-proof sheds. Lime which has damaged by rain, moisture, or air slacking shall not be used but shall be removed from the site of work forthwith. Lime shall be slacked with fresh water and screened through appropriate screens and stored and used within 14 days provided it is protected from drying out.

Field tests according to IS: 1624 shall be carried out from time to time to determine the quality of lime.

c) **River Sand:**

River sand shall conform to IS: 383 and relevant portion of IS: 515. It shall pass through pass through a I.S. sieve 4.75 mm. (3/16 B.S.) test sieve, leaving a residue not more than 5%. It shall be from natural source i.e. only river or crushed stone screenings, if allowed, chemically clean, sharp, hard durable, well graded and free from dust, pebbles, clay, shale, salt, organic matter, loam, mica or other deleterious matter. The sum percentages of all deleterious substances to acceptable limits. River sand shall not contain any trace of salt and it shall be tested and river sand containing any trace of salt shall be rejected.

The fine aggregate i.e. river sand for concrete shall be graded within limits as specified in IS: 383 and the fineness Modules may range between 2.60 to 3.20.

The fine aggregate shall be stacked carefully on a clean hard dry surface so that it will not get mixed up with deleterious foreign materials. If such a surface is not available a platform of planks or corrugated iron sheets or brick floor or a thin layer of lean concrete shall be prepared.

d) **Fine & Coarse Aggregate:**

Shall consist of crushed or broken stone 95% of which shall be retained on 4.75 mm. IS tests sieve. It shall be obtained on crushing Granite, Quartzite, Trap, Basalt, or similar approved stones from approved quarry and shall confirm to IS:383 and IS 515. Fine & Coarse aggregate shall be chemically inert when mixed with cement and shall be cubical in shape and be free soft, friable, thin, porous, laminated or flaky pieces. It shall be free from dust and any other foreign matter.

Gravel / Shingle of desired grading may be permitted as a substitute in part or full in plain cement concrete if the Architect is otherwise satisfied about the quality of aggregate. For all the R.C.C. works the size of coarse aggregate shall be 20 to 25 mm. and fine aggregate shall be 10 to 15 mm.

e) **Reinforcement:**

Reinforcement shall be of mild steel tested quality confirming to I.S.: 432-1966 and any other I.S. applicable or deformed bar confirming to IS:1786 and Is:1139 or hard drawn Fe 415 (Tor Steel) steel wire fabric confirming to IS:1566;1967.

All finished bars shall be free from cracks, surface flaws, laminations, jagged and imperfect edges.

f) **Bricks :**

Bricks shall generally comply with IS:1077 except in size which shall be classified as 1<sup>st</sup> and 2<sup>nd</sup> class. 1<sup>st</sup> class bricks shall be the best quality locally available table moulded, well burnt but not over burnt, have plain rectangular faces with parallel sides and sharp right-angled edges, have a find



compact and uniform texture. The bricks shall be free from cracks, chips, flaws, stones or subsequent to soaking in water. It shall emit a clear ringing sound on being struck and shall not absorb water more than 20% by weight. Common building bricks shall have a compressive strength of 35 kg. / sqm unless otherwise specified for first class bricks.

g) **Neeru:**

Shall be made of Class "C" Lime (i.e. pre-fat lime) as mentioned in IS: 712. It shall be slaked with fresh water then sifted and reduced to a thick paste by grinding in a mill. Neeru thus prepared shall be kept moist until used and no more than that can be consumed in 15 days shall be prepared at time.

h) **Surkhi :**

Shall be made by grinding well burnt bricks, brick bats, burnt clay balls, etc., the brick etc., to be used shall be prepared from selected clay. The quality shall confirm to IS:1344.

Bricks bats, etc., shall be ground in mechanical disintegrator to a fine powder passing through IS Sieve No. 9 (2.36 mm.) with a residue not exceeding 10% by weight.

Surkhi for lime surkhi plaster shall be ground to fine powder in a mortar mill to pass through IS Sieve 150 micron (No. 100)

Surkhi shall be stored in a weather-proof shed on a brick paved platform.

i) **Water :**

Water for mixing cement / lime / surkhi mortar or concrete shall not be salty or brackish and shall be clean, reasonably clear and free from objectionable quantities of silt and traces of oil, acid and injurious alkali, salts, organic matter and other deleterious materials which will either weaken the mortar or concrete or cause efflorescence or attack the steel in reinforced cement concrete. Water shall be obtained from sources approved by the Architect. Potable water is generally considered satisfactory for mixing and curing concrete, mortar masonry, etc., where water other than main source is used this shall be tested in an approved testing laboratory to establish its suitability. All charges connected therewith shall be borne by the Contractor.

j) **Timber :**

Timber shall be well seasoned and of the best quality Indian Teak of specified species viz., Dandeli, Balarshah, Melabar, C.P.

Timber shall be considered as well seasoned, if its moisture content does not exceed the following limits.

a) Timber for frames	14%
b) Timber for planking, shutters, etc.	12%

The moisture content of timber shall be determined according to method described in paragraphs 4 of IS:287 for Maximum permissible moisture content of timber used for different purpose in different climatic zones.

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

k) **Superior quality Indian Teak Wood :**

Superior quality Indian Teakwood means Dandeli, Balارشah, and Malabar Teak. It shall be of good quality and well-seasoned. It shall have uniform colour, reasonably straight grains, and shall be free from large. Loose, dead knots, cracks, shakes, warp, twists, bends, borer holes, sap-wood or defects of any kind. No individual hard and should knot shall be more than 1 cm. in diameter and aggregate areas of all knots shall not exceed ½% of area of the piece. There shall not be less than 6 growth rings per 2.5 cm. width.

l) **1<sup>st</sup> Class Indian Teakwood :**

1<sup>st</sup> Class Indian Teakwood means C.P. and Bulsar teak of good quality and well-seasoned. It shall have uniform colour, reasonably straight grains and shall be free from large. Loose dead knots, cracks, shakes, warp, twists, bends, sap-wood or defects of any kind. No individual hard and should knot shall be more than 2.5 cm. in diameter and aggregate areas of all the knots exceed 1% areas of the piece. There shall not be less than 5 growth tings per 2.5 cm. width.

m) **2<sup>nd</sup> Class Indian Teakwood :**

Shall be similar to first class Indian teak wood except that knot upto 4 cm. diameter and aggregate area of all knots upto 1 ½% of the area of the piece shall be allowed. There shall not be sapwood upto 15% is allowed.

n) **Flush Doors :**

All flush doors shall be solid core exterior grade unless otherwise specified and it shall generally confirm to IS:2202 and shall be fabricated as described under specification.

o) **Steel Windows and Doors :**

Steel windows and doors shall be fabricated of steel sections conforming to IS:226. They shall conform to IS 1038. Unless otherwise specified the details of construction etc., shall be as described under specification.

p) **Floor Tiles :**

Designer pre-cast concrete tiles and interlocking paver block, plain cement tiles, chequered tiles, mosaic tiles terrazzo tile shall conform to IS:1237. For neutral shade tiles grey cement shall be used. Tiles shall be compacted by mechanical vibration and hydraulically pressed. It shall be of choice shade and shall have desired pattern of chip distribution. The sizes of chips to cement in terrazzo or mosaic floor shall be as specified in IS:1237. The size and thickness of tiles shall be as approved by the Architect.

q) **Ceramic / Vitrified Tiles :**

White or coloured glazed tiles shall comply with IS:777 or relevant or latest I.S. code. It shall be from an approved manufacturer and shall be flat and true to shape. They shall be free cracks, crazing, spots, chipped edges and corners. The glazing and colour shall be uniform shade and unless otherwise specified the tiles shall be 6 mm. thick.



r) **Marbles** :

Marble slabs for flooring, dado veneering etc., shall be of kind specified in the item such as white or pink, Makrana, Chittor black, Bhanslana black, Jaisalmer yellow, Baroda green, Patiala (Pepsu) grey, etc., Marble from which slabs are made shall be selected quality, hard, sound dense and homogenous in texture and free from cracks, weathering, decay and flaws. Before starting the work, the contractor shall get the sample of Marble slabs approved by the Architect.

The slabs shall be machine cut and machine polished.

s) **Kotah / Shahbad / Cudappa / Granite** :

Shall be of selected quality, hard, sound, dense, and of homogenous texture, free from cracks decay, weathering and flaws. Stone slabs shall be of uniform colour as approved by the Architect. They shall be machine cut and machine polished where specified and shall conform to the required size. Thickness shall be specified in the respective items.

t) **Glazing** :

Glass used for glazing shall be float glass of best quality, free from flaws, specks bubbles and shall be 2.9 mm. thick upto 0.60 x 0.60 mm. size and for larger size it shall be 4 mm. thick unless otherwise specified in the Schedule of Quantities.

The following type of glasses shall be used:-

- |                        |  |
|------------------------|--|
| 1) For Office Building | Clear glass or as specified in the Schedule of Quantities. |
| 2) Office (toilets)    | Clear or frosted   |
| 3) Partitions          | Frosted  |

u) **Asbestos Roofing & rain Water Pipes** :

All Asbestos pipes and fittings shall comply with IS:459 and shall be free from cracks, chipped edges of corners and other damages.

v) **MPI. Sheets** :

MPI. Sheets shall be of a gauge specified in the description of the item and shall conform to the IS:277. The sheets shall be free from cracks, spilt edges, twists, surface flaws, etc. They shall be clean bright and smooth. Galvanising shall be uninjured and the perfect condition. The sheet shall show no sign of rust or white powdery deposits on the surface. The corrugations shall be uniform in depth and pitch and parallel.

w) **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 and exterior grade Acrylic Emulsion paint, cement paint, sand-tex matt shall be from an approved manufacturer and shall conform to the latest Indian Standard for various paints. Ready mixed pains as received from the manufacturer without any admixture shall be used, except for addition of thinner, if recommended by the manufacturer.

x) **Mortar** :

Lime Surkhi Mortar :

Lime and surkhi shall conform to the specifications. It shall be composed of approved lime and surkhi in proportion of 1 lime to 2 surkhi mixed thoroughly. The ingredients shall be accurately gauged by measure and shall be well and evenly mixed together on a platform and water added to make it homogenous. When large quantities are required the mortar shall be mixed in a mechanical grinder.

**Cement Mortar** :

Cement mortar shall be of proportions specified for each type of work in the schedule. It shall be composed of Portland Cement and sand. The ingredients shall be accurately gauged by measure and shall well and evenly mixed together in a mechanical pan mixer, care being taken not to add more water than is required. No mortar that has begun to set shall be used. River sand shall be used unless otherwise specified.

If hand mixing is allowed, then it shall be done on pucca water-proof platform. The gauged materials shall be put on the platform and mixed dry. Water will then be added and the whole mixed again until it is homogenous and of uniform colour. Not more than one bag of cement shall be mixed at one time and which can be consumed within half an hour of its mixing.

**Composite Lime, Cement, SandMortar** :

The mortar shall be of proportions specified for each type of work in the schedule of quantities. It shall comprise of Portland cement, lime and sand. Lime shall be measured in gauge boxes similar to one used for measuring cement and sand to the proportion specified and sufficient water then added to it to form a thick slurry thus obtained shall then be added to dry cement and sand mixture and thoroughly mixed to make a workable homogenous mortar of uniform colour by adding more water if necessary. Mechanical mixers shall generally be used for mixing such mortars. If hand mixing is allowed it shall be done on pucca platform.

Note :

In connections with the I.S. Code numbers indicated under Section, Specification, Section A – General

Refer to the following I.S. Code numbers and the year and or otherwise latest modified I.S. Code Number.

1) Cement	:	I.S. 269 – 1976
2) Lime	:	I.S. 712 – 1964
		I.S. 1624 – 1960
3) Fine – Aggregate	:	I.S. 383 – 1970
4) Coarse– Aggregate	:	I.S. 515 – 1970
5) Reinforcement	:	I.S. 432 – 1966 Fe 415
		I.S. 1786 – 1966 (Tor Steel)
		I.S. 1139 – 1966
6) Bricks	:	I.S. 1077 – 1970
7) Neeru	:	I.S. 712 – 1964
8) Surkhi	:	I.S. 1344 – 1968
9) Timber	:	I.S. 287 – 1960
10) Flush Doors	:	I.S. 2202 – 1966
11) Floor Tiles	:	I.S. 1237 – 1980
12) Ceramic / Vitrified Tiles	:	I.S. 777 – 1970



- 13) Asbestos Roofing  
and Rainwater pipes : I.S. 459 – 1962
- 14) R.C.C. design mix  
M-25 : I.S. 456 – 2000



## **SECTION – B: MODE OF MEASUREMENTS**

The method of measurement for various items in the tender shall be generally in accordance with the IS: 1200 subject to the items for which the mode of measurements is not given under or elsewhere in the tender.

### 1) **Excavation** :

- a) **Footings**: Area of excavation for footing shall be measured equal to the area of the lowest concrete as shown on the drawing. Depth shall be measured vertically from ground level to bottom of concrete course or dry rubble packing as the case may be.
- b) **Plinth Beams**: Depth of excavation for plinth beam shall be measured from ground level upto bottom of beam and width equal to width of the beam. If a leveling course is ordered, it shall be measured upto the bottom of the Leveling course.
- c) Where excavation is made in trenches, measurements for cutting shall be taken by means of taps and staff and the width of concrete or rubble packing as shown on the Drawing shall be considered as the width of excavation.
- d) Where excavation is made for leveling the site, levels shall be taken before start and after completion of work and total quantity of excavation computed from these levels in manner approved by the Architect.
- e) Where soil including soft rock and hard rock are mixed, hard rock after excavation shall be stacked separately. Measurement of the entire excavation shall be taken as indicated above. Excavations of hard rocks shall be measured from stacks of excavated hard rock and reduced by 40% for bulking and void. The quantity so arrived at shall be paid for under hard rock. The difference between the quantity of entire excavation and quantity payable under hard rock shall be paid as soil including soft rock.

### 2) **Earth Filling** :

In open spaces Fillings shall be measured from cross sections of embankments, levels of which are recorded by means of levels before start of work and after completion of work. When it is not possible to measure filling from cross sections, it may be measured from loose stacks or lorry measurements with previous written permission from the Architect and 20% deduction shall be made from the measured quantity to arrive at the net quantity payable.

### 3) **Cement Concrete (Plain & Reinforcement)**:

Cement concrete in R.C.C. and P.C.C. items shall be measured exclusive of reinforcement and plaster thickness but shall include necessary costs of shuttering, centering, hire charges of all equipment, curing, hacking and fair finish. Reinforcement and plaster shall be measured and paid separately.

Items like R.C.C. precast jalli, R.C.C. pipes and other such items which are normally manufactured in factories as well as those items which have been specifically mentioned in the Schedule of Quantities shall be measured inclusive of reinforcement.

No deductions will be made for openings upto 0.1 sq.mtr. and no extra labour for forming such openings or voids shall be paid.

Columns shall be measured from face to face of columns / beams and shall include haunches, if any. The depth of the beams (other than raft foundations beam) shall be measured from the top of the slab to the bottom of the beam.

