



Bhopal Smart City Development Corporation Limited

**“Development Works for Market Complex
Under Smart City Road at Shyamla Hills, Bhopal”**

REQUEST FOR PROPOSAL

2017

Prepared by

Recommended by

Approved by

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SECTION-1
NOTICE INVITING TENDER

Bhopal Smart City Development Corporation Limited

NOTICE INVITING e-TENDER (NIT)

BSCDCL invites online percentage rate /item rate tender as per schedule as under:

Tendering Document No.	:	BSCDCL/ 16
Name of the Work	:	Development Works For Market Complex Under Smart City Road At Shyamla Hills, Bhopal.
Brief Scope of Work	:	Place making, Development of market place with smart features, Internal and External Electrification. (After Project implementation 3 year of maintenance has to be done by the bidder (contractor))
Estimated Cost	:	Rs. 1,51,02,716/-(One crore fifty one lakhs two thousand seven hundred sixteen only)
Period of Completion	:	3 Months
Earnest Money Deposit	:	1.51 lakhs (One lakhs fifty one thousands only)
Non-refundable cost of e- Tender Document	:	12,500/- (Twelve thousand five hundred only)
Purchase of Tender Start Date	:	06/03/2017 by 17.30 Hrs
Purchase of Tender End Date	:	06/04/2017 by 15.00 Hrs
Last date & time of submission of Online Tender	:	06/04/2017 by 17.30 Hrs
Period during which hard copy of the documents as per NIT shall be submitted.	:	10/04/2017 by 17.00 Hrs
Date & Time of Opening of technical Tender	:	11/04/2017 by 11.00 Hrs
Date & Time of Opening of Financial	:	12/04/2017 by 11.00 Hrs

Tender	
Validity of offer	90 days from the date of opening of price bid.
Pre-Tender Meeting & Venue	22/03/2017 at 15.00 Hrs At BSCDCL, Bhopal Office

The tender document can be downloaded from www.mpeproc.gov.in **“Corrigendum, if any, would appear only on the www.mpeproc.gov.in web site and not to be published in any News Paper”**.

The intending tenderer must read the terms and conditions of BSCDCL carefully. He should only submit his tender if he considers himself eligible and he is in possession of all the documents required.

2.0(A) Information and Instructions for Tenderers posted on Website(s) shall form part of Tender Document.

The Tender Document as uploaded can be viewed and downloaded free of cost by anyone including intending tenderer. But the tender can only be submitted after uploading the mandatory scanned documents such as

- a) proof of e-payment towards cost of tender document,
- b) proof of deposit of e-Tender Processing Fee,
- c) Proof of online payment through e-portal www.mpeproc.gov.in/ Bank Guarantee of any Nationalized or Commercial Scheduled Bank against in favor CEO, BSCDCL of EMD & All other documents shall be as per Notice Inviting e-tender.

The tenderers are required to quote strictly as per terms and conditions, specifications, standards given in the tender documents and not to stipulate any deviations.

After submission of the tender the tenderer can re-submit revised tender any number of times but before last time and date of submission of tender as notified.

When it is desired by BSCDCL to submit revised financial tender then it shall be mandatory to submit revised financial tender. If not submitted then the tender submitted earlier shall become invalid.

On opening date, the tenderer can login and see the tender opening process.

Contractor can upload documents in the form of JPG format and PDF format.

Contractor to upload scanned copies of all the documents including valid service tax registration/EPF registration/VAT registration/Sales Tax registration, PAN NO. as stipulated in the tender document.

If the contractor is found ineligible after opening of tenders, his tender shall become invalid and cost of tender document and processing fee shall not be refunded.

If any discrepancy is noticed between the documents as uploaded at the time of submission of tender and hard copies as submitted physically by the

contractor the tender shall become invalid and cost of tender document and processing fee shall not be refunded.

Notwithstanding anything stated above, BSCDCL reserves the right to assess the capabilities and capacity of the tenderer to perform the contract, in the overall interest of BSCDCL. In case, tenderer's capabilities and capacities are not found satisfactory, BSCDCL reserves the right to reject the tender.

Certificate of Financial Turn Over:

At the time of submission of tender, the tender shall upload Certificate from Chartered Accountant mentioning Financial Turnover of last 3 years or for the period as specified in the tender document and further details if required may be asked from the tenderer after opening of technical tenders. There is no need to upload entire voluminous balance sheet.

In case of Percentage Rate Tender, Contractor must ensure to quote single percentage rate. Quote should be in percentage higher or below on the SOR Rates the same is to quoted in the form of decimal only. For example if contractor wants to quote 5 percent higher then he have to quote 1.05 and if he wants to quote 5 [percent below he have to quote 0.95 in given column of financial bid sheet.

In case of Item Rate Tender, price shall be entered against each item in the Bill of Quantities / Schedule of Quantities. The cost of item against which the contractor has failed to enter a rate or price shall be deemed to be covered by rates and prices of other items in Bill of Quantities / Schedule of Quantities and no payment shall be made for the quantities executed for items against which rate has not been quoted by the contractor..

In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is

left blank and no rate is quoted by the tenderer, rate of such item shall be treated as "0" (ZERO).

The tenderer if required may submit queries in writing on E-mail Id. smartcitycell@bmconline.gov.in before **22.03.2017 upto 12.00 Noon.**

MEMORANDUM

Sl. No.	Description	Cl. No. of NIT/ITT/Clauses of Contract (CC)	Values/Description to be Applicable for Relevant Clause (S)		
1)	Name of Work		Development of Market Complex Under Smart City Road At Shyamla Hills, Bhopal.		
2)	Client/Owner		BSCDCL, Bhopal		
3)	Type of Tender		Percentage rate / Item Rate tender		
4)	Earnest Money Deposit		Rs. 1.51 Lakhs (One lakh fifty one thousand only)		
5)	Estimated Cost		1,51,02,716/- (One crore fifty one lakh two thousand seven hundred & sixteen only.		
6)	Time allowed for Completion of Work		03 Months		
7)	Mobilization Advance		10% of contract value		
8)	Interest Rate of Mobilization Advance		Simple Interest Rate of 10 % Percent only) (Per Annum)		
9)	Schedule of rates applicable		Civil Works : UADD, NON SOR Electrical work : UADD, PWD, NON SOR		
10)	Validity of Tender		90 (Ninety) Days		
11)	Performance Guarantee		5.00 % (Five Percent Only) of contract value within 30 days from the issue of Letter of Award		
12)	Security Deposit/Retention Money		5.00% (Five Percent Only) of the gross value of each running bill.		
13)	Time allowed for starting the work		The date of start of contract shall be reckoned from 10 days after the date of issue of letter of Award .		
14)	Deviation limit beyond which clause 6.2 & 6.3 except		Building work as per requirement	Annual repair & maintenance of buildings	Road work as per requirement

	foundation.			As per requirement	
			Note:-The Deviation Limit of Building Work shall also apply for combined works(Building and Road)		
15)	Deviation limit beyond which clause 6.2 & 6.3		Building work as per requirement	Annual repair & maintenance of buildings as per requirement	Road work as per requirement
			Note:-The Deviation Limit of Building Work shall also apply for combined works (Building and Road)		

ELIGIBILITY CRITERIA FOR BIDDER:

1. The Average annual financial turnover for last 3 years(2013-14,2014-15,2015-16) shall be at least 30% of the estimated cost put to tender, Copies of balance sheets of last three financial years OR duly certified by a Chartered Accountant shall be submitted in support of the requisite financial Turnover.
2. The bidder shall have successfully completed similar works during the last seven years as mentioned below:

Three similar works each costing not less than 40% of the estimated cost put to tender

OR

Two similar works each costing not less than 50% of the estimated cost put to tender

OR

One similar work costing not less than 80% of the estimated cost.

Similar work means construction, place making like development of area, BUILDING WORKS, underground electrification beautification, and for electrical work providing underground HT cables / Substation work(RMU,PSS) / street lighting work value of at least Three work each costing not less than 40% of the estimated cost, Two similar works each costing not less than 50% of the estimated cost, One similar work costing not less than 80% of the estimated cost with electrical work costing in this tender.

Should be primarily engaged in construction activities including Civil / Electrical works and registered/empaneled with appropriate govt. / GOI undertaking authorities.

Should have in-house capability for specified jobs and satisfactorily completed (Phase/Part completion of the scope of work in a contract shall not be considered.

a. Firm should have registered Civil contractor and Authorized Electrical License from MP Electrical safety department .

b. The contractor / firm shall submit Client certificate(s) in support of work experience which should show the nature of work done, the value of work, date of start, date of completion as per agreement, actual date of completion and satisfactory completion of work.

3. Net worth should be positive in last three years.

4. The copy of above documents shall be submitted by the tenderer along with hard copies of other required documents.

5. Copy of Sales Tax, Service Tax, VAT Registration, EPF Registration Certificate & PAN Card.

a. Information regarding the constitution of the applicant/firm e.g. Proprietary, Partnership, Private Ltd. etc. along with with proof of the same such as copies of registration/ partnership deed etc.

6. Should submit the list of tools plant and machinery:

7. Applications from Joint venture and Consortium members are not allowed however they can be permitted to engage a approved agency to carryout electrical works after approval of BSCDCL as mentioned in SCC.

8. List of Documents to be scanned and uploaded within the period of tender submission:

a. Proof of online payment / Bank Guarantee of any Nationalized or all Commercial Scheduled Bank against EMD in favor of CEO, BSCDCL.

b. Copy of documents related to qualifying requirement of bidders as per NIT clause

c. Letter of Acceptance of tender condition unconditional as per format enclosed in Annexure-II.

d. Certificate of Financial Turnover duly certified by CA as indicated above.

e. Valid service tax registration, EPF registration, VAT registration, Sales Tax registration, PAN No.

f. Acknowledgement towards cost of tender fee submission

- g. All pages of all the Corrigendum (if any) duly signed by the authorized person.
- 9. If any condition or conditional rebate is offered by the tenderer, their tender shall summarily be rejected.

SECTION-2

INSTRUCTIONS TO TENDERER

Instruction to Tenderer (ITT)

A. GENERAL INSTRUCTIONS:

2.1. General terms of Bidding-

2.1.1 No Bidder shall submit more than one BID for the Project.

2.1.2 The Feasibility Report / Preliminary Project Report of the Project has been assessed however the Bidders are expected to carry out their own surveys, investigations and other Preliminary examination of the Project before submitting their Bids. Nothing contained in the attached drawings/BOQ shall be binding on the BSCDCL nor confer any right on the Bidders, and the BSCDCL shall have no liability whatsoever in relation to or arising out of any or all contents of TENDER.