In case of combined footings and raft foundations, the exposed, portion of the beam rib shall be measured as beam and remaining portion measured in footing / raft slab.

Slabs (other than in raft foundations) shall be measured in bays (clear of beams) with deductions for columns portions.

**Chajja:** only projected portion shall be measured in Square meter.

**Staircase:** Measurements shall be in Cu.m. Staircase comprising if steps, soffit slab, landing slab shall be measured and paid under this them. Side parapet walls, railings, finishing of raisers and treads, M.S. reinforcement and plastering etc., shall be paid separately under respective items.

4) **Reinforcement:**

Shall be measured in lengths of bars as actually placed in position on standard weight basis; no allowance being made in the weight for rolling margin, Wastage and binding wire shall not be measured, authorised overlaps and spacers shall only be measured.

**Standard weight for steel reinforcement bars**

Diameter of the steel bars in mm.	6	8	10	12	16	20	25	32
Weight of steel bars in kg per Rmt.	0.22	0.39	0.62	0.89	1.58	2.47	3.85	6.31

5) **Brick Work :**

Except walls of half-brick thickness or less, all brick work shall be measured in cubic meters.

**Thickness of Wall:**

Brick walls upto and including three bricks in thickness shall be measured in multiples of half-brick which shall be deemed to be inclusive of the mortar joints. Where fractions on half-bricks occur due to Architectural or other reasons, the measurement shall be taken half-bricks.

For walling, which is more than three bricks in thickness, the actual thickness of the wall be measured to the nearest centimeter.

Honey-combed brick walling shall be given in square meters stating the thickness of wall and the pattern of honey-combing. Honey comb openings shall not be deducted.

**Deductions:**

No deductions or additions shall be made on any account for

- a) Ends of dissimilar materials (i.e. joists, beams, lintels, lofts, grinders, rafters, purlins, trusses, corbels, steps, etc.) upto 500 square centimeters in section.
- b) Opening upto 0.1 sq. in section.
- c) Wall plates, bed plates and bearing of slabs, chajjas and the like where the thickness does not exceed 10 cm. and the bearing does not extend over the full width of the wall.

6) **Stone Masonry :**

Except where otherwise described, stone work and stone walling generally shall be given in cubic meters and fascia work in square meters.

When measuring walls, the thickness shall be measured to the nearest one centimeter.

Deductions shall be made as described under brick work.

7) **Wood Work:**

All work shall be measured net as fixed. No extra measurement will be given for shape, joints, splayed meeting styles of doors and windows and shall be measured in unit of square meters.

Area over the face inclusive of exposed frame thickness (excluding width of cover mould) shall be measured in case of door, windows and ventilators when frames are included in the item. Portions embedded in masonry or flooring shall not be measured. Where frames are measured separately mode of measurement shall be as per C.P.W.D. practice or IS:1200.

8) **Steel doors, windows, ventilators, louvers:**

Clear area over one face inclusive of exposed frame shall be measured. Holdfasts or portions embedded in masonry or flooring shall be measured.

9) **Steel rolling shutters and rolling grilles:**

Clear width between side jambs and clear height between floor and bottom of lintel / beam shall be measured. Hood shall not be measured separately. The rate should be inclusive of the cost of hood.

10) **Flooring, Skirting, Dado:**

Flooring shall be measured from skirting to skirting and where the wall surface is plastered or provided with Dado, it shall be measured from plaster to plaster or dado to dado.

11) **Plastering and Pointing:**

All plastering and pointing shall be measured in square meters unless otherwise described.

Net are of surface plastered shall be measured. No deductions will be made for ends of joints, beams, posts, etc., and opening not exceeding 0.5 sq.mtr. each and no additions shall be made neither for reveals, jambs, soffits, sills, etc. of these openings nor for finishing the plaster around openings, ends, of joists, beam and posts, etc.

Full deductions will be made for door, window and ventilator from each side with adding jambs for door, window and ventilator.

12) **Painting, White Washing, ColourWashing and Distempering:**

All painting work shall be measured in square meters.

Net are of surface painted shall be measured. No deductions will be made for unpainted surfaces of ends of joists, beams, posts etc., and opening not exceeding 0.5 sq.mtr. each and no additions shall be made for reveals, jambs, soffits, sills, etc., of these openings.

Full deductions will be made for door, window and ventilator from each side with adding jambs for door, window and ventilator.

No coefficient will be considered for painting over sponge finished or sand faced plaster.

The following multiplying factors for obtaining equivalent areas shall be adopted.

No.	Description of works	How measured	Multiplying Factor
a)	Wood paneled framed ledged, braces and battened.	Measured flat (not girthed) including frame, edges, chawkats, cleats, etc., shall be deemed to be included in the item.	1 1/8 (for each side).
b)	Wood flush part paneled and part.	-- do -- glazed or gauzed.	1 (for each side).
c)	Fully glazed or gauzed or glazed louvered ventilators / window / door.	-- do --	¼ (for each side).
d)	Fully venetioned of louvered (not with glazing).	-- do --	1 ½ (for each side).
e)	Weather boarding.	Measured flat (not girthed supporting frame work shall not be measured separately).	1 1/8 (for each side).
f)	Trellis (or Jaffri) work one way or two ways.	Measured flat overall, no deduction shall be made for opening (supporting members shall not be measured separately)	1 (for each side).
g)	Guard bars, balustrades, gratings, grille railings, grille partitions, etc.	--- do ---	1 (for painting all over).
h)	M.S. gates & open palisades fencing, door including standards, braces, rails, stays, etc.	See note below	1 (for painting over all).
i)	Steel rolling / alligator type shutters.	Measured flat over jambs, guides, bottoms, rails and locking arrangement etc. shall be deemed to be included in the item.	1 ¼ (for each side).
j)	Carved or enriched work.	Measured flat.	2 (for each side).
k)	Fully glazed or gauzed steel windows or partitions.	Measured flat.	1 ¼ (for all over).



**Note** :

The height shall be taken from the bottom of the lowest rail, if the palisades do not go below it (or from the lower end of the palisades, if they project below the lowest rail) upto the top of the palisades, but not upto the top of the standards, if they are higher than the palisades. Similarly, for the gates, depth of roller shall not be considered while measuring the height.

Area painted over sand cement plaster, sponge finished / sand faced plaster / rough cast plaster area painted without considering any coefficient for painting over sand faced plaster





## **SECTION – C: WORKMANSHIP**

### **CLEARING OF SITE, EXCAVATION AND EARTH FILLING**

**Note:** Workmanship for all items related to the construction work should be as per relevant I.S. Code.

#### **General:**

Trenches for wall foundations, column footings, raft foundations, pile caps, plinth beams, water tanks, cess pits, etc., shall be excavated to the exact length, width and depth shown in the figure on the drawing or as may be directed by the Architect. If taken out to greater length, width or depth than shown or required, the extra work occasioned thereby shall be done at the Contractors own expenses. Extra depth shall be brought up by plain cement concrete filling 1:4:8 proportion and extra length and width filled in by rammed earth or murum or if the Architect thinks it necessary for the stability of the work by 1:4:8 concrete, as may be directed by the Contractors costs.

Excavated material shall be used for filling in plinth, or each side of the foundation blocks or trenches or it shall be spread elsewhere on or near the site of work including watering, ramming and consolidating or carted away from site free of charge, as may be ordered.

The Contractor shall at his own expenses and without any extra charge, make provision for supporting all utility services, lighting the trenches, separating and stacking, serviceable materials neatly, shoring, timbering, stuttering, bailing out of water either sub-soil or rain water including pumping at any stage of the work. Trenches shall be kept free of water while masonry or any concrete works are in progress and until the Architects consider that concrete is sufficiently set.

#### **Excavation excluding in Hard Rock:**

Excavation shall be carried out in any type of soil, murum (soft or hard), soft rock, boulders, old foundation, concrete asphalt or stone paved surfaces, old masonry or concrete (plain or reinforced).

#### **Excavation in Hard Rock:**

Rock which is in solid beds, which can only remove either by blasting or by wedging or chiseling shall be treated as hard rock. A boulder or detached rock measuring one cubic meter or more, shall blasting, wedging or chiseling.

Where hard rock is met with the blasting operations is considered necessary, the Contractor shall intimate about the same to the Architect.

The Contractor shall obtain license from District / Public authorities for carrying our blasting work as well as for obtaining transporting and storing explosives as per Explosives, Rules 1940 or as amended. He shall purchase the explosives, fuses, detonators, etc., only from a licenses dealer. He shall maintain the account of explosive etc., purchased and used by him. He shall be responsible for safe custody and proper accounting of explosives materials. The Architect shall have access to check store of explosive and accounts thereof.

Blasting shall normally be done with gun powder. Dynamite Gelatin or any other high explosive shall only be used in special cases with written permission of the Architect and District / Public authorities concerned under Explosives Rules.



Blasting operations shall be carried out under the supervision of a responsible representative of the Contractor during certain hours, preferably during lunch break as approved in writing by the Architect. The representative shall be conversant with the rules of blasting.

Proper precautions for the safety of persons shall be taken. Red flags shall be prominently displayed around the area to be blasted and all people on work except those who actually light the fuses shall be withdrawn to a safe distance of not less than 100 meters from the blast. Blasting shall not be done within 100 meters of an existing masonry or any other kind of structure unless special precautions are taken by heavy blanketing etc.

Where Blasting is not practicable or prohibited, excavation shall be done by wedging or chiseling and it shall be restricted to the quantity required to enable the necessary foundation etc. to be put in. In case, the dimension of trenches exceeds those shown in drawings or as directed by the Architect, the excess quantity shall not be paid for, the item also covers bailing out subsoil or rain water including pumping at any stage of work, shoring strutting, etc.

### **Earth Filling:**

**General:** Filling shall be done with good earth, murum, stone chips, or disintegrated building debris. It shall be free from salts, organic matter, black cotton or slushy earth and combustible material. All clods shall be broken.

#### a) **Filling in Plinth :**

Filling shall be done in layers not exceeding 25 cm., amply watered and consolidated by ramming with iron or wooden rammers weighing 7 to 8 kgs. and having base 20 cm. square or 20 cm. diameter. When the filling reaches the finished level, surface shall be flooded with water for at least 24 hours, allowed to dry and then rammed and consolidated, after making good any settlement in order to avoid settlement at a later stage. Special care shall be taken to pack earth under plinth beams and column corners. Finished level of filling shall be kept to a slope intended to be given to the floor.

#### b) **Filling in Outdoor portions and for Site Development:**

Shall be done in layer of 30 cm. Each layer shall be adequately watered. When filling reaches the required level the top most layer shall be dressed to proper section, grade and camber and rolled by 8 to 10 ton's power roller and adequately watered to aid compaction.

### **DRY RUBBLE PACKING & LEVELING COURSE.**

**Dry Rubble Packing:** Ground shall first be leveled up and thoroughly consolidated by means of heavy log hammer or frog rams. Rubbles of specified thickness shall then be laid and set with hand. It shall be consolidated by either hand roller or wooden log hammer; free use of water being made during consolidation. All hollows and interstices after consolidation shall be filled up with quarry spalls, stone chips etc., and the packing blinded with stone grit and watered and consolidated by log hammer.

Rubble packing in Road work shall be thoroughly consolidated by means of power rollers of 8 ton's capacity instead of log hammers and the surface shall be brought to proper grade and camber. After checking the level, grade and camber the surface will again be watered and rolled to receive road structure.

### **Leveling Course:**

It shall be either plain cement concrete of leaner mix or lime concrete which shall be proportioned as stipulated in the relevant item and mixed and placed in position conforming to line and level show on the drawing and compacted by approved means and cured adequately.

Lime concrete shall be prepared by mixing sand and slaked lime in proportion of three parts of sand and one part of lime and ground in a suitable mill and the mortar so prepared shall be added to six parts of the brick bat passing through 50 mm. mesh, mixed well and placed in position and compacted by approved means. The concrete shall be cured adequately.

## **PLAIN & REINFORCED CEMENT CONCRETE**

### **A) VOLUMETRIC BASIS: -**

**General :** Except where they are varied by the requirements of this specification due provision of Indian Standard Specification IS-456-1964 for plain and reinforced concrete and IS-432 part I and II for Mild and Medium Tensile steel Bars and hard drawn steel wire for concrete reinforcement and any other relevant ISS applicable together with the latest amendments shall be held to be incorporated this specifications. It shall be intent of these specifications to ensure that all concrete placed at various location of the job should be durable, strong enough to carry design, loads, it should wear well and practically be impervious to water. It should be free from such defects as shrinkage, cracking and honey-combing.

### **Proportioning the Mix :**

In ordinary concrete, excluding controlled concrete, proportions of cement to fine and coarse aggregate shall be as specified in the respective items and shall be accurately measured as in table "A" below. These proportions are based on assumption that the aggregates are dry. If aggregates are moist allowance shall be made for bulking in accordance with IS:2386/-. Allowance shall also be made for surface water present in aggregate when computing water contents. Surface water present shall be determined by one of the field methods described in IS:2386/- (Part III). In the absence of exact data, the amount of surface water may estimate by the value given in table "B" below (Table "A" and "B" please see on page nos.124 & 125).

### **Mixing :**

Concrete of 1:2:4 or richer mix shall be mixed in an approved mechanical mixer. The mixer and mixing platform shall be suitably protected from wind and rain. Aggregates shall be accurately measured out in boxes and mixed dry along with cement, water shall be then added in measured quantity and mixing shall be continued until there is a uniform distribution of the materials and the mass is uniform in colour and in consistency but in no case shall he mixing be done for less than 2 minutes.

When hand mixing is permitted with the approval of the Architect it shall be carried out on water-tight mixing platform and care shall be taken to ensure that mixing is continued until mass is uniform in colour and consistency.

### **Consistency :**

Quantity of water for making reinforced concrete shall be sufficient so as to ensure that concrete shall surround and properly grip all the reinforcement. The best consistency shall be that, which will flow sluggishly without flattening out and without separation of

coarse aggregates from the mortar. The degree of plasticity shall depend on the nature of work and atmospheric temperature and whether the concrete is vibrated or hand compacted. The slumps shown in table "C" obtained by standard slump test carried out in accordance with the procedure laid down in IS:119-1959 shall be adopted for different types of work.

**Admixtures :**

The usage of admixtures is allowed only if approved by the structural consultant and his decision in this regard shall be final.

**Transportation:**

Concrete shall be conveyed from the place of mixing to the place of final deposit as rapidly as practicable by methods which will prevent segregation or loss of any of the ingredients. If segregation does occur during transport, the concrete shall remix before being placed. In no case, more than 30 minutes shall elapse between mixing the consolidation in its position.

**Placing and Compacting :**

Concrete shall be placed in layers of suitable thickness or in strips and compacted before initial setting commences and should not be subsequently disturbed. Method of placing shall be such as to preclude segregation and as far as practicable the placing shall be continuous. Special care shall be taken in accordance with IS:456 while laying concrete under extreme weather.

Concrete shall be thoroughly compacted during the operation of placing and thoroughly working around the reinforcement, embedded fixtures and spaded against corners of the form work and by punning, rodding, mechanically vibrating or by any other approved means. In addition, form work shall be tapped lightly by using wooden mallet at the pouring head. The number and type of vibrator to be used shall be subject to the approval of the Architects and in general immersion type vibrators shall be used. External vibrators shall also be used whenever directed.

The intensity and duration (of vibration shall be sufficient to cause complete settlement and compaction without any stratification of successive layers or separation of ingredients or formation of laitance. Vibrator shall be inserted vertically in the concrete at points not more than 45 cm. apart and withdrawn very slowly when air bubbles no longer come on the surface. Over vibration or vibration of very wet mixes is harmful and should be avoided. Care shall be taken to utilize the vibrator only to compact the concrete and not to spread it, sufficient number of reserve vibrator in good working condition shall be kept on hand at all times, so as to ensure that there is no slackening or interruption in compacting.

**Construction Joints :**

Concreting shall be carried out end to end continuously as far as possible and when construction joints are totally unavoidable, it shall be located in a predetermined position approved by the Architect. The joints shall be kept at places where the shear force is the minimum and these shall be straight and at right angles to the direction of main reinforcement. When the work has to be resumed, on a surface which has hardened, such surface shall be roughened. It shall be swept clean, thoroughly wetted and covered with a 13 mm. layer of mortar composed of cement and sand in the same ratio as the cement concrete mix. This 13 mm. layer of mortar shall be freshly mixed and placed immediately before the placing of the concrete.

Where the concrete has not fully hardened, all laitance shall be removed by scrubbing the Wet surface with wire or bristle brushes, care being taken to avoid dislodgment of particles of aggregate. The surface shall then be coated with neat cement grout. In horizontal joints the first layer of concrete to be placed on this surface shall not exceed 15 cm. thickness and shall be well rammed against old work, particular attention being paid to corners.

**Expansion Joint:**

Expansion joint shall be provided where required as shown on the drawings or as directed by the Architect / Consultant. The joints shall be filled by the approved quality filler.

**Curing :**

Concrete shall be carefully protected during first stage of hardening from harmful effects of excessive heat, drying winds, rain or running water. It shall be covered with a layer of sacking, sand canvas, hessian, or similar absorbent materials and kept constantly, wet for ten days from the date of placing of concrete. Alternatively, the concrete being thoroughly wetted and covered by layer of approved water-proof material which should be kept in contact with it for seven days.

**Form Work :**

The form work shall conform to the shape, lines and dimensions as shown on the plans and be so constructed as to remain sufficiently rigid during the placing and compacting of the concrete and shall be sufficiently watertight to prevent loss of cement slurry from the concrete. Form work or centering shall be constructed of steel or timber and adequately designed to support the full weight of wet concrete without deflection and retain its form during laying, ramming and setting of concrete. Timber used shall be properly seasoned so as to prevent deformation when wetted.

All props shall be straight and of full height and no joints shall be allowed. Props shall be braced with thin bamboos or wooden battens and where additional staging is necessary, extra care shall be taken to use bigger diameters props with bracing at 4 or 5 levels. All props shall be supported on sole plates and double wedges. At the time of removing props these wedges shall be gently eased and not knocked out.

All rubbish, chippings, shavings and saw dust shall be removed from the interior of the forms before the concrete is placed and the form work in contact with the concrete shall be cleaned and thoroughly wetter or treated with non-staining mineral oil or any other approved materials is kept out of contact with the reinforcement.

All form work shall be removed without shock or vibration and shall be eased off carefully in order to allow the structure to take up its load gradually. Forms shall not be disturbed until concrete has adequately hardened to take up superimposed load coming on it and in no circumstances shall forms be struck until the concrete may be subjected at the time of striking.

In the normal circumstances (generally where temperatures are above 21 degrees centigrade) and where ordinary cement is used, forms may be struck after expiry of following periods :

- |    |  |  |
|----|--|--|
| a) | Walls, Columns and Vertical sides of beam}                                   | 48 hours as may be directly by the Architect |
| b) | Bottom of slab upto 4.5 m. span.   | 7 days.                                      |
| c) | Bottom of slab upto 4.5 m. span. bottom of beam and arch rib upto 6 m. span. | 14 days.                                     |
| d) | Bottom of beams and arch rib over 6 m. span.                                 | 21 days.                                     |

However, this period may be increased or decreased at the discretion of Architects. Special care shall be taken while striking the centering of cantilevered slab canopies, portal frames, folded plate construction and period of striking centering shall be as determined by the Architect.

M/s NSA architects

Signature of Contractor with Seal

If directed, form shall be given an upward camber to ensure that the beams do not have any sag. Surface that becomes exposed on removal of forms shall be carefully examined and any fins, burrs, projections etc., that are detected shall be removed. Any honeycombing of minor nature shall be finished neatly with cement mortar 1:2.

Any work showing signs of damage through premature or careless removal of centering or shuttering, shall be reconstructed by the contractor at his own cost.

**Strength :**

Concrete mixed in the proportion desired shall have compressive strength after placing, not less than the following:

No	Concrete Mix.	Minimum compressive strength @ 7 days	Minimum compressive strength @ 28 days
1	1:1:2	160 Kg. / Sq.mtr. (2250 Lbs. / Sq. inch).	250 Kg. / Sq.mtr. (3500 Lbs. / Sq. inch).
2	1:1½:3	132 Kg. / Sq.mtr. (1875 Lbs. / Sq. inch).	200 Kg. / Sq.mtr. (2850 Lbs. / Sq. inch).
3	1:2:4	106 Kg. / Sq.mtr. (1500 Lbs. / Sq. inch).	150 Kg. / Sq.mtr. (2250 Lbs. / Sq. inch).

**Tests :**

Tests on concrete shall be carried out in accordance with IS-456/- and any other is applicable. The frequency of work test shall be at such intervals as ordered by the Architect and subject to that every 150 cu.m. of concrete placed or part thereof and for a day's concrete exceeding 30 cu.m. a batch of 6 cubes shall be made for every sample and 3 of them tested after 7 days and the remaining 3 cubes shall be tested after 28 days. The criteria for acceptance of a concrete as confirming to a specified proportion / grade of concrete shall be in accordance with IS:456 and the Contractor shall entirely re-do the rejected work at his own cost. Strength of 28 days shall alone be considered for acceptance.

The Contractor shall arrange to carry out the tests in accordance with the relevant Indian Standards Specifications in an approved laboratory and the test reports in original be submitted to Architect. The entire cost of testing shall be borne by the Contractor.

**Steel Reinforcement :**

Reinforcement shall be accurately fabricated, placed and adequately maintained in position as shown on the drawings or as directed by the Architect. All finished bars shall be free from cracks, surface flaws, laminations, jagged and imperfect edges. Cement mortar blocks shall be used to give requisite cover as shown be firmly tied with binding wire of 16 to 18 gauge. Reinforcement shall be bent in accordance with the procedure stipulated in IS:2502-1963 and will not be straightened in a manner which will injure the material.

All reinforcement shall immediately before placing in concrete be thoroughly cleaned of loose mill scale, loose rust, oil and grease or other deleterious matter that would destroy or reduce bond.



Reinforcement in reinforced concrete members shall not be connected by welding or coupling except in accordance with relevant ISS and with the previous approval of the

Architect. Overlaps and joints shall be staggered and located at points, along the spans where neither shear nor bending moment is maximum.

**Cover :**

Reinforcement shall have cover as shown on the R.C.C. drawings and where not specified the thickness of cover shall be as follows. Cement mortar blocks in C.M. 1:1 shall be used for making cover blocks.

- a) At each end of reinforcing bar not less than 25 mm. not less than twice the diameter of such rod or bar.
- b) For a longitudinal reinforcing bar in a column not less than the diameter of such rod or bar. In the case of columns of minimum of 20 mm. or under whose reinforcing bars do not exceed 13 mm. the cover of 25 mm. may be used.
- c) For longitudinal reinforcing bar in a column not less than 25 mm. not less than diameter of such rod or bar.
- d) For tensile, compressive, shear or other reinforcement in a slab not less than 13 mm. nor less than diameter of such reinforcement, and
- e) For any other reinforcement not less than 13 mm. not less than the diameter of such reinforcement.

**A) WEIGH-BATCHING BASIS i.e. (DESIGN MIX CONCRETE):**

Workmanship of Design Mix Concrete shall be carried out in accordance with I.S:456 – 2000 and any other I.S. Code is applicable.

**TABLE – A**

No	Nominal Mix.	Quantity of aggregates required per 50 kgs of cement.		Quantity of water required per 50 kgs of cement.	
		Fine Cu.m.	Coarse Cu.m.	Vibrated	Un-vibrated (For dry aggregate)
1	1:1:2	0.035 (1.2 C.ft.)	0.070 (2.4 C.ft.)	22 lit. (4.8 Gal.)	27 lit. (6 Gal.)
2	1:1½:3	0.052 (1.8 C.ft.)	0.106 (3.6 C.ft.)	23 lit. (5 Gal.)	30 lit. (6 Gal.)
3	1:2:4	0.070 (2.4 C.ft.)	0.138 (4.8 C.ft.)	27 lit. (6 Gal.)	32 lit. (7 Gal.)
4	1:3:6	0.105 (3.6 C.ft.)	0.210 (7.2 C.ft.)	28 lit. (6.25 Gal.)	34 lit. (7.5 Gal.)
5	1:4:8	0.150 (4.8 C.ft.)	0.280 (9.6 C.ft.)	-- --	45 lit. (10 Gal.)

**TABLE – B**

No	Aggregate	Approx. quantity of surface water in Lit / Cu.m.
1	Very wet sand.	120
2	Moderately wet sand.	80
3	Moist sand.	40
4	Moist gravel or crushed sock. Coarser the aggregate, lesser the water it will carry.	20 to 40

**TABLE – C**

No.	Type of Work	<u>SLUMPS</u>	
		When vibrated	When not vibrated
1.	Mass concrete in R.C.C. foundation footings.	2.5 cms. (1")	5 cms. (2")
2.	Beams, slabs, columns with simple reinforcement.	2.5 cms. to 5 cms. (1" to 2")	5 cms. to 10 cms. (2" to 4")
3.	Thin sections with congested reinforcement.	5 cms. to 10 cms. (2" to 4")	10 cms. to 15 cms. (4" to 6")

**Note: Should** conditions governing slump and workability changed pointing to advisability of an increased slump, this shall only be done by decreasing the amount of aggregate and not by increasing the amount of water.

**B) WEIGH-BATCHING BASIS i.e. (DESIGN MIX CONCRETE):-**

Workmanship for design mix concrete shall be carried out in accordance with I.S. 456-2000 and any other I.S. code is applicable.





## **BRICK AND STONE MASONRY**

### **General :**

All brick work should be carried out as shown on the drawings with setbacks, projections, cuttings, toothings, etc. Wherever the proportion of cement mortar has not been specifically mentioned, cement mortar in the proportion of 1:6 shall be used. Flat bricks arches shall be provided wherever required without any extra cost. Brick work shall be kept wet while in progress, till mortar has properly set. On holidays or when work is topped, top of all unfinished masonry shall be kept wet. Should the mortar become dry, white or powdery, for want of curing work shall be pulled down and rebuilt at the Contractor's expenses.

### **Brick Work 1<sup>st</sup>Class:**

Bricks shall be thoroughly cleaned, well wetted and soaked for at least twelve hours in fresh water before being used on the work. Bricks shall be of locally, available best quality.

English bond shall be used throughout in walling. A good bond shall be maintained throughout the work, both laterally and transversely. In walling, the courses shall be kept perfectly horizontal and in plumb with the frogs facing upwards. Vertical joints shall not exceed 10 mm. thickness and shall be full of mortar. No broken bricks shall be used except as closers. After day's work all joints shall be raked to 12 mm. depth to provide for proper key to plastering.

Mortar used shall be as specified in respective items and every third course of brick work shall be flushed with mortar grout.

Whole of the masonry work shall be brought up at one uniform level throughout the structure; but where breaks are unavoidable, joints shall be made in good long steps. All junctions of walls and cross walls shall be carefully bounded into the main walls. The rate of laying masonry may be upto a height of 60 cm. per day if cement mortar is used and 45 cm. per day if lime mortar is used. Greater heights may be built only if permitted by the Architect.

During rains, the work shall be carefully covered to prevent mortar from being washed away. Should any mortar or cement be washed away, the works shall be removed and rebuilt at the Contractor's expenses.

### **Bricks Work 2<sup>nd</sup>Class:**

Shall be similar to 1<sup>st</sup> class brick work except that 2<sup>nd</sup> class bricks shall be used and joints shall be 10 mm. to 12 mm. thick.

### **Half Brick Masonry :**

Shall be set in cement mortar as specified. Hoop iron bands of 2.5 cm. x 0.16 (1" x 1/16") shall be embedded in every fourth course with thick mortar band or 2 Nos. 6 mm. (1/4") dia. bars shall be used in every sixth course otherwise as specified under item.

## **RUBBLE MASONRY**

### **General :**

Stones shall be of the kind specified in the item and shall be from an approved quarry. Stones shall be well wetted before laying in position. The mortar shall be as specified in the item. Face stone shall not be less than in breadth than in height, it shall also tail into the work more than its height. Jambs of doors, windows and openings shall be formed with quoins. In case of battered walls, the courses on battered surface shall be at right angle to the batter.



Through stones or headers shall be laid in every course at a distance not exceeding 2 meters part and shall be staggered. They shall be in one piece for walls upto 1.5-meter width and shall be lap jointed in case of wall having thickness more than half meter. The face area of each header shall not be less than 0.50 sqm. 1:2:4 cement concrete may also be allowed where good length headers are not available. Headers shall be marked with oil paint for ready identification.

Height of quoins shall be same as that of the course. Length of quoins shall be 0.50 m. and shall be laid header and stretcher alternatively. Faces of quoins shall be fair dressed. No quoins stones shall be less than 0.30 cum. In content. Joints of masonry shall be raked out and unless otherwise stated, shall be raised cement pointed by using cement mortar 1:1 to all exposed surfaces. All masonry work shall be well watered for a period of seven days.

a) **Coursed Rubble Masonry – First Sort** :

Height of course shall not be less than 15 cm. and all courses shall be of uniform height. All stones in the course shall be of same height. In no case height of course shall be more than any of the course below it. Bed and sides shall be hammer or chisel dressed back from the face 75 mm. and 35 mm. respectively.

Faces of stones shall be hammer dressed and bushing shall not be more than 35 mm. Thickness of joints shall not be more than 10 mm. Stones shall break joints at least half the height of the course. Work on interior face shall be precisely the same, as on exterior face.

Quoins shall be at least 0.5 m. long laid square on their beds and shall be fair dressed to a depth of at least 10 cm.

b) **Uncoursed Rubble Masonry** :

Stones shall be hammer dressed. Nearly fifty per cent of stones shall not be less than 0.30 cum. in content each, and twenty-five per cent of stone shall tail back in masonry by 40 cm. or more. Stones shall be so arranged as to break joints as much as possible.

Long vertical joints shall be carefully avoided. Thickness of joints shall in no case exceed 12 mm.