2.1.3 Notwithstanding anything to the contrary contained in this RFP, the Preliminary terms specified in the draft Agreement shall have overriding effect; provided, however, that any conditions or obligations imposed on the Bidder hereunder shall continue to have effect in addition to its obligations under the Agreement.

2.1.4 The BID shall be furnished in the format exactly as per Appendix-I i.e. Technical Bid as per Appendix IA and Financial Bid as per Appendix IB. BID amount shall be indicated clearly in both figures and words, in Indian Rupees in prescribed format of Financial Bid and it will be signed by the Bidder's authorized signatory. In the event of any difference between figures and words, the amount indicated in words shall be taken into account.

2.1.5 The Bidder shall deposit a BID Security (EMD) of Rs. 1.51 Lakhs in accordance with the provisions of this RFP. The Bidder has to provide the BID Security (EMD) through online payment or in the form of a Bank Guarantee acceptable to the BSCDCL, as per format at Appendix-II.

2.1.6 The validity period of the Bank Guarantee, shall not be less than 180 (one hundred and eighty) days from the BID Due Date, inclusive of a claim period of 60 (Sixty) days, and may be extended as may be mutually agreed between the BSCDCL and the Bidder.

2.1.7 The BID shall be summarily rejected if it is not accompanied by the BID Security. The BID Security shall be refundable no later than 150 (one hundred and fifty) days from the BID Due Date except in the case of the Selected Bidder whose BID Security shall be retained till it has provided a Performance Security under the Agreement.

2.1.8 The Bidder should submit a Power of Attorney as per the format at Appendix-III, Authorizing the signatory of the BID to commit the Bidder.

2.1.9 Any condition or qualification or any other stipulation contained in the BID shall render the BID liable to rejection as a non-responsive BID.

2.1.10 The BID and all communications in relation to or concerning the Bidding Documents and the BID shall be in English language.

2.1.11 The documents including this RFP and all attached documents, provided by the BSCDCL are and shall remain or become the property of the BSCDCL and are Transmitted to the Bidders solely for the purpose of preparation and the submission of a BID in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their BID. The provisions of this Clause.

2.1.12 shall also apply mutatis mutandis to BIDs and all other documents submitted by the Bidders, and the BSCDCL will not return to the Bidders any BID, document or any information provided along therewith.

2.1.13 This RFP is not transferable.

2.1.14 any award of Project pursuant to this RFP shall be subject to the terms of Bidding

Documents and also fulfilling the criterion as mentioned in clause 2.1.17.

2.1.16 while bidding is open to persons from any country, the following provisions shall apply then the Eligibility of such Bidder shall be subject to approval of the BSCDCL from national security and public interest perspective. The decision of the BSCDCL in this behalf shall be final and conclusive and binding on the Bidder. The holding or acquisition of equity or control, as above, shall include direct or indirect holding/ acquisition, including by transfer, of the direct or indirect legal or beneficial ownership or control, by persons acting for themselves or in concert and in determining such holding or acquisition, the BSCDCL shall be guided by the principles, precedents and definitions contained in the Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 1997, or any substitute thereof, as in force on the date of such acquisition. The Bidder shall promptly inform the BSCDCL of any change in the shareholding, as above, and failure to do so shall render the Bidder liable for disqualification from the Bidding Process.

2.1.17 Notwithstanding anything to the contrary contained herein, in the event that the Bid Due Date falls within three months of the closing of the latest financial year of a Bidder, it shall ignore such financial year for the purposes of its Bid and furnish all its information and certification with reference to the 5 (five) years or 1 (one) year, as the case may be, preceding its latest financial year. For the avoidance of doubt, financial year shall, for the Purposes of a Bid hereunder, mean the accounting year followed by the Bidder in the course of its normal business.

2.1.18 Any entity which has been barred by GOI or Govt of Madhya Pradesh, MP DISCOM for the works of expressways, National highways, ISC and EI works, and the bar subsists as on the Bid Due Date, would not be eligible to submit the BID.

2.1.19 The BSCDCL reserves the right to reject an otherwise eligible bidder on the basis of the information provided under clause 2.1.19. The decision of the BSCDCL in this case shall be final.

2.2 Eligibility and qualification requirements of Bidder

2.2.1 For determining the eligibility of Bidder the following shall apply:

(a) The Bidder may be a single entity or Consortium, coming together to implement the Project. However, no Bidder applying individually or as a member of a Consortium, as the case may be, can be member of another Bidder. The term Bidder used herein would apply to both a single entity and a Consortium.

(b) Bidder may be a natural person, private entity, or any combination of them with a formal intent to enter into a Consortium agreement or under an existing agreement to form a Consortium. A Consortium shall be eligible for consideration subject to the conditions.

(c) An Bidder shall not have a conflict of interest (the "Conflict of Interest") that affects the Bidding Process. Any Bidder found to have a Conflict of Interest shall be disqualified and liable for forfeiture of the BID Security or Performance Security as the case may be. A Bidder shall be deemed to have a Conflict of Interest affecting the Bidding Process, if:

(d) A Bidder shall be liable for disqualification and forfeiture of BID Security, if any legal, financial or technical adviser of the BSCDCL in relation to the Project is engaged by the Bidder, its Member or any Associate thereof, as the case may be, in any manner formatters related to or incidental to such Project during the Bidding Process or subsequent to the (i) issue of the LOA or (ii) execution of the Agreement. In the even though such adviser is engaged by the selected Bidder or Contractor, as the case may be, after issue of the LOA or execution of the Agreement for matters related or incident alto the project, then notwithstanding anything to the contrary contained herein or in the13LOA or the Agreement and without Prejudice to any other right or remedy or the BSCDCL, including the forfeiture and appropriation of the BID Security or Performance Security, as the case may be, which the BSCDCL may have there under or otherwise, the LOA or the Agreement, as the case may be, shall be liable to be terminated without the BSCDCL being liable in any manner whatsoever to the Selected Bidder or Contractor for the same. For the avoidance or doubt, this disqualification shall not apply where such adviser was engaged by the Bidder, its Member or Associate in the past but its assignment expired or was terminated 6 (six) months prior to the date of issue of this RFP. Nor will this disqualification apply where such adviser is engaged after a period of 3 (three) years from the date of commercial operation of the Project.

Other Instructions:-

On line percentage rate /item rate tenders on behalf of Owner/Client are invited for the work of Development Works For Market Complex Under Smart City Road At Shyamla Hills, Bhopal for BSCDCL at Bhopal city.

The pre-qualification / enlistment of the contractors should be valid on the last date of submission of tenders. In case the last date of submission of tender is extended, the pre-qualification of contractor should be valid on the original date of submission of tenders.

The work is estimated to cost Rs. **1,51,02,716/-** (Rupees One crore fifty one lakh two thousand seven hundred & sixteen only)

The tender document as uploaded can be seen on website www.mpeproc.gov.in and can be downloaded free of cost.

Mode of Submission: Earnest Money Deposit

Earnest Money Deposit of amount as mentioned in “NIT/ Memorandum (Annexure-I)” required to be submitted along with the tender shall be in the form of Demand Draft payable at place as mentioned in NIT in favour of CEO, BSCDCL from any Scheduled bank or Bank Guarantee from any Nationalized or all Commercial scheduled banks in the enclosed format. The EMD shall be valid for minimum period of 150 (One Hundred Fifty) days from last day of submission of Tender. **The EMD shall be scanned and uploaded to the e-Tendering website within the period of tender submission and original should be deposited in office of BSCDCL**

The EMD of all unsuccessful tenderers will be returned within thirty (30) days of the Award of the contract to successful tenderer or after the receipt of their BGs verified from the Zonal office of the issuing Bank, whichever is later. No interest will be payable by the BSCDCL on the said amount covered under EMD/Any other Security Deposit.

Interested contractor who wish to participate in the tender has also to make following payments in the form of Demand Draft/Pay Order or Banker's Cheque of any Scheduled Bank and to be scanned and uploaded to the e-Tendering website within the period of tender submission:

Cost of Tender Document – **Rs. 20,000/-** To be submit online only/-

***X% shall be as prevailing on the date of NIT e-Tender Processing Fee – As applicable for MPEPROC portal.**

Demand Draft or Pay Order Banker's Cheque or Bank Guarantee against EMD, Cost of Tender Document and, e-Tender Processing Fee online payment receipt accordingly, shall be placed in single sealed envelope superscripted as “Earnest Money, Cost of Tender Document and Cost of e-Tender Processing Fee” with name of work and due date of opening of the tender also mentioned thereon.

Copy of pre-qualification/enlistment letter and certificate of work experience (if required) and other documents as specified in the tender shall be scanned and uploaded to the e-Tendering website within the period of tender submission and certified copy of each shall be deposited in a separate envelope marked as "Other Documents".

Both the envelopes shall be placed in another envelope with due mention of Name of work, date & time of opening of tenders and to be submitted in the office of BSCDCL after last date & time of submission of tender.

Online technical tender documents submitted by intending tenderers shall be opened only of those tenderers, whose Earnest Money Deposit, Cost of Tender Document and e-Tender Processing Fee and other documents placed in the envelope are found in order. The Price tender of those tenderers whose documents found to be in order shall be opened. The date of opening of price tender shall be informed to the tenderer.

The tender submitted shall become invalid if:

- ❖ The tenderer is found ineligible.
- ❖ The tenderer does not upload all the documents (including service tax registration/VAT registration/Sales Tax Registration) as stipulated in the tender document.

If any discrepancy is noticed between the documents as uploaded at the time of submission of tender and hard copies as submitted physically in the office of tender opening authority.

VALIDITY OF TENDER

The tender for the works shall remain open for acceptance for a period of Ninety (90) days from the date of opening of financial tender. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the BSCDCL, then the BSCDCL shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money as aforesaid. Further the tenderers shall not be allowed to participate in the retendering process of work.

ACCEPTANCE OF TENDER

BSCDCL reserves the right to reject any or all the tenders in part or full without assigning any reason whatsoever. BSCDCL does not bind itself to accept the lowest tender. The BSCDCL reserves the right to award the work to a single party or split the work amongst two or more parties as deemed necessary without assigning any reason thereof. The Contractor is bound to accept the part work as offered by BSCDCL after split up at the quoted/negotiated rates.

The tenders shall be strictly as per the conditions of contract. Tenders with any additional condition(s)/modifications shall be rejected.

The witnesses to the Tender/Contract Agreement shall be other than the tenderer/ tenderers competing for this work and must indicate full name, address, and status/occupation with dated signatures.

The acceptance of tender will rest with the BSCDCL who does not bind itself to accept the lowest tender and reserves to itself the right to reject any or all the tenders received without assigning any reason thereof. Tenders in which, any of the prescribed conditions are not fulfilled or found incomplete in any respect are liable to be rejected.

On acceptance of tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from Engineer-in-Charge or its authorized representative shall be intimated by the contractor within 07 days of issue date of letter of Awards by BSCDCL.

The tenderer shall not be permitted to tender for works if his near relative is posted in the project office or concerned Zonal Office of the BSCDCL. The contractor shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any of the officers in BSCDCL. Any breach of this condition by the tenderer would render him liable to the withdrawal of the work awarded to him and forfeiture of Earnest Money and Security Deposit. This may also debar the contractor from tendering for future works under BSCDCL.

For the purpose of operation of this clause a near relative shall mean wife, husband, parents, grandparents, children, grandchildren, brothers, sisters, uncles, aunts, cousins and their corresponding in-laws.

The time of completion of the entire work, as contained in contract shall be as mentioned in "Memorandum - Annexure-I", which shall be reckoned from the 10th day after issue of the letter of Award by the BSCDCL.

Canvassing whether directly or indirectly, in connection with tenderers is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.

The tender award, execution and completion of work shall be governed by tender documents consisting of (but not limited to) Letter of Award/Letter of work order, Bill of Quantities, Special Conditions of Contract, General Conditions of Contract, Specifications, Drawings. The tenderers shall be deemed to have gone through the various conditions including sub-soil water conditions, topography of the land, drainage and accessibility etc. or any other condition which in the opinion of contractor will affect his price/rates before quoting their rates. No claim whatsoever against the foregoing shall be entertained.

The drawings with the tender documents are Tender Drawing and are indicative only.

ADDENDA/ CORRIGENDA

Addenda/Corrigenda to the tender documents may be issued prior to the date of submission of the tender to clarify or effect modification in specification and/or contract terms included in various tender documents. The tenderer shall suitably take into consideration such Addenda/Corrigenda while submitting his tender. The tenderer shall return such Addenda/ Corrigenda duly signed and stamped as confirmation of its receipt & acceptance and submit along with the tender document. All addenda/ Corrigenda shall be signed and stamped on each page by the tenderer and shall become part of the tender and contract documents.

SITE VISIT AND COLLECTING LOCAL INFORMATION

Before tendering, the tenderers are advised to visit the site, its surroundings to assess and satisfy themselves about the local conditions such as the working and other constraints at site, approach roads to the site, availability of water & power supply, application of taxes, duties and levies as applicable & any other relevant information required by them to execute complete scope of work. The tenderer may obtain all necessary information as to risks, weather conditions, contingencies & other circumstances (insurgencies etc.) which may influence or affect their tender prices. Tenderer shall be deemed to have considered site conditions whether he has inspected it or not and to have satisfied himself in all respect before quoting his rates and no claim or extra charges whatsoever in this regard shall be entertained / payable by the BSCDCL at a later date.

ACCESS BY ROAD

Contractor, if necessary, shall build temporary access roads to the actual site of construction for the works at his own cost to make the site accessible. The Contractor shall maintain the same in motorable condition at all the times as directed by Engineer-in-Charge at his own cost. The contractor shall be required to permit the use of any roads so constructed by him for vehicles of BSCDCL or any other agencies/ contractors who may be engaged on the project site, free of cost.

Non-availability of access roads or approach to site, for the use of the contractor shall in no case condone any delay in the execution of work nor be the cause for any claim for compensation.

HANDING OVER & CLEARING OF SITE

The Contractor should note that area for construction may be made available in phases as per availability and in conjunction with pace of actual progress of work at site. The work may be required to be carried out in constrained situations. The work is to be carried out in such a way that the traffic, people movement, if any, is kept operative and nothing extra shall be payable to the contractor due to this phasing / sequencing of the work. The contractor is required to arrange the resources to complete the entire project within total stipulated time. Traffic diversion, if required, is to be done and maintained as per requirement of local traffic

police or/and as per specification, by the contractor at his own cost and the contractor shall not be entitled for any extra payment, whatsoever, in this regard.

The efforts will be made by the BSCDCL to handover the site to the Contractor free of encumbrances. However, in case of any delay in handing over of the site to the Contractor, the BSCDCL shall only consider suitable extension of time for the execution of the work. It should be clearly understood that the BSCDCL shall not consider any revision in contract price or any other compensation whatsoever viz. towards idleness of Contractor's labour, equipment etc.

Old structures on the proposed site, if required, shall be demolished by the contractor properly at his own cost unless and

otherwise mentioned elsewhere in the tender document. The useful material obtained from demolition of structures & services shall be the property of the owner/BSCDCL and these materials shall be stacked in workmanship like at the place specified by the Engineer-in-charge.

Necessary arrangement including its maintenance is to be made by the contractor for temporary diversion of flow of existing drain and road, as the case may be. The existing drain, road would be demolished, wherever required, with the progress of work under the scope of proposed project. The existing Road and Drain which are not in the alignment of the said project but are affected and/ or need to be demolished during execution for smooth progress of the project, shall be rehabilitated to its original status and condition (including black topping) by the contractor at his own cost. The cost to be incurred by contractor in this regards shall be deemed to be included in the quoted rates of the bill of quantity items and contractor shall not be entitled for any extra payment whatsoever in this regard.

The information about the public utilities (whether over ground or underground) like electrical/ telephone/ water supply lines, OFC Cables, open drain etc. is the responsibility of contractor to ascertain the utilities that are to be affected by the works through the site investigation.

The contractor shall be responsible to obtain necessary approval from the respective authorities for shifting/ re-alignment of existing public utilities. BSCDCL shall only assist the contractor for liaisoning in obtaining the approval from the concerned authorities.

Any services affected by the works must be temporarily supported by the contractor who must also take all measures reasonably required by the various bodies to protect their services and property during the progress of works. It shall be deemed to be the part of the contract and no extra payment shall be made to the contractor for the same.

SCOPE OF WORK

The scope of work covered in this tender shall be as per the Bill of Quantities, specifications, drawings, instructions, orders issued to the contractor from time to time during the pendency of work. The drawings for this work, which may be referred for tendering, provide general idea only about the work to be performed under the scope of this contract. These may not be the final drawings and may not indicate the full range of the work under the scope of this contract. The work will be executed according to the drawings to be released as "GOOD FOR CONSTRUCTION" from time to time by the Engineer-in-charge of BSCDCL and according to any additions/ modifications/ alterations/ deletions made from time to time, as required by any other drawings that would be issued to the contractor progressively during execution of work. It shall be the responsibility of the contractor to incorporate the changes that may be in this scope of work, envisaged at the time of tendering and as actually required to be executed.

The quantities of various items as entered in the "BILL OF QUANTITIES" are indicative only and may vary depending upon the actual requirement. The contractor shall be bound to carry out and complete the stipulated work irrespective of the variation in individual items specified in the bill of quantities. The variation of quantities will be governed as per clause No. 6.0 of contract.

APPROVAL OF TEMPORARY / ENABLING WORKS

The setting and nature of all offices, huts, access road to the work areas and all other temporary works as may be required for the proper execution of the works shall be subject to the approval of the Engineer-in-charge. All the equipments, labour, material including cement, reinforcement and the structural steel required for the enabling/ temporary works associated with the entire Contract shall have to be arranged by the Contractor only. Nothing extra shall be paid to the Contractor on this account.

CLARIFICATION AFTER TENDER SUBMISSION

Tenderer's attention is drawn to the fact that during the period, the tenders are under consideration, the tenderers are advised to refrain from contacting by any means, the BSCDCL and/or his employees/ representatives on matters related to the tender under consideration and that if necessary, BSCDCL will obtain clarifications in writing or as may be necessary. The tender evaluation and process of award of works is done by duly authorized Tender Scrutiny Committee and this committee is authorized to discuss and get clarification from the tenderers.

ORDER OF PRECEDENCE OF DOCUMENTS

In case of difference, contradiction, discrepancy, with regard to conditions of contract, Specifications, Drawings, Bill of quantities etc. forming part of the contract, the following shall prevail in order of precedence.

Letter of Award, along with statement of agreed variations and its enclosures, if any.

Description of Bill of Quantity / Schedule of Quantities.

Special Condition of Contract.

Technical specifications (General, Additional and Technical Specification) as given in Tender documents.

General Conditions of Contract.

Drawings

CPWD/ MORTH specifications (as specified in Technical Specification of the Tender) update with correction slips issued up to last date of receipt of tenders.

Relevant B.I.S. Codes

ACCEPTANCE OF TENDER CONDITIONS

From: (On the letter head of the company by the authorized officer having power of attorney)

BSCDCL Limited,

Sub: Name of the work & NIT No.:

Sir,

This has reference to above referred tender. I/We are pleased to submit our tender for the above work and I/We hereby unconditionally accept the tender conditions and tender documents in its entirety for the above work.

I/we are eligible to submit the tender for the subject tender and I/We are in possession of all the documents required.

I/We have viewed and read the terms and conditions of this GCC/SCC carefully. I/We have downloaded the following documents forming part of the tender document:

- a) Notice Inviting e-Tender. (pg- to pg-)
- b) Quoting Sheet for Tenderer (pg- to pg-)
- c) Instructions to Tenderers & General Conditions of Contract (Vol- I/2013)
:(pg- to pg-)
- d) Technical Specifications (Vol-II) (pg- to pg-)
- e) Bill of Quantities (Vol-III) (pg- to pg-)
- f) Tender Drawing (pg- to pg-)
- g) Acceptance of Tender Conditions (Annexure II)
Corrigendum, if any (pg- to pg-)

I/we have uploaded the mandatory scanned documents such as cost of tender document, EMD, e-Tender Processing Fee and other documents as per Notice Inviting e-tender AND I/We agree to pay the cost of tender document, EMD, e-Tender Processing Fee (only receipt/proof of online payment) and other documents in physical form in the form and manner as described in NIT/ITT.

Should this tender be accepted, I/We agree to abide by and fulfill all terms and conditions referred to above and as contained in tender documents elsewhere and in default thereof, to forfeit and pay BSCDCL, or its successors or its authorized nominees such sums of money as are stipulated in the notice inviting tenders and tender documents.