Pillar offsets shall be properly dressed with hammer or chisel to form proper angle. Stones used for the backing shall be of fairly large size.

c) **Random Rubble Masonry – First Sort** :

Stones shall be roughly chisel dressed. They shall be solidly bedded in mortar. Height of stone shall not be more than width of face or length of tail. Stones shall be of equal size and so arranged as to break joints as much as possible, avoiding long lines of horizontal or vertical joints. Quoins shall be same as described in Coursed Rubble Masonry – 1<sup>st</sup> Sort. All stones shall be carefully fitted. Thickness of face joint shall be not exceeded 25 mm. Edges of stones shall be chisel dressed for fitting in position properly.

### **WOOD WORK**

Timber used shall conform to specifications described under Materials, Doors, Windows, Ventilators, walls, Paneling, False Ceiling, etc., shall be in accordance with Architect's drawing in every detail and all joiner's work shall be accurately set out, framed and finished in a proper workman-like manner, frames of doors, windows and ventilators etc. and shutter styles and rails shall be best solid teak of quality specified in the schedule of quantities. The scantlings shall be accurately planed smooth, rebates, rounding and mouldings shall be made as shown on the drawings, patching or plugging of any kind shall



not be allowed. Joints shall be simple, neat and strong. Framed joints shall be coated with suitable adhesive like glue or synthetic resin before the frames are put together. All mortice and tenon joints shall be fit and fully and accurately without wedging or filling. The joints shall be pinned with hard wood or bamboo pins of 10 mm. to 12 mm. dia. or rust resisting star shaped metal pins 8 mm. after the frames are put together and pressed in position by means of press. The frames are put together and pressed in progress of work by suitable boxing. All portions of timber abutting against or embedded in masonry or concrete shall be treated against termites by giving a coat of any approved wood preservative.

Unless otherwise specified all doors, frames shall have six M.S. flat holdfasts and window frames shall have four holdfasts shall be provided to the ventilators, if directed. Size of holdfasts shall be 30 mm. x 40 mm. x 6 mm. M.S. flat bent to shape worth fish tail end and it shall be fixed to frame with sufficient number of screws as directed. When door / window frames are to be fixed to R.C.C. column or R.C.C. wall, holdfasts shall be substituted by suitable arrangements such as coach crews, rawl bolts etc., to secure frames to R.C.C. column or R.C.C. wall as directed by the Architect.

Frames and shutter shall not be painted or erected before being approved by Architect.

### **Paneled Shutter :**

Panels shall be of pattern and size as shown on the drawings or as directed by Architect. Solid teak wood panels shall be in one piece wherever possible. Where two or more pieces are permitted, they shall be of equal width. Panels shall be framed into grooves made in styles and rails to the full depth of groove and faces shall be closely fitted to sides of groove.

Where panels specified are block board, it shall be solid core with teak internal lipping and of approved make.

Partly paneled and partly glazed shutter shall be similar to paneled shutters except that such parts as are directed shall be glazed with plain or ground glass as specified. Styles and rails shall be rebated 12 mm. to receive glass. Sash bars shall be moulded and rebated and mitered on sides to receive the glass which shall be fixed with putty and beads.

### **Hardware Fittings :**

Unless otherwise specified all hardware, fittings and fixtures shall be supplied by the employer free of charge. However, the cost of fixing fittings shall be included in the rate quoted. The fixing shall be done in the best workman-like manner in accordance with the manufactures specifications. The Contractor shall be held responsible for working of all moving parts dependent on proper fixing. He will also be responsible for any breakage due to negligence during fixing or lack of protection before the building is handed over. The Contractor shall also take delivery of all hardware fittings etc., as and when supplied and arrange for safe storage etc.

Hardware required for fixing false ceiling, wall paneling etc., shall be arranged by the Contractor at his cost. Apart from the hardware fittings required for the joinery items, the Contractor shall have to fix all other items of hardware fittings to be supplied by the employer viz. coat / picture hooks, numerical, letters to denote buildings, hanging rods etc., as directed by the Architects.

Painting and polishing of wood work shall be as per specifications under respective heads.

### **Flush Doors :**

All flush doors shall be solid core unless otherwise specified. It shall conform to the relevant specifications of I.S. 2202 and shall be obtained from approved manufactures. The finished thickness of the shutter shall be mentioned in the items. Face veneers shall be of the pattern and colour approved by the Architect and an approved sample shall be deposited with the Architect for reference.

The solid core shall be wood laminae prepared from battens of well-seasoned and treated good quality wood having straight grains. The battens shall be of uniform size of about 2.5 cm. width. These shall be properly glued and machine pressed together, with grains of each piece reversed from that of adjoining one. The longitudinal joints of the battens shall be staggered and no piece shall be less than 50 cm. in length. Alternatively, the core shall be of solid teak particle board. Edges of the core shall be lipped internally with 1<sup>st</sup> Class teak wood battens of 4 cm. (1.5") minimum depth, glued and machine pressed along with the core.

The core surface shall then have two or three veneers firmly glued on each face. The first veneer (called cross band) shall be laid with its grains at right angles to those of the core and the second and the third veneers with their grains parallel to those of the core. The under veneers shall be of good quality, durable and well-seasoned wood. The face veneers shall be of minimum 1 mm. thickness and of well-matched and seasoned 1<sup>st</sup> class teak, laid along with grains of the core battens. The combined thickness of all the veneers on each face shall not be less than 4 mm. Thermosetting synthetic resin conforming to I.S. 303 or moisture-proof plywood grade MPF.I. shall be used in manufacture. In addition to internal lipping all doors shall have external lipping all round.

### **STEEL DOORS, WINDOWS, VENTILATORS** **ROLLING SHUTTER, M.S. GRILLES ETC.**

Steel used in the manufacture of rolled steel sections shall not have more than 0.060 per cent of Sulphur and 0.065 per cent of phosphorus. The carbon content shall not exceed 0.30 per cent and shall be of weldable quality. In all other respects, the rolled steel sections shall conform to I.S. 226-1955 and I.S. 1977-1962.

Frames shall be square and flat. Both the fixed and openable frames shall be constructed of sections which have been cut to length, mitred and electrically welded at corners. Sub-dividing bar units shall be tenoned and rivetted into the frames. All frames shall have the corners welded to a true right angle and welds shall be neatly cleaned off. Couplings, mouldings and weather bar shall be provided as directed by the Architects.

Outer frames shall be provided with fixing holes centrally in the web of the sections and fixing screws and lugs shall be used for fixing the frame to masonry. Mastic cement shall be used for making the joints watertight.

Hinges shall be strong projecting type. If directed friction type hinges shall be used in which case windows shall not be fitted with peg stays.

Projecting type hinged shutter shall be fitted with bronze or brass peg stays, 30 cm. long with peg and brackets welded / riveted to the frame or as sated under item.

All windows shall be provided with handles of brass or bronze or otherwise as stated under them.

Top hung ventilators shall be fixed with plain hinges rivetted / welded to the fixed frame. A brass or bronze peg stay 30 cm. long as in windows shall be provided or as stated under item.

Center hung ventilators shall be hung on two pairs of brass or leaded tin bronze cup pivots rivetted to the inner and outer frames of the ventilators to permit the ventilators to swing through an angle of approximately 85. The opening position of the ventilator shall be so balanced to keep it open at any desired angle under normal weather conditions. A bronze spring catch shall be fitted in the center of the top bar of the ventilator for the operation of the ventilator. This spring catch shall be secured to the frame with brass screws and shall close into a mild steel malleable iron catch plate rivetted or welded to



outside of the outer ventilator frame bar. A brass cord pulley wheel in mild steel or malleable iron brackets shall be provided along with card eye.

The windows and ventilators shall be painted. All the steel surfaces shall be thoroughly cleaned free of rust, scale or dirt and mill scale by picking or phosphating and before erection painted with one coat of approved primer and after erection painted with two finishing coats of synthetic enamel paint of approved shade and quality.

Glazing of specified thickness shall be provided on the outside of frames and unless otherwise specified, metal beading of approved shape, and section shall be used for fixing glasses. Special metal sash putty of approved make shall be used, if directed.

### **Rolling Shutters:**

Shall be of approved manufacture suitable for fixing in the position ordered i.e. outside, inside, on or below lintel or between jambs. Shutters up to 12 sqm. (130 Sq.ft.) in area shall be manually operated or Push Up type while bigger sizes shall be of reduction gear type mechanically operated chain or handles.

These shall be consisting of 8 gauges or as specified with 75 mm. (3") M.S. laths of best quality mild steel strips machine rolled and straightened with an effective bridge depth of 16 mm. (5/8") and shall have convex corrugation. These shall be interlocked together throughout their entire length with end locks. These shall be mounted on specially designed pipe shaft.

The spring shall be of approved make coiled type. These shall be manufacture from tested high tensile spring steel wire or strip of adequate strength to balance the shutters in positions. The spring pipe, shaft etc., shall be supported on strong M.S. or malleable cast iron brackets.

Both the side guides and bottom rail shall be jointless and of single piece of pressed steel.

Top cover of shaft, spring etc., shall be of the same material as that of lath.

For rolling shutter with wicket-gate, night latch shall be provided free of cost.

The shutter and cover etc., shall be painted with one coat of anti-corrosive paint and two coats of synthetic enamel paint of approved quality and shade.

### **Collapsible Steel Gate:**

It shall consist of vertical double channels at 10 cm. centers. The sizes of channels T-Section for top and bottom shall be as approved by the Architects. The gate shall be provided with necessary bolts, nuts, locking arrangements, stoppers and brass handles on both sides. The gate shall be painted with one coat of anti-corrosive paint before erection and two coats of synthetic enamel paint of approved quality and shade.

### **Wrought Iron Grilles:**

Grilles shall be manufactured as per drawings and the welded joints shall be smooth. The grilles shall be painted with one coat of anti-corrosive paint before fixing and two coats of synthetic enamel paint of approved quality and shade.



### **Aluminum Doors, Windows, Ventilators & Partitions etc.:**

These shall be obtained from approved and established manufactures and shall be of Aluminum alloy conforming to I.S. 733 and sections shall generally conform to I.S. 1948. Theses shall be fabricated as per the details drawings,

Frames for windows, ventilators etc., shall be square and flat. Both fixed and openable frames shall be constructed of section which have been cut to length, mitred and welded at corners. Sub-dividing bars shall be tenoned and rivetted into the frames. All frames shall have corners welded to a true right angle. For side hung shutters, hinges shall normally be of projecting type made of Aluminum alloy and rivetted / welded to frames. Handles, peg stays etc., or approved quality Aluminum or its alloy conforming to IS Specifications.

All types of shutters shall be fabricated, supplied and fixed as specified in the IS:1948. The rate shall include supplying and fixing all fittings and fixtures required for proper and safe operation.

The doors shall be fabricated by using standard aluminum alloy extruded sections as specified in IS:1948. The rate shall include supplying and fixing all fittings and fixtures including approved locking arrangement as directed.

All aluminum fabricated work shall be anodized to the British Standard 1616:1961 to give an anodized film of 25 micron.

The Contractor shall take to stack the fabricated frames etc., on site under cover. They shall be handled with care, stacked on edge on level bearers and supported evenly. Before erecting, the frames coming in contact with concrete, masonry, plaster of dissimilar metals shall be coated with a coat of Zinc Chromate conforming to IS:104-1950. The Contractor shall cover all anodized finish work with a thick layer of clear transparent lacquer based on methacrylate or cellulose butyrate to protect the surface from wet cement during installation. This coating shall remove on completion. Before handing over, the aluminum work shall be washed with mild solution of non-alkali soap and water.

### **Glazing:**

Glazing shall be approved especially quality glass of specified thickness and unless otherwise directed it shall be provided the exterior with metal beading.

## **FLOORING, SKIRTING, DADO AND STONE VENEERING**

All flooring, skirting, dado and stone veneering etc., shall be executed strictly as per relevant IS Specification and in workman-like manner.

### **Indian Patent Stone:**

Selection of materials, method of mixing, placing and compacting shall generally conform to the specifications under plain and reinforced cement concrete described earlier. A stiff mix consistent with workability shall be used.

### **Preparation of Surface:**

Before the operation for laying topping is started the surface of base concrete shall be thoroughly cleaned of all dirt, loose particles coked mortar droppings and laitance if any, by scrubbing with coir or steel wire brush. Where the concrete has hardened so much that roughening of surface by wire brush is not possible, the surface shall have roughened by chipping or hacking at close intervals. The surface





shall then be cleaned with water and kept wet for 12 hours and surplus water shall be removed by mopping before the topping is laid.

### **Laying:**

The screed strips shall be fixed over the base concrete dividing it into suitable panels. Before placing the concrete for topping, neat cement slurry shall be thoroughly brushed into the prepared surface of the base concrete just ahead of the finish. Concrete of specified proportion and thickness shall be laid in alternate panels to required level and slope and thoroughly tamped.

### **Finishing the Surface:**

After the concrete has been fully compacted it shall be finished by troweling or floating with neat cement rendering. Finishing operations shall start shortly after the compaction of concrete and the surface shall be troweled three times at intervals so as to produce a uniform and hard surface. The satisfactory resistance of floor to wear depends largely upon the care with troweling is carried out. The time intervals allowed between successive troweling is very important. Immediately after placing cement rendering, only just sufficient troweling shall be done to give a level surface. Excessive troweling in the earlier stages shall be avoided as this tends to bring a layer rich in cement to the surface. Sometime, after the first troweling, the duration depending upon the temperature, atmospheric conditions and the rate of the set of cement used, the surface shall be re-troweled to close any pores in the surface and to bring to surface and to scrape off any excess water in concrete or laitance. No dry cement shall be used directly on the surface to absorb moistures or to stiffen the mix. The final troweling shall be done well before the concrete has become too hard but at such time that considerable pressure is required to make any impression on the surface.

If directed by the Architect, approved mineral pigment shall be added to the rendering to give desired colour and shade to the flooring at no extra cost.

When instead of 1:2:3 or 1:2.5:3.5 mix, 1:2:4 is specified the topping shall be rendered with 1:1 cement mortar with a suitable mineral pigment, if directed, instead of cement only. If specified in the Schedule of Quantities, the flooring shall be machine polished as per the Architect's instructions.

Wherever the patent stone flooring is used as finishing on roof the joints shall be filled with an approved bitumastic filler in workman like manner.

### **Ironite Topping:**

Instead of finishing the top with rendering coat of 1:1 cement mortar, the top shall be finished with 12 mm. thick ironite topping. Unless otherwise specified, one part of ironite and four parts of ordinary cement by weight shall be mixed dry thoroughly. This dry mixture shall be mixed with stone grit 6 mm. (1/4") and down size or as otherwise directed in the ratio of 1:2 by volume and well turned over. Just enough water shall be added to this dry mix and mixed thoroughly well and laid to uniform thickness of 12 mm. and compacted. After initial set has started the surface shall be finished as directed.