If I/we fail to commence the work within 10 days of the date of issue of Letter of Award and/or I/we fail to sign the agreement as per Clause 82 of Clauses of Contract and/or I/we fail to submit performance guarantee as per Clause 02 of Clauses of Contract, I/we agree that BSCDCL shall, without prejudice to any other right or remedy, be at liberty to cancel the Letter of Award and to forfeit the said earnest money as specified above.

Yours faithfully,
(Signature of the tenderer with rubber stamp)

Dated

SECTION-3

CLAUSES OF CONTRACT

CLAUSES OF CONTRACT(CC)

DEFINITIONS

The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of BSCDCL and the contractor, together with the documents referred to therein including these conditions, the specifications,

designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

Bhopal Smart City Development Corporation Limited, hereinafter called 'BSCDCL' propose to get the works executed as mentioned in the Contract on behalf of Owner/ Client as Implementing agency/Executing Agency.

- 1.2 In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-

APPROVAL means approved in writing including subsequent written confirmation of previous verbal approval.

BILL OF QUANTITIES or SCHEDULE OF QUANTITIES means the priced and completed Bill of Quantities or Schedule of Quantities forming part of the tender.

CONTRACTOR shall mean the individual, firm, LLP or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or LLP or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.

CONTRACT VALUE means the sum for which the tender is accepted as per the letter of Award.

DRAWINGS mean the drawings referred to in the contract document including modifications if any and such other drawings as may from time to time be furnished and/ or approved by BSCDCL.

DATE OF COMMENCEMENT OF WORK: The date of start of contract shall be reckoned from 10 days after the date of issue of letter of Award.

ENGINEER-IN-CHARGE means the Engineer of BSCDCL who shall supervise and be in-charge of the work.

LANGUAGE: All documents and correspondence in respect of this contract shall be in English Language.

- i) **“LETTER OF AWARD”** shall mean BSCDCL’s letter or notification conveying its acceptance of the tender subject to such conditions as may have been stated therein.

MONTH means English Calendar month 'Day' means a Calendar day of 24 Hrs each

BSCDCL shall mean Bhopal Smart City Development Corporation Limited, a company registered under the Indian Company Act, with its registered office at Near Natraj Petrol Pump, Sector A, Berkheda, Bhopal, Madhya Pradesh 462023 or its Administrative officers or its engineer or other employees authorized to deal with any matter with which these persons are concerned on its behalf.

OWNER/ CLIENT means the Government, Organization, Ministry, Department, Society, Cooperative, JV Entities (whether incorporated or unincorporated or registered as the case may be) etc. who has awarded the work/ project to BSCDCL and/ or appointed BSCDCL as Implementing / Executing Agency/ Project Manager and/ or for whom BSCDCL is acting as an agent and on whose behalf BSCDCL is entering into the contract and getting the work executed.

SCHEDULE(s) referred to in these conditions shall mean the standard schedule of rates of the government mentioned in the Memorandum (Annexure-I) with the amendments thereto issued up to the date of receipt of the tender.

- n) **SITE** means the lands and other places on, under, in or through Which the works are to be executed or carried out and any other lands or places provided by BSCDCL/client/owner or used for the purpose of the contract.
- o) **TENDER** means the Contractor's priced offer to BSCDCL for the execution and completion of the work and the remedying of any defects therein in accordance with the provisions of the Contract, as accepted by the Letter of Award or Award letter. The word TENDER is synonymous with Tender and the Word TENDER DOCUMENTS with "Tendering Documents" or "offer documents".

WRITING means any manuscript typed written or printed statement under or over signature and/or seal as the case may be.

Works or Work shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

The headings in the clauses/ conditions of tender documents are for convenience only and shall not be used for interpretation of the clause/ condition.

Words imparting the singular meaning only also include the plurals and vice versa where the context requires. Words importing persons or parties shall include firms and corporations and organizations having legal capacities.

Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightning and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the BSCDCL or causes solely due to use or occupation by Government of the part of the works in respect of which a

certificate of completion has been issued or a cause solely due to BSCDCL's faulty design of works.

Market Rate shall be the rate as decided by the Engineer-in-Charge on the basis of the prevailing cost of materials and labour at the site where the work is to be executed plus the percentage mentioned elsewhere in the tender document to cover, all overheads and profits.

PERFORMANCE GUARANTEE:

"Within 30 (Thirty) days from the date of issue of letter of Award or within such extended time as may be granted by BSCDCL in writing, the contractor shall submit to BSCDCL an irrevocable performance bank guarantee in the form appended, from any Nationalized Bank or all Commercial schedule bank equivalent to 5% (five per cent only) of the contract value for the due and proper execution of the Contract. The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case the time for completion of works gets extended, the contractor shall get the validity of Performance Guarantee extended to cover such extended time for completion of work.

BSCDCL reserve the right of forfeiture of the performance guarantee in the event of the contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract.

Performance guarantee shall be returned after successful completion / testing / commissioning and handing over the project to the client up to the entire satisfaction of BSCDCL / Client.

In case the contractor fails to submit the performance guarantee of the requisite amount within the stipulated period or extended period, letter of Award automatically will stand withdrawn and EMD of the contractor shall be forfeited.

SECURITY DEPOSIT/ RETENTION MONEY

The Security deposit or the retention money shall be deducted from each running bill of the contractor @ 5% (five per cent only) of the gross value of the Running Account bill. Earnest money shall be adjusted first in the security deposit and further recovery of security deposit shall commence only when the upto date amount of security deposit exceeds the earnest money deductible under this clause. No Interest shall be paid on amount so deducted.

Security deposit will be released after completion of O&M period.

The release/refund of security deposit of the contractor shall be subject to the observance/compliance of the conditions as under and whichever is later:

- a) Expiry of the defect liability period in conformity with provisions contained in clause (Defect liability clause). The expiry of defect liability period shall be extended from time to time depending upon extension of time granted by BSCDCL.

The contractor produces a clearance certificate from the labour office. As soon as the work is virtually completed, the contractor shall apply for the labour clearance

certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate.

- 3.4 BSCDCL reserves the right of part or full forfeiture of security deposit in addition to other claims in the event of contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of contract.

MOBILIZATION ADVANCE

Mobilization advance up to maximum of amount as mentioned in the

“Memorandum (Annexure-I)” shall be paid to the contractor, if requested by him, on submission of irrevocable Bank Guarantee valid for contract period of an amount 1.2 times of the mobilization advance to take care of advance and interest at prescribed rate from a nationalized bank or all Commercial scheduled bank in the enclosed Performa. The Mobilization advance shall be interest bearing @ as mentioned in the “Memorandum (Annexure-I)”.

This advance shall be paid in three installments as follows:

First Installment of fifty percent of total mobilization advance shall be paid after the agreement is signed and upon submission of performance guarantee for full amount as specified.

2nd installment of twenty five percent of total mobilization advance will be paid after the setting up of site office and site laboratory, complete mobilization of plant and machinery, scaffolding & shuttering materials etc.

The Balance twenty five percent of total mobilization advance shall be paid on completion of 10% of work in terms of cost and after the contractor has fully mobilized the work at site.

The mobilization advance bear simple interest at the rate as mentioned in the Memorandum (Annexure-I) and shall be calculated from the date of payment to the date of recovery (365 days in a year) both days inclusive, on the outstanding amount of advance. Recovery of such mobilization advanced including interest shall be made by the deduction from the contractor's bills commencing after first ten percent of the gross value of the work is executed and paid, on pro-rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered either by the time eighty percent of the gross value of the contract is executed and paid, together with interest due on the entire outstanding amount up to the date of recovery of the installment or on expiry of eighty percent of contract period (i.e. time allowed for completion of work in terms of Memorandum-Annexure-I) whichever is earlier.

The bank guarantee submitted by contractor against mobilization advance shall initially be made for the full amount as mentioned in para 4.1 above

and valid for the contract period, and be kept renewed from time to time to cover the balance amount and likely period of completion of recovery together with interest. However, the contractor can submit part bank guarantees against the mobilization advance in as many numbers as per proposed number of recovery installments equivalent to the amount of each installment.

Notwithstanding what is contained above, no mobilization advance whatsoever shall be payable, if payment of mobilization advance is not mentioned in the Memorandum (Annexure-I).

SECURED ADVANCE AGAINST NON-PERISHABLE MATERIALS

Interest free secured advance up-to a maximum of 75 % (seventy five percent) of the Market Value of the Materials or the 75 % (seventy five percent) cost of materials as derived from the tendered item rate of the contractor, whichever is less, required for incorporation in the permanent works and brought to site and duly certified by BSCDCL site Engineer shall be paid to the Contractor for all non-perishable items as per UADD/MPPWD/CPWD norms. The advance will be paid only on submission of Indemnity Bond in the prescribed pro-forma. The advance shall be recovered in full from next Running Account bill and fresh advance shall be paid for the balance quantities of materials. The contractor shall construct suitable go-down at the site of work for safe storage of the materials against any possible damages due to sun, rain, dampness, fire, theft etc. at his own cost. He shall also employ necessary watch & ward establishment for the purpose at his costs and risks.

Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-in-Charge provided the contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-in-Charge shall be final and binding on the contractor in this matter. No secured advance shall however, be paid on high risk materials such as ordinary glass, sand, petrol, diesel etc.

DEVIATIONS / VARIATIONS EXTENT AND PRICING

The Engineer-in-Charge shall have power (i) to make any alterations in, omissions from, additions to or substitutions for, the original specifications, drawings, designs and instructions that may appear to him to be necessary during the progress of the work, (ii) to omit part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions, or substitutions shall form part of the contract as if originally provided therein and any altered, additions or substituted works which the contractor may be directed to do in the manner specified above as part of the work, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereunder provided:

The time for the completion of the work shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered be extended, if requested by the contractor, as follows:

in the proportion which the additional cost of the altered, additional or substituted work bears to the original tendered value plus

25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

If the extra items includes any work for which no rate is specified in the contract, then such work shall be carried out at the rates entered in the schedule of rates (as mentioned in Memorandum (Annexure-I)) for Civil/ Sanitary Works minus/plus the percentage which the tendered amount of scheduled items bears with the estimated amount of schedule items based on the Schedule of Rates (as mentioned in Memorandum (Annexure-I) for Civil/ Sanitary Works). The scheduled item means the items appearing in the Schedule of Rates (as mentioned in Memorandum (Annexure-I)for Civil/ Sanitary Works) which shall be applicable in this clause. This clause will apply mutates mutandis to electrical work except that Electrical Schedule of Rates as mentioned in Memorandum (Annexure-I) will be considered in place of Civil/ Sanitary works Schedule of rates as mentioned in Memorandum (Annexure-I)

However, In the case of extra item(s), (items that are completely new, and are in addition to the items contained in the contract, and not included in the schedule of rates (as mentioned in Memorandum (Annexure-I)), the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within one month of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para:

If the market rate for the substituted item so determined is more than the market rate of agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

If the market rate for the substituted item so determined is less than the market rate of the agreement (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted)

In the case of contract item(s), substituted item(s), contract cum substituted items, which exceed the limits laid down in Memorandum (Annexure-I), the contractor shall within fifteen days of receipt of order of occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the scheduled of quantities, the Engineer-in-Charge shall within one month of receipt of the claims supported by analysis, after giving consideration

to the analysis of the rates submitted by the Contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Memorandum (Annexure-I), and the Engineer-in-charge shall after giving notice of the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

6.4 The contractor shall send to the Engineer-in-Charge once every three months,

an up to date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Engineer-in-charge may authorize consideration of such claims on merits.

For the purpose of operation of Memorandum (Annexure-I), the following works shall be treated as works relating to foundation unless and otherwise defined in the Contract:

For Buildings: All works up to 1.2 meters above ground level or up to floor 1 level whichever is lower.

For abutments, piers and well steining: All works upto 1.2m above the bed level.

For retaining walls, wing walls, compound walls, chimneys, over head reservoirs/tanks and other elevated structures: All works upto 1.2 metres above the ground level.

For reservoirs/tanks (other than overhead reservoirs/tanks). All works upto 1.2 metres above the ground level.

For basement: All works upto 1.2m above ground level or upto floor 1 level whichever is lower.

For Roads, all items of excavation and filling including treatment of sub base.

Any operation incidental to or necessarily has to be in contemplation of tenderer while filling, tender or necessary for proper execution of the item

included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not specifically indicated in the description of the item and the relevant specifications shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule or rates as the case may be Nothing extra shall be admissible for such operations.

Market Rates to be determined as per various sub-clauses under the clause 6.0 shall be on the basis of **Prevailing rates of Material (unless mentioned otherwise), Relevant Labour authority rate for Labour, market rates of T&P etc. plus 15% towards Contractors' Profits and Overheads.**

The following factors may be considered in the justification of rates on which

Contractor's overhead & profit shall not be applicable:

Buildings and Other Construction Worker Cess as applicable in the state of work place

EPF (Employer Contribution) component, as per EPF act on the portion of labour's wages

VAT on works contract / WCT, as per composite scheme in the State of work place, if applicable Service Tax

ESCALATION

No claim on account of any escalation on whatsoever ground shall be entertained at any stage of works. All rates as per Bill of Quantities (BOQ) quoted by contractor shall be firm and fixed for entire contract period as well as extended period for completion of the works. No escalation shall be applicable on this contract.

COMPENSATION FOR DELAY

If the contractor fails to maintain the required progress in terms of clause

or relevant clause of GCC & Special Conditions of Contract, to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the BSCDCL on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the Engineer in charge (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day / week (as applicable) that the progress remains below that specified in Clause

or the relevant clause in GCC & Special Conditions of Contract or that the work remains incomplete.

This will also apply to items or group of items for which a separate period of completion has been specified

- i) Compensation for delay of work @ 1.5% per month delay to be computed on daily basis.

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given. The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with BSCDCL.

In case, the contractor does not achieve a particular milestone mentioned elsewhere in the tender document, or the re-scheduled milestone(s) the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time. With-holding of this amount or failure to achieve a milestone, shall be automatic without any notice to the Contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.

ACTION IN CASE WORK NOT DONE AS PER SPECIFICATIONS

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in-charge, his authorized subordinates in charge of the work and all the superior officers, officer of the Quality Assurance Unit of the BSCDCL or any organization engaged by the BSCDCL for Quality Assurance and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself. If it shall appear to the Engineer-in-charge or his authorized subordinates in-charge of the work or to the officer of Quality Assurance or his subordinate officers or the officers of the organization engaged by the BSCDCL for Quality Assurance or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 8.0 of the contract (for non-completion of the work in time) for this default. In such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the Engineer in charge may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

ACTION IN CASE OF BAD WORK

If it shall appear to the Engineer-in-Charge or his authorized representative in charge of the work or to the Chief Technical Examiner or to any other inspecting agency of Government/ State Government/ Owner where the work is being executed, that any work has been executed with unsound, imperfect, or unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the contractor shall on demand in writing which shall be made within twelve months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, Certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own proper charge and cost, and in the event of his failing to do so within a period to be specified by the Engineer-in-Charge in his demand

aforsaid while the contractor failure to do so shall continue, the Engineer-in-Charge may rectify or remove and re-execute the work or remove

and replace with others, the material or articles complained of as the case may be at the risk and expense in all respects of the contractor.

CANCELLATION/DETERMINATION OF CONTRACT IN FULL OR PART

Subject to other provisions contained in this clause the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:

If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workmanlike manner shall omit to comply with the requirement of such notice for a period of seven days thereafter; or

If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-Charge; or

If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge; or

If the contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge; or

If the contractor shall offer or give or agree to give to any person in BSCDCL service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any action relation to the obtaining or execution of this or any other contract for BSCDCL; or

If the contractor shall enter into a contract with BSCDCL in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-Charge; or

If the contractor shall obtain a contract with BSCDCL as a result of wrong tendering or other non-bona-fide methods of competitive tendering or commits breach of Integrity Pact; or

If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors; or If the contractor being a company, shall pass a resolution or the Court shall make an order for the winding up of the company, or a receiver or manager on behalf of the debenture holders or otherwise shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manager; or If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days, or. If the contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of the labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer sublet or otherwise parts with the entire works or any portion thereof without and prior written approval of the Engineer-in-Charge.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge may without prejudice to any other right or remedy which shall have accrued or shall accrue hereafter to BSCDCL, by a notice in writing to cancel the contract as whole or only such items of work in default from the Contract, the Engineer-in-charge shall have powers:

Take possession of site and any materials, constructional plant, implements, stores, etc. thereon; and/ or

Carry out the incomplete work by any means at the risk and cost of the contractor; and/ or

The Engineer-in-charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/part incomplete work of any item(s) taken

out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by BSCDCL because of action under this clause shall not exceed 10% of the tendered value of the work.

To determine or rescind the contract as aforesaid (of which termination or rescission notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination or rescission the full security deposit recoverable under the contract and performance guarantee shall be liable to be forfeited and un-used materials, construction plants, implements, temporary buildings, etc. shall be taken over and shall be absolutely at the disposal of the BSCDCL. If any portion of the Security Deposit has not been paid or received it would be called for and forfeited; and/ or

To employ labour paid by the BSCDCL and to supply materials to carry out the work or any part of the work debiting the contractor with the cost of the labour and the price of the materials of the amount of which cost and

price certified by the Engineer-in-Charge shall be 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 rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Engineer-in- Charge as to the value of the work done

shall be final and conclusive against the contractor provided always that action under the sub-clause shall only be taken after giving notice in writing to the contractor. If the expenses incurred by the BSCDCL are less than the amount payable to the contractor at his agreement rates, the difference shall not be paid to the contractor; and/ or

After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof as shall be un-executed or delayed with reference to the General Conditions of Contract clause no. 25.0 and/ or relevant clause of Condition Special of Contract, 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 (of the amount of which excess the certificate in writing of the Engineer-in-Charge shall be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by BSCDCL under his contract or on any other account whatsoever or from his security deposit or the proceeds of sales of unused materials, construction plants, implements temporary buildings etc. thereof or a sufficient part thereof as the case may be. If the expenses incurred by the BSCDCL are less than the amount payable to the contractor at his agreement rates, the difference shall not be paid to the contractor; and/or

By a notice in writing to withdraw from the contractor any items or items of work as the Engineer-in-charge may determine in his absolute discretion and get the same executed at the risk and cost of the contractor.

Any excess expenditure incurred or to be incurred by BSCDCL in completing the works or part of the works or the excess loss or damages suffered or

may be suffered by BSCDCL as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to BSCDCL in law be recovered from any moneys due to the contractor on any account, and if such moneys are not sufficient the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor shall fail to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors unused materials, constructional plant, implements, temporary buildings, etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the contractor under the contract and if thereafter there be any balance outstanding from the contractor, it shall be recovered in accordance with the provisions of the contract and law.

Any sums in excess of the amounts due to BSCDCL and unsold materials, constructional plant etc. shall be returned to the contractor, provided always that if cost or anticipated cost of completion by BSCDCL of the works or part of the works is less than the amount which the contractor would have been paid had he completed the works or part of the works, such benefit shall not accrue to the contractor.

In the event of anyone or more of the above courses being adopted by the Engineer-in-Charge the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has 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. Provided further that if any of the recoveries to be made, while taking action as above, are in excess of the security deposit forfeited, these shall be

Limited to the amount by which the excess cost incurred by the BSCDCL exceeds the security deposit so forfeited.

CONTRACTOR LIABLE TO PAY COMPENSATION EVEN IF ACTION NOT TAKEN UNDER CLAUSE 11.0

In any case in which any of the powers conferred upon the Engineer-in-Charge by relevant clause thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force all or any of the powers vested in him under any clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Engineer-in-Charge) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the

contractor, or procured by the contractor and intended to be used for the execution of the work/or any part thereof, paying or allowing for the same in account at the contract rates, or in the case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge, whose certificate thereof shall be final and binding on the contractor and/or direct the contractor, clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-Charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

CARRYING OUT PART WORK AT RISK & COST OF CONTRACTOR

If contractor:

At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or

Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge;

or

Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

The Engineer-in-Charge without invoking action under clause 11.0 of contract may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to BSCDCL, by a notice in writing to take the part work/part incomplete work of any item(s) out of his hands and shall have powers to:

Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or

Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by BSCDCL because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor. The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by BSCDCL in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by BSCDCL as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to BSCDCL in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract. In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

SUSPENSION OF WORKS

The contractor shall, on receipt of the order in writing of the Engineer-in-charge, suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-charge may consider necessary for any of the following reasons:

On account of any default on part of the contractor, or

For proper execution of the works or part thereof for reason other than the default of the contractor, or

For safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-charge.

(b) If the suspension is ordered for reasons (ii) and (iii) in sub-para (a) above.