Plain and Coloured Cement Tiles, Marble Mosaic and Terrazzo Tiles Flooring:

The tiles shall conform to IS : 1237 having the colour approved the Architect and the rate shall include provision of border tiles and tiles of different colours in pattern if directed. The mosaic topping of lighter shade tiles shall be made of White Cement with an approved shade pigment and neutral shade shall be of Grey cement with an approved shade pigment. The type of tiles shall be as specified in respective items.



The sub-grade shall be thoroughly wetted after cleaning of all dirt, laitance, and loose material. A bed of lime mortar consisting of one part of lime and two parts of sand shall be laid and properly leveled to an average thickness of 25 mm. and the surface shall be kept slightly rough to form a satisfactory key for tiles. Neat cement paste of honeylike consistency shall be spread over mortar bed, over such area at a time as would accommodate about 20 tiles. Tiles shall be soaked in water for 15 minutes and allowed to dry for the same duration. Tiles shall then be fixed with a thin coat of cement paste on back of each tile and then each tile being gently tapped with a wooden mallet till it is properly bedded and in level with adjoining tiles. Joints shall be fine and as imperceptible as possible.

After tiles have been laid in a room or a day's fixing work is completed, surplus cement grout that may have come out of the joints may be wiped off gently and joints cleaned. A

thin slurry of coloured cement matching to the colour of tiles shall be spread over it and rubbed so as to seal even a thinnest joint between the tiles and make it impervious and the flooring cured for 7 days. The tiles shall be polished and finished according to IS:1443.

#### **Dado, Skirting and Risers:**

Tiles shall conform to IS:1237 and shall be of approved design. The tiles shall be fixed near cement grout on a blacking coat consisting of 1:4 cement sand plaster of 15 mm. thick. The top and bottom junctions of tiles shall be rounded off neatly as directed. The joints shall be filled with matching shade coloured cement slurry. The surface shall be kept wet for 7 days and then polished with carborundum stone to obtain smooth surface and fine polish.

#### **Shahabad / Tandur / Kotah / Cuddappa Stone Flooring :**

The flooring shall be either with rough stone or machine cut and machine polished as specified in respective items and shall be of specified thickness and of approved quality and size, free from cracks and flakes and shall be uniform in colour with straight edges. The sides of machine cut and machine polished stone shall have perfect right angles and surface smooth. The stone slabs shall be laid and finished as described under plain cement or colour cement tiles on a bedding of 1:2 lime mortar 25 mm. (Average) thickness. The finished stone surface thus laid shall then be polished to the required degree as approved by the Architect.

#### **In Dado, Skirting, Risers etc.:**

Stone slabs shall be laid on backing plaster of cement mortar 1:4 of 15 mm. to 20 mm. thick and finished as described under plain and coloured cement tile dado.

#### **Marble mosaic / Terrazzo in situ work in flooring, dado, skirting etc.:**

The terrazzo / mosaic finish shall be laid on an under layer of thickness as specified in the respective items. The topping shall consist of a layer of marble chips of selected sizes, colour and design approved by Architect, mixed with cement with desire shade of pigment.

For lighter shade mosaic. terrazzo white cement shall be used and for neutral shade, grey cement shall be used. The proportion of terrazzo mix shall be three parts of cement one part of marble powder by weight. For every part of cement marble powder mix, the proportion of marble aggregate by volume shall be 1.5 parts unless otherwise specified.

The topping shall be mixed and laid in panels as described in IS:2114 and as per decorative designs prepared by Architects. The dividing strips of panels shall be Aluminum or as specified in the Schedule of Quantities. It shall be polished as specified in IS: 2114.



**Broken Mosaic Flooring:**

Broken mosaic finish shall be laid on an underlayer of thickness as specified in the item.

Pieces of mosaic tiles shall be obtained from broken marble mosaic tiles of approved shade conforming to IS:1257. The sizes of pieces shall be suitable to obtain the desired pattern of flooring as shown on the drawings or as approved by Architect.

Broken pieces shall be thoroughly wetted before fixing them. Ordinary or coloured cement grout shall be spread on the bedding. Mosaic tile pieces shall be fixed piece by piece to the desired pattern. The flooring shall be laid to correct level and slopes and compacted by straight screed tamper. The grout shall cream upto the surface. The junctions of the flooring and the wall shall be rounded and the flooring shall be extended along the wall to about 15 cm. (6"). After the day's work, the surplus cement grout that may have come out of the joints shall be cleaned off. The flooring shall be cured for seven days and then polished with a machine as stipulated in IS:1443.

**Broken ChinaMosaic:**

Broken China Mosaic flooring shall be exactly as per broken mosaic tile flooring except that the broken pieces shall be of China of approved colour and manufacturer and the floor shall not be polished.

**Marble Flooring:**

Marble slabs shall be of the best Indian marble of White or other approved colour as specified in the item. They shall be hard, dense, uniform and homogeneous in texture. They shall have even crystalline grain and free from defects and cracks. The surface shall be machine polished to an even and perfectly plane surface and edges machine cut true to square. The rear face shall be rough enough to provide a key for the mortar.

No slab thinner than the specified thickness at its thinnest part. The sizes of the slabs shall be as specified in the respective items.

The slabs shall be laid as described under mosaic tile flooring in every respect.

**White Glazed / Ceramic Tiles / Vitrified Tiles in Flooring and Dado:**

White Glazed Tiles from an approved manufacturer conforming to IS:777 shall be used. They shall be of specified size and thickness. All specials viz. coves, internal and external angles, corners, beads etc., shall be used wherever directed. Underlayer of specified thickness and mortar of stipulated proportion shall be laid as described in marble mosaic flooring. Tiles shall be washed clean and set in cement grout and each tile being gently tapped with a wooden mallet till it is properly bedded and in level with the adjoining

tiles. The joints shall be kept as thin as possible and in straight lines or to suit the required pattern. After the tiles have been laid, surplus cement grout shall be cleaned off.

The joints shall be cleaned off the grey cement grout with a wire brush or trowel to a depth of 5 mm. (3/16") and all dust and loose mortar removed. Joints shall then be flush pointed with white cement. The floor shall then be kept wet for seven days. After curing, the surface shall be washed with mild hydrochloric acid and clean water. The finished floor shall not sound hollow when tapped with a wooden mallet.



## **PLASTERING**

### **Scaffolding:**

Scaffolding for carrying out plastering work shall be double steel scaffolding having two sets of vertical supports so that the scaffolding is independent of the walls.

### **Preparation of surface:**

All putlog holes in brick work and junction between concrete and brick work shall be properly filled in advance. Joints in brick work shall be raked about 10 mm. if not raked out while constructing brick masonry work and concrete surface hacked to provide the grip to the plaster, if not hacked earlier projecting burns of mortar formed due to gaps at joints in shuttering shall be removed.

The surface shall be scrubbed clean with wire brush / coir brush to removed dirt, dust etc., and the surface thoroughly washed with clean water to remove efflorescence, grease and oil etc., and shall be kept wet for a minimum of six hours before application of plaster.

### **Neeru Plaster:**

Cement mortar of specified proportion and thickness shall be prepared in small batches and applied to the wall surface / ceiling. The ensure proper thickness, gauged patches shall be made at 1.5 to 2 m. apart and the surface plastered true to line, level and plumb taking special care to finish jambs of windows, doors, wall returns, corners, junctions etc. A thin layer of neeru shall then be applied and rubbed into surface and finished by means of trowel until the surface is even and smooth. The surface shall be kept moist for seven days and then given a coat of white wash.

### **Sand-faced Plaster:**

The surface shall be prepared as above.

The coat of cement mortar in proportion of 1:4 or as specified, shall be applied uniformly all over the surface to a thickness of 12 mm. and finished true to level and line and keys shall formed on the surface. The surface shall be kept moist till the finishing coat is applied.

The finishing coat shall be applied a day or two after. The proportion of mortar for finishing coat shall be one part of cement and three parts of selected, well graded and washed sand, or as specified under item and it shall be applied in a uniform thickness of 6 mm. (1/4").

The surface shall be tapped to uniform grained texture by using sponge pads as directed. Curing shall start after 24 hours and the surface kept wet for seven days.

### **Rough Cast Plaster:**

Except for the finishing coat the surface shall be prepared and base coat of plaster applied as under sand-faced plaster.

Finishing coat mortar shall be in proportion of one part of cement and one part of specially selected and graded sand and one part of gravel of 3 to 6 mm. size. It shall be flung upon the first coat with large trowel to form an even and decorative coat. The work shall generally conform to clause 16.5 of IS:1661-1960. The thickness of the coat shall be about 12 mm. (1/2"). It shall be cured for seven days.

**Rough coat plaster with colour finish:**

This finish shall be similar to Rough cast plaster above except a high-grade mineral pigment of approved shade shall be mixed with white cement instead of ordinary grey cement while preparing the mortar.

**Water-proofing Treatment :**

Unless otherwise specified, the Contractor shall carry out waterproofing treatment of basements, terrace and water retaining structures through reputed firms having specialization in the line and approved by the Architects. The Contractor shall also furnish full details of such treatment to the Architects and provide all information / proof etc., regarding the effectiveness of the treatment when called upon to do so. All such treatment shall have to be guaranteed in the form approved by the Employer for a minimum period of ten years. Any defects / leakages noticed during the guarantee period shall have to be rectified free of cost by the Contractor including reinstating the surface to its original condition and finish.

Water-proofing of sunk portions of floor slabs for baths, W.C. and kitchen mores etc., in residential buildings, unless otherwise specified, shall be done as specified in the schedule and shall generally comprise of :

- a) A coat of hot bitumen, min. 6 mm. thick screened with stone grit.
- b) Min. 20 mm. thick cement plaster in cement mortar 1:3 with approved water-proofing cement compound as per manufactures specifications. The plaster shall be cured by pounding for seven days.

The rate for the above treatment shall include drying and cleaning surfaces free of dust etc. and wiping with kerosene before application of bitumen. The vertical faces and returns shall also be treated similarly. The actual area treated including vertical faces and returns shall be measured and paid for. The work should be done in such a way that the finished flooring in bath has a minimum slope of 20 to 25 mm.

**PAINTING**

**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 plaster work 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 manufactures. All paints shall be brought on site in sealed thins in ready mixed form and shall be applied direct with the addition of thinner, if recommended by the manufacturers.

**White Washing:**

White was shall be prepared from lime slaked on spot, mixed and stirred with sufficient water to make a thin cream. This shall be allowed to stand for 24 hours and shall be screened through clean cloth. Four kg. gum dissolved in hot water shall be added to each cubic meter of the cream (115 gm. per cft.).

Blue shall be added to give required whiteness. The approximate quantity of water to be added in making cream shall be five liters per kg. of lime.



White wash shall be applied in specified coats by using flat brushes or spray pumps. Each coat shall be allowed to dry before next coat is applied. If additional coats than what have been specified, are necessary to obtain uniform and smooth finish, it shall be given at no extra cost.

The finished dry surface shall not show any signs of cracking and peeling nor shall it come off readily on the hand when rubbed.

If directed by the Architects one coat of chalk and glue shall be applied before application of white / colour wash at no extra cost.

**ColourWash:**

Colour wash shall be prepared by adding mineral colours not affected by lime to white wash. No colour wash shall be done until a sample of the colour wash to the required tint or shade has been got approved from the Architects.

Colour wash shall be applied as specified under white wash.

**Dry Distemper:**

Shade shall be got approved from the Architects before application of distemper.

The surface shall be prepared as specified earlier. A primer coat using approved primer or sizing shall be applied. Distemper prepared as per manufacturer's directions shall be applied and each coat shall be allowed to dry before subsequent coat is applied. The finished surface shall be free from chalking when rubbed, even uniform and shall show not brush marks. If additional coats are necessary, they shall be given at no extra cost.

**Oil Bound Distemper:**

The surface shall be prepared as specified above. A primer coat of either cement primer or any approved distemper primer shall be applied.

After the primer coat has dried, the surface shall be lightly sand papered and dusted to make to smooth to receive distemper.

Distemper shall be prepared as per the directions of the manufacturer and conforming to shade approved. It shall be applied in specified coats, taking care to allow for drying of each coat before subsequent coats are applied.

**Water-proof Cement Paint / Sand-tex matt Paint:**

The surface shall be prepared as specified above and thoroughly wetted with clean water before water-proof cement paint is applied.

The paint shall be prepared strictly as per manufacturers specifications and in such quantities as can be used up in an hour of its mixing, as otherwise the mixture will set and thicken, affecting flow and finish.

The paint thus prepared shall be applied on clean and wetted surface with brush or spraying machine. The solution shall be kept stirred during the period of application. It shall be applied on the surface which is on the shady side of the building so that the direct heat of the sun on the surface is avoided. The completed surface shall be watered after the days work. Number of coats shall be as specified in the item.



### **Painting – Oil / Enamel / Plastic Emulsion etc.:**

Ready mixed oil paint, flat oil paint, plastic emulsion paint, ready mixed synthetic enamel paint, etc., shall be brought in original containers and in sealed tins. If for any reason thinner is necessary, the brand and quantity 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. A 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 mouldings etc., shall be left on the work. The glass panes, floor etc. shall be cleaned of stains.

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.

### **POLISHING AND VARNISHING**

#### **French Polishing:**

French spirit polish shall be of an approved make conforming to IS:348. If it has to be prepared on site, the polish shall be made by dissolving 0.7 kg. of best shellac in 4.5 liters of methylated 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 season timber pieces and make 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 methylated 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 finishing coat, the pad shall be covered with a fresh piece of clean fine cotton cloth, slightly dampened with methylated spirit and rubbed lightly and quickly with a circular motion, till the finish surface attains uniform texture and high gloss.

#### **Wax Polishing :**

Wax polish shall either be prepared on site or obtained readymade from market. Polish made on the site shall be prepared from a mixture of pure bee's wax, linseed oil, turpentine oil and varnish in the ratio of 2:1.5:1:½ by weight. The bees 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 gloss and is quite dry showing no sign of sickness when touched. Gloss of the polish depends on the amount of rubbing, therefore rubbing must be continuous and with uniform pressure and frequent change in direction.

**Varnishing :**

Surface shall be prepared as described above. After preparation of surface, two coats of clean boiled linseed oil shall be applied at sufficient interval of time. After the linseed oil has dried two coats of varnish obtained from approved manufacturer shall be applied at sufficient interval of time. If the surface fails to produce the required gloss an additional coat shall be applied without any extra cost.

**GENERAL DEVELOPMENT AND ROAD WORK**

EXCAVATION	:	As in Section C
FILLING	:	As in Section C
DRY RUBBLE PACKING	:	As in Section C

**Dry Rubble Pitching :**

The pitching shall consist of large stones, regular in shape, as far as possible, and no stone shall be less than 20 cm. x 20 cm. on face and depth shall be as specified in the item. The edges of the stone shall be dressed even and regular by hammer and shall be laid regularly and evenly breaking joint as much as possible and shall be beaten down with heavy hammer so as to be embedded into the earth. The interstices between the stones shall be carefully filled in with stone chips, closely and firmly packed and well driven with hammer. Loose stone in packing shall on no account be allowed. The entire surface shall be thoroughly rammed, set in place and made compact with a log hammer so that the surface of entire pitching when completed shall be flat and even.

**Water Bound Macadam :**

6 cm. to 7.5 cm. size hand broken metal shall be spread over the prepared base to a thickness of 12 cm. The metal layer shall then be rolled and compacted by an 8 to 10-ton power roller. The thickness of the compacted layer after completing all the operations described below shall not be less than 7.5 cm.

Rolling shall start from edge of road and proceed towards the crown in longitudinal strips overlapping on successive strips by at least one half the width of the rear wheel of the roller. The operation shall continue till no visible settlement of the metal or movement under the roller is observed. The gradient and camber shall be checked from time to time by means of level stakes, strings camber board etc. Any depression or hump shall be corrected by removing completely the metal layer there at and rolling the same satisfactorily till refusal.

After the dry rolling is completed either murum or stone dust, grit or sand shall be spread. Moderate sprinkling of water and rolling shall be continued and stone dust shall again be spread if required till all voids are completely filled and movement of metal under the wheel ceases. If there is excess powder the same shall be removed by light brooming. The surface shall be checked for camber etc. The unevenness or undulations shall be rectified as required. The whole surface shall be then watered and





extra powder added if required, brushed and rolled to obtain mosaic surface. This surface shall be maintained till an upper layer is laid.

The rate of spreading either hard core or earth shall not be less than 0.3 cum. to 0.35 cum. per 10 sqm. area. The first layer of either murum / stone / grit / sand shall not be spread over a wet or watered metal layer.

### **FULL – GROUT**

#### **Spreading of Metal :**

2.5 cm. to 4 cm. size stone metal shall be spread to a loose thickness of 10 cm. and compacted to a thickness of about 7.5 cm. by 8-ton power roller.

#### **Applied Bitumen:**

Bitumen 30/40 penetration of approved manufacturer, heated to a temperature of 200 C. (400 F) shall be applied hot by means of a pressure distributor or hand spray at the rate of 65 kg. / 10 sqm.

#### **Blinding the Surface:**

Immediately following the application of bitumen and while it is still hot, key aggregate 12 mm. size shall be evenly spread at the rate of 0.2 cum. / 10 sqm. After spreading the aggregate, the whole area shall be thoroughly rolled with a six to eight-ton power roller. It is important that this rolling shall be done when the bitumen is still movement under the roller.

#### **Protection of the Surface:**

The surface shall be protected from all traffic.

### **SEMI – GROUT**

#### **Spreading of Metal :**

2.5 cm. to 4 cm. size stone metal shall be spread to a loose thickness of 7.5 cm. thick and compacted to a thickness of about 5 cm. by 8 ton power roller.

#### **Applied Bitumen:**

Bitumen 30/40 penetration of approved manufacturer, heated to a temperature of 200 C. (400 F) shall be applied hot by means of a pressure distributor or hand spray at the rate of 25 kg. / 10 sqm.

#### **Blinding the Surface :**

As in Full–Grout.

#### **Seal Coat (For Full Grout and Semi Grout Surface) :**

The surface shall be brushed free of any loose blindage, taking care that the brushing is not so severe as to remove the blindage but of the voids into which it is set. The surface shall then be tested for depression, which shall be made up by painting with bitumen 30/40 penetration and blinding with aggregate of a size, equivalent to the depth of depression.

**Application of Bitumen:**

Bitumen 80/100 penetration of approved manufacturer, heated to a temperature of 177 to 190 C. (350 to 375 F) shall than be applied evenly to the road surface by means of a pressure distributor or hand-spray at the rate of 12.5 kg. / 10 sqm.

**Blinding and Final Consolidation:**

While the bitumen is still hot the surface shall be blinded evenly with stone aggregate of 6 mm. and down gauge size. The blindage shall be clean and not contain any dust and the rate of application shall be 0.1 cum. per 10 sqm.

After spreading of the blindage the road shall be given a final rolling with a eight ton power. Any soft or depressions detected at a later date shall be made up as directed by the Architect without any extra cost.

**Premix Asphalt Carpet :**

The rate shall include preparation of surface.

**Preparation of Surface :**

Clean the surface with wire brush and dust it with gunny bags. All pot holes, depressions and corrugations shall be made good and applying a tack coat of 80/100 penetration bitumen heated to 177 to 191 C. and the depressions made up with suitable size premix aggregate and consolidated by approved means. The surface shall then be painted with 80/100 penetration bitumen heated to 177 to 191 C. at the rate of 7.5 kgs. Per 10 sqm.

**Preparation of Premix:**

Premix shall be prepared as under:

5. cm. thick consolidated.

No		Per 100 Sft.	Per 1000 Sft.
1	Stone metal 2 cm. (3/4")	5 Cft.	15.25 Cum.
2	Stone chips 10 mm. (3/8")	3 Cft.	9 Cum.
3	Grit / sand (of desired grade and quality)	4 Cft.	12 Cum.
4	Asphalt 80/100 penetration from approved manufacturer heated to 177 C.	50 lbs.	2450 Kgs.
5	Solvent*	3 lbs.	150 Kgs.
6	Filler	Either clean lime stone powder or Hydrated lime in desired quantity.	



4 cm. thick consolidated (to be done in 2 courses)

Base Course (2.5 cm. thick)

No		Per 100 Sft.	Per 1000 Sft.
1	Stone metal 2.5 cm. (1/4")	8 Cft.	24.5 Cum.
2	Stone chips 12 mm. (1/2")	4 Cft.	12 Cum.
3	Asphalt 60/70 penetration from approved manufacturer heated to 177 C.	36 lbs.	1760 Kgs.
4	Filler	As above.	

Wearing Course (1.5 cm. thick)

No		Per 100 Sft.	Per 1000 Sft.
5	Stone metal 12 cm. (1/2")	5 Cft.	15.25 Cum.
6	Grit / Chips 6 mm. (1/4")	2 Cft.	6 Cum.
7	Asphalt 60/70 or 80/100 penetration from approved manufacturer heated to 177 C.	22 lbs.	1075 Kgs.
8	Solvent*	1.5 lbs.	65 Kgs.
9	Filler	As above.	

The quantity of solvent may vary depending upon the local weather conditions. Use of solvent and its quantity shall be determined by the Architects before commencement of the work. Batches should be proportioned in accordance with the capacity of the mixer being used. Place clean stone metal and chips in the mixer. Add 2/3 of the batch of quantity of the hot asphalt at the designed temperature along with solvent and mix well. Add grit / sand and filler and continue mixing until the sand / grit is uniformly disturbed throughout the mix. The add remaining quantity of hot asphalt and continue mixing till the whole mix is uniform and homogenous. If desired, the sand / grit shall be heated before use. The mix shall then be carried to the place of deposition by means of wheel barrows.

The proportion suggested above should in the normal course give a dense mix. If necessary the proportions may be varied to obtain a dense mix, at the discretion of the Architects, at no extra cost.

#### **Laying of Premix:**

The mix shall be laid to a uniform thickness and to proper level, grade and camber and rolled with six to eight-ton power roller. The surface shall be checked for grade and camber during rolling and premix added and removed as required. The thickness shall be as specified after consolidation. When the base course is rolled the wearing, course is laid similarly and rolled to give a consolidated thickness as specified in the time.

#### **Premixed Seal Coat:**

After the premix carpet is laid the surface shall be sealed with premix grit prepared as described under wearing course above with a suitable cutback added. The premixed seal must be brushed in to fill the interstices, additional material being applied during rolling of found necessary. The quantity of premixed seal shall be approximately 0.15 cum. per 10 cum. The surface shall be finally dusted with stone powder and rolled to give a smooth finish.

### **Road Concrete :**

Specification for aggregate cement and concreting shall be as specified in the section under "Materials".

Before concreting, the surface shall be checked for the given profile. Wooden forms equal to the depth road slab thickness shall be erected to correct line and level and held by stakes driven into the ground along the outside edge at suitable intervals and two stakes being placed at each joint. Forms should be supported, strengthened or braced, whenever necessary so that they are able to prevent deformation and resist deformation under pressure of concrete or impact of tamping or vibrating. Working faces of all forms shall be thoroughly cleaned and oiled before use and forms which are used more than once, shall be carefully examined and trued if necessary before re-use.

Sub-grade shall be properly moistened before any concrete is deposited on it, care being taken to see that there are no standing pools of water. It may be advisable to have the sub-

grade watered 12 to 24 hours in advance of placing concrete. Concrete shall be laid in alternate bays not exceeding 30 sqm.

Concrete shall be deposited on sub-grade for the entire width of the slab and shall be kept sufficiently above the level of forms so that when tamped, it becomes a dense mass.

I.R.C. fabric reinforcement, if specified, shall be placed in correct position before commencing concreting.

The concrete shall be brought to the specified contour by means of heavy screed or tamper handles weighing not less than 10 kgs. / meter and not less than 7.5 cm. wide or surface vibrator if directed by the Architects. This screed or tamper may be steel. It shall be drawn with a saw in motion in combination with a series of lefts and drops. At transverse joint tamper shall be drawn not closer than one meter towards the joint and shall then be lifted and set down at the joint and drawn backwards away therefrom. Surplus concrete shall then be taken up with shovels and thrown ahead of the joint. Immediately after the screeding or tamping has been completed the surface shall be inspected for high and low spots and any needed correction made by adding or removing concrete. The entire surface shall then be floated with hand floats one meter long and 7.5 cm. wide and this operation must be performed from bridge provided across the slab. The surface shall be roughened by brooming.

The longitudinal and transverse edges of the slab shall be properly formed with suitable tools and the same should be rounded to 10 mm. radius.

The finished surface of the slab must conform to the grade, alignment and contours as directed and cured for fourteen days.

After curing period is over the joints shall be filled up with approved bitumastic filler. Unless otherwise specified, the rate shall include filling of joints as specified.

### **STORM WATER DRAINAGE**

The work shall be carried out in accordance with rules and regulations of local Drainage Authority. Necessary provision for sight rails, boning staves etc. shall be made.

Tests regarding water-tightness of joint and cleanliness of pipes shall be performed before the trenches are covered.



Work of laying pipe lines and provided Manholes, Chambers, etc., shall include necessary excavation in any strata including old foundations of any description, refilling the trenches in layers of 20 cm. watering and consolidation.

**Pipes :**

All Hume pipes (Reinforced) shall conform to the relevant I.S.S. and shall be new, perfectly sound, free from cracks, cylindrical, straight and of specified nominal diameter. They shall be made of reinforced cement concrete manufactured by centrifugal or spun process and shall have even texture.

**Trenches :**

The trenches for laying shall be excavated to lines and levels as directed. The bed of the trench shall be truly and evenly dressed throughout from one change of grade to the next.

The gradient is to be set out by means of boning roads and should the required depth be exceeded at any point; the trench shall be brought to proper grade by means of cement or lime concrete of the specification of the bed concrete without any extra cost.

The bed of the trench, if in soft or made-up earth, shall be well watered and rammed and depressions thus formed filled with sand or other suitable materials as directed by the Architects.

If rock is met with, it will be removed to 15 cm. below the level of the pipe and the trench will be refilled with bed concrete, sand or other suitable material approved by the Architects.

The trench shall be kept free from water. Shoring and timbering shall be provided wherever required.

The width of trench shall be nominal diameter of the pipe plus 38 cm. but it shall not be less than 52 cm.

**Laying of Pipes :**

No concreting is ordinarily necessary. In cases where the soil is made up is very soft, concreting may be resorted to form the bed of the trench below the pipe, if directed by the Architects at no extra cost.

The pipes shall be carefully laid to levels and gradients shown in the plans and sections. Great care shall be taken to prevent sand etc., from entering the pipes. The pipes between two manholes shall be laid truly in straight lines without vertical or horizontal undulations. The body of the pipe shall for its entire length on an even bed in the trench and places shall be excavated to receive the collar for the purpose of jointing.

**Jointing :**

A few skeins of spun soaked in neat cement wash shall be inserted in the groove at the end of the pipe and the two adjoining pipes butted against each other. The collar shall then be slipped over the joint, covering equally both the pipes. Spun yarn soaked in neat cement wash shall be passed round the pipes and inserted in the joint by means of caulking tools from ends of the collar. More skeins of yarn shall be added and well rammed above.

The object of the yarn is to center the two ends of the pipes within the collar and to prevent the cement mortar of the joint penetrating into the pipes.

Cement mortar with one part of cement and one part of sand shall be slightly moistened and must on no account be soft or sloppy and shall be carefully inserted by hand in to the joint and more cement mortar added until the space of the joint has been filled completely with tightly caulked mortar. The joint shall be finished off neatly outside the collar on both sides at an angle of 45.



Any surplus mortar projecting inside the joint is to be removed and to guard against any such projections sack or gunny bag shall be drawn past each joint after completion.

Cement mortar joint shall be cured at least for seven days.

**Testing :**

All joints shall be tested to a head of 60 cm. of water above the top of the highest pipe between two manholes.

The lowest end of the pipe shall be plugged watertight. Water shall then be filled in manhole at the upper end of the line.

The depth of water in the manhole shall be 60 cm. plus the diameter of the pipe. The joint shall then be examined. Any joint found leaking or sweating shall be remade and embedded into 15 cm. layer of cement concrete (1:2:4) 30 cm. in length and the joint retested without any extra cost.

**Manholes:**

Size of manholes shall be as specified in the item and the sizes specified shall be internal size of the manhole. The work shall be done strictly as per standard drawing and specifications.

**Bed Concrete :**

Shall be in 1:4:8 cement concrete 23 cm. (9") thick.

**Brick Work:**

Shall be with best quality local bricks and proportion of mortar shall be 1:4 unless otherwise specified.

**Plaster:**

Inside of the walls shall be plastered with 12 mm. thick cement plaster 1:3 and finished with floating coat of neat cement. The external face shall be pointed with 1:3 cement mortar.

**Benching:**

Channels and benching shall be done in cement concrete 1:2:4 rendered smooth with neat cement.

**Foot Rests:**

M.S. square rods of 22 mm. (7/8") diameter or C.I. rungs shall be embedded in masonry where the depth of manhole exceeds one meter and they shall be fixed 35 cm. apart and projecting 11 cm. from the wall. Foot rests shall be painted with bitumen as directed.

**Manhole Covers:**

Covers for manhole in the road proper shall not be less than 200 kgs. on footpaths and backyards. Lightweight covers shall be used whose weight for 45 cm. dia. shall not be less than 58 kgs. and that of 90 cm. x 45 cm. or 61 cm. x 45 cm. 90 kgs.



**Drop Connection:**

The case of drop connection C.I. pipes shall be provided with heel rest bend at the bottom and bend with access door at the top for cleaning purposes. The pipe shall be encased in 1:3:6 plain concrete.

**Miscellaneous Items of Work:**

The rates quoted by the Contractor for all miscellaneous items of work viz. cooking platforms, moories, built-in cupboards, counters, partitions, railings, electrical meter, switchboard cupboards, etc., shall be for the work as described in the schedule of quantities and as show in detailed drawings and shall be to the entire satisfaction of the Architects.

**MATERIAL TEST LIST**

The Contractors will have to take necessary material test as per I.S. code which is applicable, at their own cost for the following materials or any other material using in construction work periodically or as and when required by the Architects / Consulting Engineer.