The contractor shall be entitled to an extension of the time equal to the period of every such suspension plus 25% for completion period. No

adjustment in contract price will be allowed for reasons of such suspension.

- ii) In the event of the Contractor treating the suspension as an abandonment of the Contract by BSCDCL, he shall have no claim to payment of any compensation on account of any profit or advantage which he may have derived from the execution of the work in full.

TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR

Without prejudice to any of the right or remedies under this contract if the contractor dies, the Engineer in-charge shall have the option of terminating the contract without compensation to the contractor.

TIME ESSENCE OF CONTRACT & EXTENSION FOR DELAY

The time allowed for execution of the Works as specified in the Memorandum (Annexure-I) or the extended time in accordance with these conditions shall be the essence of the contract. The execution of the works shall commence from such time period as mentioned in MEMORANDUM (ANNEXURE – I) or the date on which the Engineer-in-Charge issues written orders to commence the work. If the Contractor commits default in commencing the execution of the work as aforesaid, the BSCDCL shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee absolutely.

- 16.2** Within 10 (Ten) days of Letter of Award, the Contractor shall submit a Time and Progress Chart (CPM/ PERT/ Quantified Bar Chart) and get it approved by the Engineer-in-Charge. The Chart shall be prepared in direct relation to the time stated in the contract documents for completion of items of the works. It shall indicate the forecast (mile-stones) of the dates of commencement and completion of various items, trades, sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time stipulated in the Contract documents and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work exceeds one month (save for special jobs for which a separate program has been agreed upon) complete 1/8th of the whole of work before 1/4th of the whole time allowed in the contract has elapsed, 3/8th of the work before one half of such time has elapsed and 3/4th of the work before 3/4th of such time has elapsed. The physical progress report including photographs shall be submitted by the contractor on the prescribed format & the intervals (not exceeding one month) as decided by the Engineer in Charge. The compensation for delay as per clause 8.0 shall be leviable at intermediate stages also, in case the required progress is not achieved to meet the above time deadlines of the completion period and/ or milestones of time and progress chart, provided always that the total amount of Compensation for delay to be paid under this condition shall not exceed 10% of the tendered value of work”.

If the work(s) be delayed by:

1. force-majeure or
 2. Abnormally bad weather, or
 3. Serious loss or damage by fire, or
 4. Civil commotion, local commotion of workmen, strike or lockout, affecting any or the trades employed on the work, or
 5. Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract, or
 6. Non-availability of stores, which are responsibility of the BSCDCL or,
 7. Non-availability or break down of tools and plant to be supplied or supplied by BSCDCL or,
 8. Any other cause which, in the absolute discretion of the BSCDCL, is beyond the Contractor's control, then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer-in-Charge within 07 days but shall nevertheless use constantly his best endeavor to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.
- 16.4** Request for extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay in the prescribed form. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired. In any such case BSCDCL may give a fair and reasonable extension of time for completion of work. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing within a reasonable time from the receipt of such request. Non application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-Charge and the extension of time so given by the Engineer-in-Charge shall be binding on the contractor.

TIME SCHEDULE & PROGRESS

17.1 Time allowed for carrying out all the works as entered in the tender shall be as mentioned in the "Memorandum (Annexure-I)" which shall be reckoned from the 10th day from the date on which the letter of Award is issued to the Contractor. Time shall be the essence of the contract and contractor shall ensure the completion of the entire work within the stipulated time of completion.

The contractor shall also furnish within 10 days of date of issue of letter of Award a CPM network/ PERT chart/ Bar Chart for completion of work within stipulated time. This will be duly got approved from BSCDCL. This approved Network/ PERT Chart shall form a part of the agreement. Achievement of milestones as well as total completion has to be within the time period allowed.

Contractor shall mobilize and employ sufficient resources for completion of all the works as indicated in the agreed BAR CHART/PERT Network. No additional payment will be made to the contractor for any multiple shift work or other incentive methods contemplated by him in his work schedule even though the time schedule is approved by the Engineer-in-Charge.

During the currency of the work the contractor is expected to adhere to the time schedule on mile stone and total completion and this adherence will be a part of Contractor's performance under the contract. During the time schedule on mile stone and total completion and this adherence will be a part of Contractor's performance under the contract. During the execution of the work contractor is expected to participate in the review and updating of the Network/BAR CHART undertaken by the BSCDCL. These reviews may be undertaken at the discretion of Engineer-in-charge either as a periodical appraisal measure or when the quantum of work order on the contractor is substantially changed through deviation orders or amendments. The review shall be held at site or any of the offices of BSCDCL/owner /consultant at the sole discretion of BSCDCL. The contractor will adhere to the revised schedule thereafter. The approval to the revised schedule resulting in a completion date beyond the stipulated date of completion shall not automatically amount to a grant of extension of time to the contractor.

Contractor shall submit (as directed by Engineer-in-Charge) progress reports on a computer based program (program and software to be approved by Engineer-in-Charge) highlighting status of various activities and physical completion of work. The contractor shall send completion report with as built drawings to the office of Engineer-in-Charge, of BSCDCL in writing within a period of 30 days of completion of work.

The photographs of the project taken on last day of every month indicating progress of work (in soft copies) shall be attached along with the physical progress reports to be submitted to Engineer-in-charge.

TAXES AND DUTIES

18.1 Except as otherwise specifically provided in the contract, the contractor shall be liable and responsible for the payment, of all taxes, such as excise duty, custom duty, sales tax, Value Added Tax including the purchase tax, consignment tax, work contract tax, service tax, entry tax or any other similar tax in the state concerned, turnover tax, toll tax, octroi charges, royalty, labour cess, levy and other tax(es) or duty(ies) which may be specified by local/state/ central government from time to time on all material articles which may be used for this work. The rates quoted by him in the tender in bill of quantities shall be inclusive of all taxes, duties, levies etc.

The imposition of any new and/or increase in the aforesaid taxes, duties levies (including fresh imposition of any other Tax) is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/levies/cess, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of Engineering-in charge attributable to delay in execution of work within the control of contractor. The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, give a written notice thereof to the Engineering-in-charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

In the event of nonpayment/default in payment of any of the above taxes, BSCDCL reserves the right to with-hold the dues/payments of contractor and make payment to local/state/Central Government authorities or to labourers as may be applicable. The rate quoted by the contractor shall be deemed to be inclusive of all taxes as given in clause 19.1 Tax deductions at source shall be made as per laws prevalent in the State as applicable for the work.

The stamp duty and registration charges, if any, on the contract agreement levied by the Government or any other statutory body, shall be paid by the contractor as applicable in the state of work.

It will be incumbent upon the Contractor to obtain a registration certificate as a dealer under the Local Sales Tax Act / VAT and the Central Sales Tax Act and necessary evidence to this effect shall be furnished by the Contractor to BSCDCL.

The tenderer shall quote his rates inclusive of Service Tax, Turnover Tax / Sales Tax on Works Contract / VAT payable to State Govt. along-with other taxes, duties, levies etc. in conjunction with other terms and conditions. In case, the Turnover Tax/ Sales Tax on Works contract on execution of works is waived off by the State Govt. at later stage for this project, the equivalent amount from the date of waiver of such tax (as per prevailing rate as on the date of waiver of Turnover Tax/ Sales Tax on Works Contract/ VAT) shall be deducted from the amount payable to the contractor from subsequent RA bills.

In the event of decrease / relaxation and / or waiver of any of the existing / prevailing tax(es), duties, levies, cess by Central / state Govt. Or any other statutory body(ies), after the last stipulated date for the receipt of tender including extension (if any), and the contractor thereupon has been paid or has raised claims of such tax(es), duties, levies, cess; such sums shall be recovered / deducted (from claims raised but which has not been paid) effective from the date as reckoned in the relevant statutory order / law / ordinance etc. The contractor, shall, within a period of 30 days of any such waiver/relaxation/decrease in tax(es), duties, levies, cess, give a written notice thereof to Engineer-in-charge stating the statutory change with Documentary proof thereto. Provided always that Engineer-in-charge shall have full powers to effect recovery/deduction on account of any such statutory change even if contractor has not intimated in the event when any such statutory action comes to his notice.

INCOME TAX DEDUCTION (TDS)

Income tax deductions shall be made from all payments made to the contractor including advances against work done, as per the rules and regulations in force, in accordance with the Income Tax act prevailing from time to time.

VALUE ADDED TAX (VAT) / SALES TAX

The contractor shall comply with all the provisions of VAT / SALES TAX Act applicable in the respective state. The contractor shall be registered with the applicable sales tax authority of the state / Union territory as applicable for the works. The contractor shall be responsible for submission of appropriate sales tax / VAT to the authority and BSCDCL shall all times be kept indemnified for non fulfilment of the sales tax / VAT obligations by the contractor including but not limited to registration, submission of tax & its returns at appropriate times and any

other statutory obligation(s) in this regard as applicable. However, contractor is bound to submit the proof of deposit of Sales Tax / VAT to the BSCDCL failing which the Engineer-in-charge shall have, without prejudice to any other rights or remedy available under any of the clauses of contract, full powers to deduct / recover the sum(s) he deems fit from any amount due / payable or any security deposit available at his disposal.

SERVICE TAX

The tenderer shall quote his rates inclusive of Service Tax along with other taxes, duties, levies etc. The contractor must have registration No. with Service Tax Authorities and will provide copy of Registration to BSCDCL before release of any payment by the Corporation. The contractor will submit regular Invoice / Bill fulfilling all conditions of Service Tax Rules 1994 amended from time to time and shall produce proof of deposit of Service Tax to the Corporation as and when demanded failing which the Engineer-in-charge shall have without prejudice to any other rights or remedy available under any of the clauses of contract, full powers to deduct / recover the sum(s) he deems fit from any amount due / payable or any security deposit available at his disposal.

ROYALTY ON MATERIALS:

The contractor shall deposit royalty and obtain necessary permit for supply of bajri, stone, kankar, sand and other materials etc. from the local authorities and quoted rates shall be inclusive of royalty.

The contractor shall be deemed to have inspected the site, its surrounding and acquainted itself with the nature of the ground, accessibility of the site and full extent and nature of all operations necessary for the full and proper execution of the contract, space for storage of materials, constructional plant, temporary works, restrictions on the plying of heavy vehicles in area, supply and use of labour materials, plant, equipment and laws, rules and regulations, if any, imposed by the local authorities.