The materials should be got tested in an approved Laboratory as per IS standard and test reports in duplicate should be submitted to the Architect's Office.

- |    |                                |   |    |                                     |
|----|--------------------------------|---|----|-------------------------------------|
| 1) | Sand                           | : | a) | Silt Content.                       |
|    |                                |   | b) | Bulking.                            |
|    |                                |   | c) | Particle size distribution.         |
|    |                                |   | d) | Or as directed.                     |
| 2) | Stone aggregate                | : | a) | Soft and deleterious material.      |
|    |                                |   | b) | Particle size distribution.         |
| 3) | Cement Concrete RCC mix design | : | a) | Slump.                              |
|    |                                |   | b) | Cube strength.                      |
|    |                                |   | c) | Or as per I.S. 456-2000             |
| 4) | Bricks                         | : | a) | Dimensions                          |
|    |                                |   | b) | Water absorption and efflorescence. |
|    |                                |   | c) | Compressive strength.               |
| 5) | Timber                         | : |    | Moisture.                           |
| 6) | Ceramic/Vitrified Floor Tiles  | : | a) | Transverse strength.                |
|    |                                |   | b) | Water absorption.                   |
|    |                                |   | c) | Abrasion test.                      |
| 7) | Steel                          | : | a) | Tensile                             |
|    |                                | : | b) | Bend.                               |

**Note:** The Contractor will have to take necessary material test other than above test as per relevant I.S. code, if required and as directed by Architect / Owner.



### MATERIAL TESTING

A chart showing the recommended time and quantity scheduled for conducting test on various building materials is given. Please ensure that tests are carried out according to the above guidelines. Contractor's rate should include for necessary expenditure for testing including transport of samples of following tests.

No	Material	Test	Test Procedure	Minimum Quantity	Frequency
1	Sand	a) Silt Content	Field	20 Cum	20 Cum or part thereof
		b) Bulking	Field	20 Cum	--- Do ---
		c) Particle size distribution	Field	40 Cum	Every 40 Cum required for RCC work.
2	Stone	a) Soft and Deleterious	IS - 2336 Part – II		As required.
		b) Particle size distribution	Field	45 Cum.	Every 45 Cum part thereof for RC work. For rest of work as desired.
3	Cement Concrete or RCC	Slump	Field		Once a day or as desired.
		Cube Strength	Field / Laboratory	20 Cum slab, beams and connected columns 5 Cum in columns	Every 20 Cum of a day's concrete. Every 5 Cum column concrete.
4	Steel	a) Tensile Strength	IS - 1529	20 tonnes	Every 20 tonnes or part.
		b) Bend Strength	---- Do ----	---- Do ----	---- Do ----
5	Lime	Chemical and Physical properties of lime.	IS - 6932	5 M.T.	10 M.T. or part thereof

No	Material	Test	Test Procedure	Minimum Quantity	Frequency
6	Bricks	Dimensions Water absorption Efflorescence compressive strength		Designation 100 75) 50) 40,000 35) --- Do --- 100-40,000 75) 50) 100,000 35)	Every 40,000 or part thereof. Every 100,000 or part thereof one test for source of 40,000 or part thereof. Two tests for 1 <sup>st</sup> lot of 40,000 and one test later for every 40,000 and part thereof.
7	Brick Tiles	Compressive Strength Efflorescence		40,000 40,000	For 40,000 or part. One test per Source.
8	Marble	Moisture absorption Mohs hardness scale	IS – 1124 – 1974 IS – 1706 – 1972	Rs.10,000/- Value	Rs. 10,000/- or part thereof. (Value)
9	Timber	Moisture	IS – 11215 – 1985	1 Cum.	Every one Cum and part.
10	Aluminum door or window fitting	Thickness of anodic coating.	IS – 5523 – 1969	Rs. 5,000/-	Rs. 10,000/- or part thereof.
11	Ceramic Tiles / Vitrify Tiles / Designer pre-cast Concrete Tiles and interlocking paver block	a) Transverse Strength b) Water Absorption c) Abrasion test	IS – 1237 --- Do --- --- Do ---	200 Tiles --- Do --- --- Do ---	2000 Tiles or part. --- Do --- --- Do ---
12	Flush Door	a) End Immersion b) Knife c) Adhesion	IS – 2207	22 – 65 66 – 100 101 – 180 181 – 300 301 – 500 501 – above	Destructive tests No. of shutters. 1 2 2 3 4 5





No	Material	Test	Test Procedure	Minimum Quantity	Frequency
13	Tar felt Type-3 Grade - I	Conform to I.S. 1322 – 1970			One Test
14	Pig lead	I.S. 782 – 1978			One Test
15	R.C.C. design mix M-25	All test as per I.S.:456-2000		As per directed	As per directed

**Note :** The Contractor will have to take necessary material test other than above test as per I.S. code for above material or other than above material, if required and as directed by the Architect / Owner.



**SBI INFRA MANAGEMENT SOLUTIONS PVT.LTD.**

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BANDRA KURLA COMPLEX, BANDRA(E), MUMBAI- 400051

**PART – B: PRICE BID**

**TENDER ID: MUM202009025**

**TENDER FOR PROPOSED CIVIL WORKS OF STATE BANK OF INDIA'S GROUND FLOOR, RBO  
NASHIK AT BSNL CTTC BUILDING, D ROAD, MIDC SATPUR, NASIK - 422 007**

**TENDER SUBMITTED BY:**

**NAME** : \_\_\_\_\_  
**ADDRESS** : \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
**GSTIN NO.** : \_\_\_\_\_  
**DATE** : \_\_\_\_\_

**ARCHITECT**



**NARENDRA SARDESHPANDE & ASSOCIATES**  
Architects

43, "Shreekul", Flat No. 2, Ground Floor, United Western Housing Society, Near Tathawade Garden, Karvenagar, Pune - 411 052  
Telephone: (020) 25454297 E-mail : nsapune1@gmail.com

## TENDER DOCUMENT

**PROPOSED CIVIL RENOVATION OF GROUND FLOOR, BSNL CTTC BUILDING, "D"  
ROAD, MIDC SATPUR, NASHIK FOR STATE BANK OF INDIA RBO NASHIK.**

**VOLUME 2 - PRICE BID (civil work)**

Client :

**SBI Infra Management Solutions Pvt. Ltd.**

SBIIMSPL Circle Office, SBI Local Head Office,  
Third Floor, Bandra Kurla Complex,  
Bandra (East), Mumbai - 400 051



**NARENDRA SARDESHPANDE & ASSOCIATES**  
Architects

43, "Shreekul", Flat No. 2, Ground Floor, United Western Housing Society, Near Tathawade Garden, Karvenagar, Pune - 411 052  
Telephone: (020) 25454297 E-mail : nsapune1@gmail.com

**CIVIL WORK B.O.Q. FOR PROPOSED INTERIOR RENOVATION OF GROUND FLOOR, BSNL CTTC BUILDING, "D" ROAD, MIDC SATPUR, NASHIK FOR STATE BANK OF INDIA.**

Sr. No.	ITEM	Total Quantity	unit	RATE	AMOUNT
<b>A</b>	<b>DEMOLITION WORK.</b>				
<b>1</b>	<b>Demolition of floor, skirting &amp; dado tiles.</b>	117.24	sqm	200.00	23,448.15
	Dismantalling of existing floor & dado tiles & removing the debris away from the site. The item includes removing of skirting in office area.				
	If water-proofing is to be removed then quantity for demolition of floor tiles will not be considered seperately.				
<b>2</b>	<b>Demolition of existing water-proofing upto slab.</b>	7.78	cum	1,000.00	7,781.40
	Dismantalling of existing waterproofing upto slab but without hampering the slab & removing the debris / items away from the site.				
<b>3</b>	<b>Removing of existing T.W. door frame with shutters.</b>	6.00	Job	750.00	4,500.00
	Cutting of existing T.W. door frame from the wall & shifting the debris away from the site.				
<b>4</b>	<b>Removing of all plumbing/sanitation work (with fixtures) - for ladies &amp; gents toilet</b>	1.00	job	7,000.00	7,000.00
	Dismantalling of existing plumbing & sanitary fixtures with all pipes & removing the debris / items away from the site.				
<b>B</b>	<b>TOILET WORK</b>				
<b>1</b>	<b>Toilet Waterproofing.</b>				
<b>a</b>	<b>P/A Chemical waterproofing (if required)</b>	5.00	sqm	250.00	1,250.00
	Providing & applying kemprol v 210 polyster base liquied membren waterproofing compound for sunk surface.				
	The Contractor shall ensure that the sunk surfaces are absolutely clean off the lumps or debris etc.				
<b>b</b>	<b>P/A water-proof base coat.</b>	58.36	sqm	550.00	32,100.09
	Applying a layer of Water proofing compound ( as specified by the manufacturer) and then providing a layer of CM 1:3 mixed with water proofing compound ( of the same manufacturer) with proper placing and levelling and finishing the surface neatly with out any cracks / joints before raising the floor level of toilets / laying of Septic line and Drainage line pipes. The treated area should be tested by Stagnating water for four days. The work should be done with proper workmanship and finished neatly.				
<b>c</b>	<b>P/A brick-bat coba</b>	31.48	sqm	2,250.00	70,834.50
	Providing & applying brick-bat filling in sunk in single layer. The layer should be fixed on CM 1:3 & finished with 20 mm thk. Layer of CM 1:3				
	PCC 1:3:6 with waterproofing compound should be provided on top of brick-bat coba to achieve the required laevel wherever necessary				
<b>2</b>	<b>Plumbing &amp; sanitation work (Internal)</b>				
<b>2-a</b>	<b>Single attached Toilet (toilet size - 1.2 m. X 2.1 m.)</b>	2.00	Job	13,000.00	26,000.00
	P/F necessary plumbing (C-PVC) & sanitary (PVC) work with appropriate diameters of pipes except fixtures for toilet with following facilities -				
	a. Wash Hand Basin with cold water supply with angle stop cock & piller cock provision				
	b. Stop cock & bib cock for individual toilet				
	c. E.W.C. with flush tank with angle cock provision) & hand faucet				
<b>2-b</b>	<b>Toilet Block - 2 nos. - Ladies &amp; Gents toilet block</b>				
	<b>Ladies toilet block</b> - Wash basin area (2.90 m. x 1.95 m.) and two no. of WC's (0.9 m x 11.2 m.)				
	<b>Gents toilet block</b> - Wash basin cum urinal area (4.00 m. x 1.95 m.) and two no. of WC's (0.9 m x 11.2 m.)				

	The toilet blocks should be provided with - wash basins with pillar taps & angle stop cocks, EWC with flush tanks & angle stop cocks, stop cock with each toilet, urinals in gents toilet with angle stop cocks etc.						
i	<b>P/F Concealed plumbing lines in C-PVC using following diameter pipes as per requirements.</b>		2.00	job	12,000.00	24,000.00	
	a. 2"						
	b. 1 1/2"						
	c. 1 1/4"						
	d. 1"						
	e. 3/4"						
	f. 1/2"						
	Providing & fixing concealed type plumbing lines of various diametres with necessary fitting etc. complete.						
ii	<b>P/F Concealed sanitary lines in PVC using following diameter pipes as per requirements.</b>		2.00	job	12,000.00	24,000.00	
	a. 1 1/2"			rmt			
	b. 2"			rmt			
	c. 3"			rmt			
	d. 4"			rmt			
	Providing & fixing concealed type sanitary lines of various diametres with necessary fitting & traps etc. complete.						
<b>3</b>	<b>P/C brick wall with both side plaster</b>						
	a. 230 mm thk. Walls		89.08	sqm	2,700.00	2,40,510.60	
	b. 150 mm. thk. Wall		43.10	sqm	2,100.00	90,513.89	
	c. 115 mm thk. Wall		21.67	sqm	1,900.00	41,166.73	
	Providing & constructing brick masonry using burnt bricks in C.M. 1:4 for following thicknesses at all levels. Patli beam of wall thickness with 2 nos. of 6 mm dia. MS bars after every 900 mm height should be provided including curing.						
	The item includes RCC lintel beam over opening.						
	A single coat plaster of 15 mm thk. average in CM 1:4 on both the surfaces of walls is included in the item.						
	Cutting of existing flooring (wherever required) should be considered in the item						
<b>4</b>	<b>P/F flooring work</b>						
	<b>a. Vitrified tiles on cement mortar</b>		31.46	Sqm	1,500.00	47,190.00	
	Basic Rate / code of Tile : - Rs. 75 per sft.						
	Providing and fixing 600 x 600 mm Vitrified Tiles of 1st quality of approved shade and pattern in CM 1:4 in proper line and level and with hair line joint inclusive of providing and laying necessary backing material and joint filling compound of the same shade of the tiles.						
	<b>b. Vitrified tiles on approved tile adhesive</b>		671.68	Sqm	1,200.00	8,06,015.70	
	Basic Rate / code of Tile : - Rs. 55 per sft.						
	Providing and fixing 600 x 600 mm Vitrified Tiles of 1st quality of approved shade and pattern in adhesive cement on existing flooring in proper line and level and with hair line joint inclusive of providing and laying necessary backing material and joint filling compound of the same shade of the tiles.						
	The item includes providing & fixing 100 mm high skirting flush with POP punning and finishing the top with plaster.						
<b>5</b>	<b>Polishing of staircase flooring in kotah</b>		51.51	sqm	300.00	15,452.64	
	Polishing the kotah treads, risers & landings (Gr. Floor to First floor) along with skirting and cleaning the floor etc. complete						
	The item includes polishing of nosing & edges etc. complete.						

<b>6</b>	<b>P/F dado for toilet.</b>			128.88	Sqm	1,350.00	1,73,982.53	
	Basic Rate / code of Tile : - Rs. 75 per Sft.							
	Providing and fixing ceramic tiles up to full height from Finished floor level of approved shade of ceramic tiles as per pattern for dado from FFL using CM 1:4 in proper line and level as directed by the Architect as shown in the drawings including necessary rough plaster, backing material, water proofing and joint filling compound of the same shade as that of the ceramic tiles. All sanitary fittings shall be located on the joints or junctions of the tiles or as shown in the drawing and the joints to be finished neatly with proper							
<b>7</b>	<b>P/F cill/jambs in granite.</b>							
	upto 150mm wide							
	Basic Rate / code of Granite : - Rs. 150 per Sft.							
	<b>a. Single patti.</b>			36.08	Rmt	900.00	32,472.00	
	<b>b. Double patti</b>			47.25	Rmt	2,000.00	94,500.00	
	Providing & fixing cills / jambs upto 150 mm width with half round edge polish to the outer edge.							
	In case of door frames only single edge should be seen.							
<b>8</b>	<b>P/F Granite Partitions</b>			2.84	sqm	3,500.00	9,922.50	
	Basic Rate / code of Granite : - Rs. 175 per Sft.							
	Providing & fixing partitions between urinals made up of 20 mm thk, granite slab of approved shade & colour fixed in floor & dado tiles with full round edge polish for exposed edges.							
	The item includes farma cutting & cutting of granite as per design.							
<b>9</b>	<b>P/C Granite platform - 675 wide</b>							
	Basic Rate / code of Granite : - Rs. 175 per Sft.							
	a. For wash basin with cutting for bowl (basin or sink)			11.17	rmt	4,500.00	50,250.38	
	Providing & constructing platform made up of 20 mm thk. Granite of approved shade & colour. The granite shall be fixed on horizontal & vertical kadappah supports. All the kadappah slabs shall be recessed by 50mm from the granite facia patti. 50 mm wide granite facia patti with full round edge polish shall be fixed on edge of granite ledge.							
	In case of WHB or Kit. Platform; kadappah ledge shall be cut as per the size of bowl.							
<b>10</b>	<b>P/F Fixtures -</b>							
	Providing & fixing following fixtures inclusive of all necessary fittings, accessories & attachments to make them operational.							
	<b>Sanitary Fittings - Cera make or equivalent make</b>							
	a. W.H.B. -							
	i. Wall mounted (code - 52040103)			2.00	no	3,000.00	6,000.00	
	ii. Counter sunk (code - 52030103)			8.00	no	4,000.00	32,000.00	
	b. Wallhung type E.W.C.(code - S1041101) with soft closing seat cover (code - B1520102) and flush tank (code - B1020106)			6.00	no	10,000.00	60,000.00	
	c. Hand / Health Faucet - Jacquar make			6.00	no	2,500.00	15,000.00	
	d. Urinals - (code S4020104)			4.00	no	11,500.00	46,000.00	
	e. Nirali sink (24" x 18" glossy finish)			1.00	no	6,000.00	6,000.00	
	<b>Plumbing Fittings - Jacquar CP Continental or equivalent</b>							
	a. Concealed stop cocks			10.00	no	2,000.00	20,000.00	
	b. Bib cock			4.00	no	2,000.00	8,000.00	
	c. Piller cock			12.00	no	2,200.00	26,400.00	
	d. Angle stop cock			16.00	no	1,500.00	24,000.00	
	e. Two way Bib-cock			6.00	no	2,500.00	15,000.00	
	<b>Toilet Accessories (Sheenz make - Zen collection) or equivalent</b>							
	a. Soap Dispenser			12.00	no	2,000.00	24,000.00	
	b. Napkin rod / ring			12.00	no	900.00	10,800.00	
	c. Toilet Paper Holder			6.00	no	1,200.00	7,200.00	
	d. Glass Shelves			2.00	no	1,200.00	2,400.00	
	e Soap Dish			2.00	no	600.00	1,200.00	
	f. Rimless mirror with bevelled edges.							
	Size : -							

## NSA architects

	1800 x 900			3.00	no	4,600.00	13,800.00	
	450 x 600			2.00	no	2,000.00	4,000.00	
<b>C</b>	<b>ALUMINIUM WINDOW &amp; FABRICATION WORK</b>							
<b>1</b>	<b>P/F powder coated louvered windows for TOILETS</b>			4.03	sqm	2,500.00	10,080.00	
	Providing and fixing louvered windows consists of 50" x 25" box type heavy duty (14 Gauge) "JINDAL / INDAL / HINDALCO" make aluminum window frame. Adjustable aluminum louver system of same gauge to have a 100 mm wide 6mm frosted glass for privacy. Provision for fixing exhaust fan (300 x 300) to be made and fixed frosted glass to be provided to, inclusive all necessary fixtures and fittings, glass etc. complete in all respect.							
<b>2</b>	<b>P/F Rolling shutter</b>			10.21	sqm	2,500.00	25,515.00	
	Providing & fixing M. S. Rolling shutters (using 18 guage sheets) for the facade openings with proper supports and locking arrangement on both sides. If the span of rolling shutter is more than 3 metres, then for operational conveniences Lever mechanism should be provided for smooth operation and a lock should be provided in the centre of the shutter. The surface to be treated with 2 coats of anti rust paint and 2 coats of Enamel paint of approved colour on both the sides.							
<b>D</b>	<b>PLUMBING &amp; SANITATION WORK (External)</b>							
<b>1</b>	<b>32mm DIA C.P.V.C PIPE</b>			25.00	rmt	350.00	8,750.00	
	Providing & fixing 32 mm C.P.V.C pipes for distribution in toilets / pantry including chase cutting, chase filling. The rate shall include all accessories like tees, unions, elbows, bends etc. required to make the system operational & complete.							
<b>2</b>	<b>DRAINAGE WORK</b>			1.00	job	30,000.00	30,000.00	
	Providing & fixing PVC pipes (75 / 100 mm) of supreme/prince make or equivalent in position of required size with special fittings, traps, bends, ys, floor & nahni traps etc. Including chemical sealed joints as required at site making necessary connections with existing lines for w.c. & waste water lines, chambers to be constructed wherever necessary, unused lines for w.c. & waste water to be removed, the rate shall include all incidental work, cutting & making good walls & floors etc. Complete. Please visit the site for inspection.							
	The item includes constructing inspection chambers / gully trap chamners etc. all to make system workable.							
	The proposed external drainage system to be connected to existing system. The drainage system of existing toilet block is at an approximate horizontal distance of 25 mt to 30 from the farthest proposed toilet							
	<b>TOTAL AMOUNT</b>						<b>22,19,036.10</b>	
						say	<b>22,19,036.00</b>	

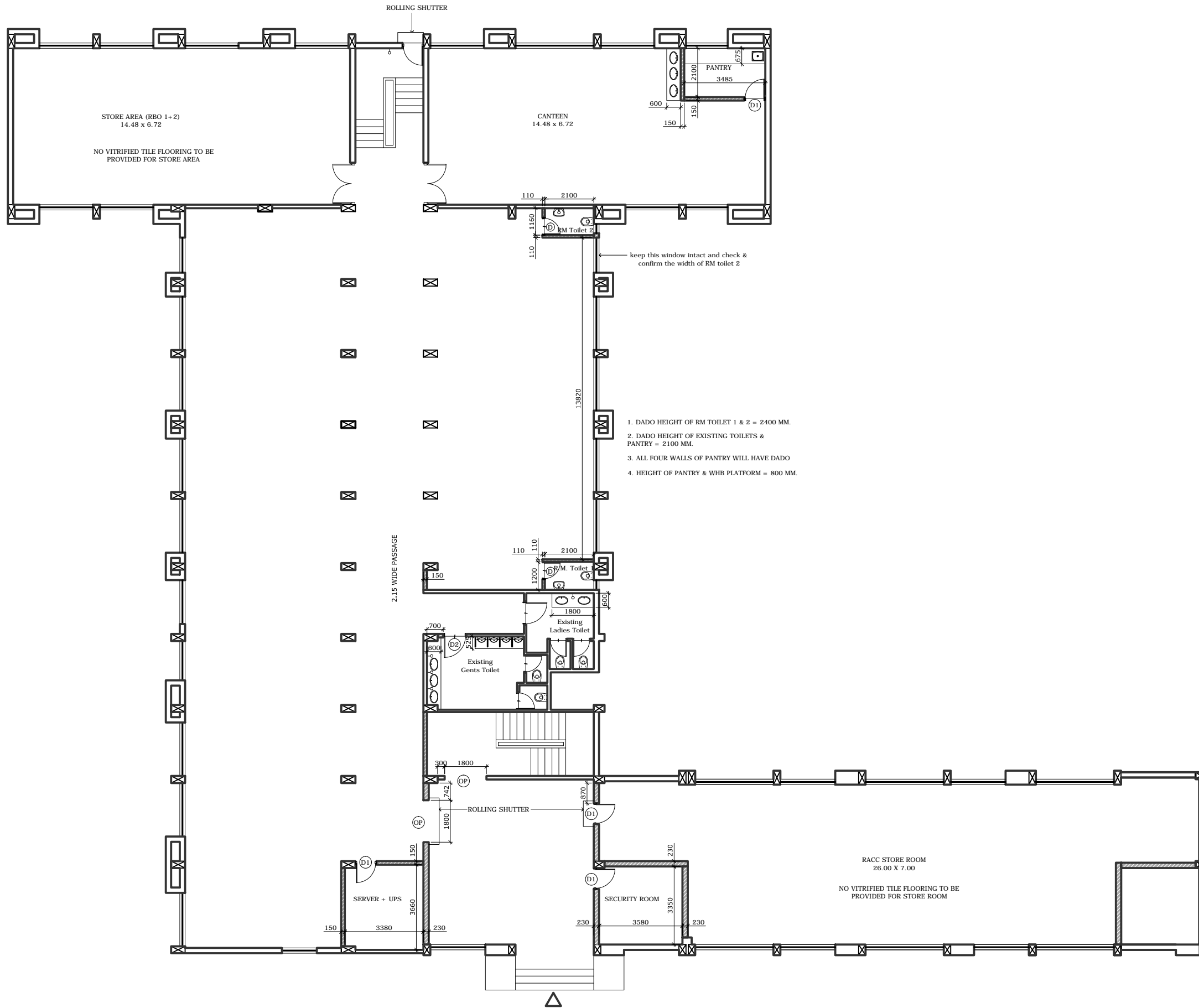
GST extra

Amt. in words : - Rs. Twenty Two Lakh Nineteen Thousand Thirty Six only.

	<b>Percentage rate below estimated cost (in figures)</b>		
	<b>In words -</b>		
<b>OR</b>			
	<b>Percentage rate above estimated cost (in figures)</b>		
	<b>In words -</b>		

Sign &amp; Seal of the Contractor : -

Name &amp; Address of the Contractor : -



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LEGEND CIVIL ALTERATIONS

SYMBOL	DESCRIPTION
	PROPOSED BRICK WORK
	WALL TO BE DIMOLISH
	P.O.P. PUNNING ON WALL
	PLASTER ON WALL

OPENING SCHEDULE

TYPE	DESCRIPTION	SIZE (mm)	CILL (mm)	LINTEL (mm)
OP	OPENING	1800 X 2100	00	2100

DOORS

D	DESCRIPTION	SIZE (mm)	CILL (mm)	LINTEL (mm)
D	SOLID FLUSH DOOR	750 X 2100	00	2100
D1	SOLID FLUSH DOOR	900 X 2100	00	2100
D2	SOLID FLUSH DOOR	1000 X 2100	00	2100

PROJECT :- PROPOSED INTERIOR DESIGN OF RBO ON GROUND FLOOR

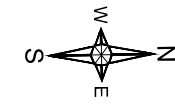
CLIENT :- STATE BANK OF INDIA

SITE :- SATPUR (MIDC), NASHIK

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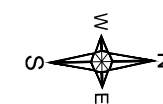
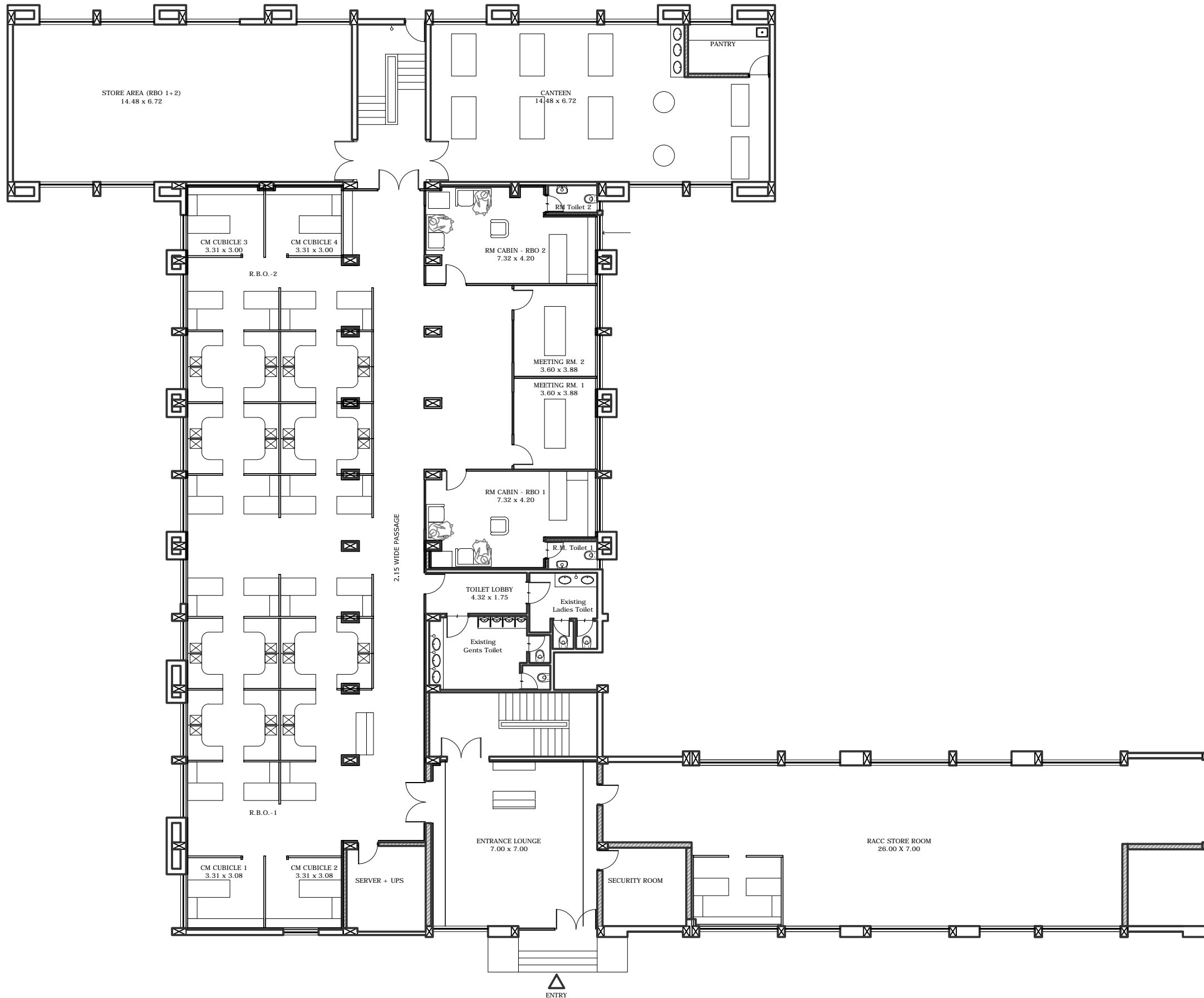
DRAWING CATEGORY GR. FLOOR - RBO		SHEET CIVIL ALTERATION LAYOUT	
L	(1-)	01	SCALE N.T.S.
JOB NO. 229-25	DATE 22.09.2020	DRAWN BY NS	REVISED BY





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PROJECT: -PROPOSED INTERIOR DESIGN OF RBO ON GROUND FLOOR

CLIENT :-STATE BANK OF INDIA

SITE :-SATPUR (MIDC), NASHIK



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DRAWING CATEGORY			SHEET	
GR. FLOOR - RBO			SCHEME - GFP	
SD	(C)	01	SCALE	
			1:60	
JOB NO.	DATE	DRAWN BY	REVISED BY	
229-25	07.09.20	N.S.		