The rates and prices to be tendered in the bill of quantities are for completed and finished items of works and complete in all respects. It will be deemed to include all constructional plant, labour, supervision materials, transport, all temporary works, erection, maintenance, contractor's profit and establishment/overheads, together with preparation of designs & drawings pertaining to casting yard, shop drawing, fabrication drawing (if required), staging form work, stacking yard, etc. all general risk, all taxes, royalty, duties, cess, octroi and other levies, insurance liabilities and obligations set out or implied in the tender documents and contract .

If any temporary/ permanent structure is encountered or safety of such structure in the vicinity is endangered due to execution of the project, the contractor has to protect the structures by any means as per direction of Engineer-in-Charge. If any damage is caused to any temporary or permanent structure(s) in the vicinity due to execution of the project, the contractor has to make good the same by any means as per direction of Engineer-in-Charge. The contractor should inspect the site of work from this point of view. The cost to be incurred in this regard shall be deemed to be included in his quoted rates of BOQ items and the contractor shall not be entitled for any extra payment in this regard.

INSURANCE OF WORKS ETC

Contractor is required to take contractor's all risk policy or erection all risk policy (as the case may be) from an approved insurance company in the

joint name with BSCDCL and bear all costs towards the same for the full

period of execution of works including the defect liability period for the full amount of contract against all loss of damage from whatever cause arising other than **excepted risks** for which he is responsible under the terms of the contract and in such manner that the BSCDCL and the contractor are covered during the period of construction of works and/or also covered during the period of defect liability for loss or damage

The work and the temporary works to the full value of such works.

The materials, constructional plant, centering, shuttering and scaffolding materials and other things brought to the site for their full value.

Whenever required by BSCDCL, the contractor shall produce the policy or the policies of insurance and the receipts for payment of the current premium.

INSURANCE UNDER WORKMEN COMPENSATION ACT

Contractor is required to take insurance cover under the Workman Compensation Act, 1923 amended from time to time from an approved insurance company and pay premium charges thereof. Wherever required by BSCDCL the contractor shall produce the policy or the policies of Insurance and the receipt of payment of the current premiums.

THIRD PARTY INSURANCE

Contractor is required to take third party insurance cover for an amount of 5%(five percent) of contract value from an approved insurance company for insurance against any damage, injury or loss which may occur to any person or property including that of BSCDCL / owner / client, arising out of the execution of the works or temporary works. Wherever required by BSCDCL the contractor shall produce the policy or the policies of Insurance and the receipt of payment of the current premiums.

In case of failure of the contractor to obtain contractors all risk policy, insurance under workman compensation act and third party insurance as described above within one month from the date of commencement of work, running account payments of the contractor shall be withheld till such time the aforesaid insurance covers are obtained by the contractor.

If the Contractor could not effect a comprehensive insurance cover against risks which he may be required to effect under the terms of the contract, then he shall give his attention to get the best insurance cover available and even in case of effecting a wider insurance cover than the one which the subsidiary of the General

Insurance Company could offer, such an insurance is ought to be done after the BSCDCL's approval, by or through the subsidiary of the General Insurance Company.

(Refer clause 74.2) The contractor shall at all times indemnify BSCDCL and Owner against all claims, damages or compensation under the provision of Payment of wages act-1936, Minimum Wages Act-1948, Employer's liability Act-1938, the workmen's compensation Act-1947, Industrial Disputes Act-1947 and Maternity Benefit Act-1961 or any modifications thereof or any other law in force or as consequence of any accident or injury to any workman or other persons in or about the works, whether in the employment of the contractor or not, against all costs, charges and expenses of any suit, action or proceedings arising out of such incident or injury and against all sum or sums which may with the consent of the contractor be paid to compromise or compound any such claim. Without limiting his obligations and liabilities as above provided, the contractor shall insure against all claims, damages or compensation payable under the Workmen's Compensation Act 1923 or any modification thereof or any other law relating thereto.

PAYMENTS

All running payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed and/or accepted by BSCDCL and shall not preclude the recovery for bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the Contract, or any part thereof, in this respect, or the accruing of any claim, nor shall it conclude, determine or affect in any way the powers of the BSCDCL under these conditions or any of them as to the final settlement and adjustments of the accounts or otherwise, or in any other way vary/ affect the contract. The final bill shall be submitted by the contractor within three months of the completion of work, otherwise BSCDCL's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on contractor. Each Running Bills should be accompanied by two sets of at-least 20 (twenty) photographs as per direction of Engineer-in-charge taken from various points depicting status of work as on Report/ Bill date and Monthly Progress Report for the concerned month in the pro-forma to be given/ approved by Engineer-in-Charge. Intermittent progress Photographs as and when required shall also be provided by the Contractor at his own cost as per direction of Engineer-in-Charge. No payment of running account bill shall be released unless it is accompanied by photographs and Monthly Progress Report as above.

It is clearly agreed and understood by the Contractor that notwithstanding anything to the contrary that may be stated in the agreement between BSCDCL and the contractor; the contractor shall become entitled to payment only after BSCDCL has received the corresponding payment(s) from the client/ Owner for the work done by the contractor. Any delay in the release of payment by the client/ Owner to BSCDCL leading to a delay in the release the corresponding payment by BSCDCL to the contractor shall not entitle the Contractor to any compensation/ interest from BSCDCL.

All payments shall be released by way of e-transfer through RTGS/NEFT in India directly at their Bank account by BSCDCL.

MEASUREMENTS OF WORKS

Engineer-in-charge shall, except as otherwise provided, ascertain and determine by measurement, the value of work done in accordance with the contract.

Except where any general or detailed description of the work expressly shows to the contrary, measurement shall be taken in accordance with the

Procedure set forth in the UADD/MPPWD/CPWD Specification. In the case of items which are not covered by specifications, mode of measurement as specified in the Technical Specifications of the contract and if for any item no such technical specification is available, then a relevant standard method of measurement issued by the Bureau of Indian Standard shall be followed.

Provided further that, In case of Cancellation/Determination of Contract in Full or in Part in accordance with clause 11.0 (and its sub-clauses), following methodology shall be adopted in respect of measurements in addition to what has been mentioned in foregoing:-

All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-Charge or his representative, the Engineer-in-Charge and BSCDCL shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor. The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

COMPUTERISED MEASUREMENT BOOKS

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract. All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book as per the format of BSCDCL so that a complete record is obtained of all the items of works performed under the contract. All such measurements and levels recorded by the

contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative.

After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to BSCDCL a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer-in-Charge and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks.

The final, fair, computerized measurement book given by the contractor, duly bound, with its pages numbered, should be 100% correct, and no cutting or overwriting in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly numbered and bound, after getting the earlier MB cancelled by the BSCDCL. The contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the BSCDCL.

The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages numbered along with two spare copies of the "bill.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements /levels by the Engineer-in-Charge or his representative.

The contractor shall give not less than seven days' notice to the Engineer-in-Charge or his authorized representative in charge of the work before covering up or otherwise placing beyond the reach of checking and/or test checking the measurement of any work in order that the same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of checking and/or test checking measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the BSCDCL to check the measurements recorded by

contractor and all provisions stipulated herein above or anywhere in the tender document shall be applicable to such checking of measurements or levels.

It is also a term of this contract that checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

WITHHOLDING AND LIEN IN RESPECT OF SUMS DUE FROM CONTRACTOR

Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, BSCDCL shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any, deposited by the contractor and for the purpose aforesaid, BSCDCL shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, BSCDCL shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract pending finalization or adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-Charge or BSCDCL will be kept withheld or retained as such by the Engineer-in-Charge or BSCDCL till the claim arising out of or under the contract is

determined by the competent court and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Engineer-in-Charge or the BSCDCL shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/limited company, as the case may whether in his individual capacity or otherwise. BSCDCL shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc, to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for BSCDCL to recover the same from him in the manner prescribed in sub-clause 27.1 of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by BSCDCL to the contractor, without any interest thereon whatsoever.

LIEN IN RESPECT OF CLAIMS IN OTHER CONTRACTS

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or by BSCDCL against any claim of the Engineer-in-Charge or BSCDCL in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer-in-Charge or the BSCDCL. It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in-Charge or the BSCDCL will be kept withheld or retained as such by the Engineer-in-Charge

or the BSCDCL or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the competent court, as the case may be, and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

WORK TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ORDERS ETC.

All items of work in the bill of quantities/ schedule of quantities shall be carried out as per the UADD/MPPWD/CPWD/ MORTH (as the case may be) specifications, drawings and instructions of the Engineer-in-Charge of BSCDCL and the rates shall include for supply of required materials including proper storage, consumables, skilled & unskilled labour, supervision and tools, tackles, plant & machinery complete as called for in the detailed specifications and conditions of the contract. Latest updated UADD/MPPWD/CPWD specification shall be followed for execution of work.

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in strict accordance with the specifications.

The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work assigned by the Engineer-in-Charge.

The contractor shall comply with the provisions of the contract and execute the works with care and diligence and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

MATERIALS TO BE PROVIDED BY THE CONTRACTOR

The contractor shall, at his own expense, provide all materials, required including Cement & Steel for the works. The contractor shall at his own expense and without delay; supply to the Engineer-in-Charge samples of materials to be used on the work and shall get the same approved in advance. All such materials to be

provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract.

The contractor shall, if requested by the Engineer-in-Charge furnish proof, to the satisfaction of the Engineer-in-Charge that the materials so comply.

The contractor shall at his risk and cost, submit the samples of materials to be tested or analyzed and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-Charge or his authorized representative shall at all times have access to the works and to all workshops and places where work is being prepared or from where materials, manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance and cost in obtaining the right and visit to such access. The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-Charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full power to require other proper materials to be substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may require such removal and substitution shall be borne by the contractor.

MATERIALS AND SAMPLES

The materials/products used on the works shall be one of the approved make/brands out of list of manufacturers / brands /makes given in the tender documents. The contractor shall submit samples/ specimens out of approved makes of materials/ products to the Engineer-in-Charge for prior approval. In exceptional circumstances Engineer-in-Charge may allow alternate equivalent makes/brands of products/ materials at his sole discretion. The final choice of brand / make shall remain with the Engineer- in-Charge, whose decision in this matter shall be final and binding and nothing extra on this account shall be payable to the Contractor. In case single brand/ make are mentioned, other equivalent makes/ brands may be considered by the Engineer-in-Charge. In case of variance in UADD/MPPWD/CPWD/IS/BIS Specifications from approved products/makes specification, the specification of approved product/make shall prevail for which nothing shall be paid extra to the Contractor. In case no make or brand of any materials, articles, fittings and accessories etc. is specified, the same shall comply with the relevant Indian Standard Specifications and shall bear the ISI/BIS mark. The Engineer of BSCDCL and the owner shall have the discretion to check quality of materials and equipments to be incorporated in the work, at source of supply or site of work and even after incorporation in the work. They shall also have the discretion to check the workmanship of various items of work to be executed in this work. The contractor shall provide the necessary facilities and assistance for this purpose.

The above provisions shall not absolve the contractor from the quality of final product and in getting the material and workmanship quality checked and approved from the Engineer-in-Charge of BSCDCL.

The contractor shall well in advance, produce samples of all materials, articles, fittings, accessories etc. that he proposes to use and get them approved in writing by BSCDCL. The materials articles etc. as approved shall be *LABELLED* as such and shall be signed by BSCDCL and the Contractor's representative.

The approved samples shall be kept in the custody of the Engineer-in- Charge of BSCDCL till completion of the work. Thereafter the samples except those destroyed during testing shall be returned to the contractor No payment will be made to the contractor for the samples or samples destroyed in testing.

The brands of all materials, articles fittings etc. approved together with the names of the manufacturers and firms from which supplies have been arranged shall be recorded in the site order book.

The contractor shall set up and maintain at his cost, a field testing laboratory for all day to day tests at his own cost to the satisfaction of the Engineer-in-Charge. This field testing laboratory shall be provided with equipment and facilities to carry out all mandatory field tests as per MORTH/UADD/MPPWD/CPWD (as the case may be) specifications. The laboratory building shall be constructed and installed with the appropriate facilities, Temperature and humidity controls shall be available wherever necessary during testing of samples. All equipments shall be provided by the Contractor so as to be compatible with the testing requirements specified. The Contractor shall maintain all the equipments in good working condition for the duration of the contract. The Contractor shall provide approved qualified personnel to run the laboratory for the duration of the Contract. The number of staff and equipment available must at all times be sufficient to keep pace with the sampling and testing programme as required by the Engineer-in-charge. The Contractor shall fully service the site laboratory and shall supply everything necessary for its proper functioning, including all transport needed to move equipment and samples to and from sampling points on the site, etc. The Contractor shall re-calibrate all measuring devices whenever so required by the Engineer-in-charge and shall submit the results of such calibration without delay. All field test shall be carried out in the presence of BSCDCL's representative. All costs towards samples, materials, collection, transport, manpower, testing etc. shall be borne by the Contractor and are deemed to be included in the rates quoted by him in the bill of quantities.

The contractor(s) shall display the calibration certificate of each equipment at the location of equipment & shall get recalibrated at least one week before its expiry date.

MATERIALS PROCURED WITH THE ASSISTANCE OF BSCDCL

If any material for the execution of this contract is procured with the assistance of BSCDCL either by issue from its stores or purchase made under orders or permits or licenses obtained by BSCDCL, the contractor shall hold and use the said materials economically and solely for the purpose of this contract and shall not dispose them without the permission of Engineer-in-charge. The contractor, if required by the BSCDCL, shall return all such surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination on whatsoever reason, on being paid or credited such price as the Engineer-in-charge shall determine having due regard to the conditions of materials. The price allowed to the contractor, however, shall not exceed the amount charged to him excluding the element of storage charges which shall be 10% of the cost charged to contractor. The decision of the Engineer-in-charge shall be final and conclusive.

Contractor(s) has / have to deploy security personnel for safeguarding of materials procured at site.

CONTRACTOR TO SUPPLY TOOLS & PLANTS

The contractor shall provide at his own cost all materials, machinery, tools & plants as require for completion of work. In addition to this, appliances, implements, other plants, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement or examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

MOBILIZATION OF MEN, MATERIALS AND MACHINERY:

All expenses towards mobilization at site and de-mobilization including bringing in equipment, work force, materials, dismantling the equipment's, clearing the site etc. shall be deemed to be included in prices quoted and no separate payment on account of such expenses shall be entertained.

It shall be entirely the Contractor's responsibility to provide, operate and maintain all necessary construction equipment's, scaffoldings and safety, gadget, lifting tackles, tools and appliances to perform the work in a workman like and efficient manner and complete all jobs as per the specifications and within the schedule time of completion of work. Further, contractor shall also be responsible for obtaining temporary electric and water connection for all purposes. The contractor shall also make standby arrangement for water & electricity to ensure un-interrupted supply.

It shall be the responsibility of the contractor to obtain the approval for any revision and/or modification desired by him from BSCDCL before implementation.

The procurement and supply in sequence and at the appropriate time of all materials and consumable shall be entirely the contractor's responsibilities and his rates for execution of work shall be inclusive of supply of all these items.

It is mandatory for the contractor to provide safety equipment's and gadgets to his all workers, supervisory and Technical staff engaged in the execution of the work while working. The minimum requirement (but not limited to) shall be gum boots, safety helmets, Rubber hand gloves, face masks, safety nets, safety belts, goggles etc. as per work requirements. Sufficient nos. of these equipment's and gadgets shall also be provided to BSCDCL by the contractor at his own cost for use of BSCDCL Officials and/ or workforce while working/supervision of work at site. No staff/ worker shall be allowed to enter the site without these equipment's/ gadgets.

The cost of the above equipment's/ gadgets are deemed to be included in the rates quoted by the contractor for the items & works as per Bill of Quantities and contractor shall not be entitled for any extra payment in these regard. The above norm is to be strictly complied with at site. In case the contractor is found to be deficient in providing Safety Equipment's/ Gadgets in the opinion of Engineer-in-charge, the Engineer-in-charge at his option can procure the same at the risk & cost of contractor and provide the same for the use of worksite and shall make the recoveries from the bills of the contractor for the same. The contractor shall abide by all rules & regulations pertaining to Health, Safety and Environment.

All designs, drawings, bill of quantities, etc., except Bar Bending Schedule, Shop & Fabrication drawings, for all works shall be supplied to the contractor for their scope of work all buildings services and development works by BSCDCL in phased manner as the works progress. However it shall be the duty and responsibility of the contractor to bring to the notice of the BSCDCL in writing as to any variation, discrepancy or any other changes required and to obtain revised drawings and designs and / or approval of the BSCDCL in writing for the same.

One copy of contract documents including drawings furnished to the contractor shall be kept at the site and the same shall at all reasonable times be available for inspection.

All materials, construction plants and equipments etc. once brought by the contractor within the project area, will not be allowed to be removed from the premises without the written permission of the Engineer-in-charge. Similarly all enabling works built by the contractor for the main construction undertaken by him, shall not be dismantled and removed without the written authority of the BSCDCL.

Contractor shall have to prepare the Bar Bending Schedule, shop and fabrication drawings free of cost, if required for any of the items of work.

Five copies of these drawings each including for revision will be submitted to BSCDCL for approval. Before executing the item, shop drawings and bar bending schedule should be approved by BSCDCL.

BSCDCL shall supply Work Force in the various categories to assist the contractor in execution of the works on recoverable basis as per provision mentioned elsewhere in the contract.

All contractors' plant, machinery and equipment shall be kept in perfect condition during currency of the contract.

QUALITY ASSURANCE PROGRAMME

To ensure that the services under the scope of this contract are in accordance with the specifications, the Contractor shall adopt Quality Assurance Programme to control such activities at the necessary points:

The contractor shall prepare and finalize such Quality Assurance

Programme within 15 days from date of issue Letter of Award. BSCDCL shall also carryout quality audit and quality surveillance of systems and procedures of Contractor's quality control activities. A Quality Assurance Programme of Contractor shall generally cover the following:

His organization structure for the management and implementation of the proposed Quality Assurance Program.
Documentation control system.

c) The procedure for purpose of materials and source inspection.

System for site controls including process controls.
Control of non-conforming items and systems for corrective actions.
Inspection and test procedure for site activities.
System for indication and appraisal of inspection status.
System for maintenance of records.
System for handling, storage and delivery.

A quality plan detailing out quality practices and procedures, relevant standards and acceptance levels for all types of work under the scope of this contract.

All the quality reports shall be submitted by the Contractors in the formats appended hereto. Checklist enclosed here in this document shall be followed while carrying out Construction activities (items). If any item is not covered by the Checklist/ Formats appended hereto, the Format for the same may be developed and submitted to Engineer-in-Charge for approval and the same shall be adopted. These filled in formats shall be prepared in two copies and duly signed by representatives of contractor and BSCDCL. All the costs associate with Printing of Formats and testing of materials required as per technical specifications or by Engineer-in-charge shall be included in the Contractor's quoted rates in the Schedule/ Bill of quantities.

CONTRACT COORDINATION PROCEDURES, COORDINATION MEETINGS AND PROGRESS REPORTING

The Contractor shall prepare and finalize in consultation with BSCDCL, a detailed contract coordination procedure within 15 days from the date of issue of Letter of Award for the purpose of execution of the Contract. The Contractor shall have to attend all the meetings at any place in India at his own cost with BSCDCL, Owners/ Clients or Consultants of BSCDCL/ Owner/ Client during the currency of the

Contract, as and when required and fully cooperate with such personal and agencies involved during these discussions. The Contractor shall not deal in any way directly with the Clients/ Owners or Consultants of BSCDCL/Owner/ Clients and any dealing/correspondence if required at any time with Clients/ Owners/ Consultants shall be through BSCDCL only. During the execution of the work, Contractor shall submit at his own cost a detailed Monthly progress & programme report to the Engineer-in-charge of BSCDCL by 5th of every month. The format of monthly progress & programme report shall be as approved by Engineer-in-Charge of BSCDCL.

COMPLETION CERTIFICATE AND COMPLETION PLANS

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days

of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or

(b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-Charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof less actual cost incurred on removal of materials / debris / malba etc.

The contractor shall submit completion plan as required vide General Specifications for Electrical works as applicable within thirty days of the completion of the work. In case, the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to a ceiling of Rs.5,00,000 (Rs. Five Lakhs only) as may be fixed by the Engineer-in-charge concerned and in this respect the decision of the Engineer-in-charge shall be final and binding on the contractor.

PROHIBITION OF UNAUTHORISED CONSTRUCTION & OCCUPATION

No unauthorized buildings, construction of structures should be put up by the contractor anywhere on the project site, neither any building built by him shall be occupied in un-authorized manner by him or his staff.

It shall be the responsibility of the contractor to see that the building under construction is not occupied by anybody in un-authorized manner during construction, and is handed over to the Engineer-in-Charge with vacant possession of complete building. If such building though completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy of compensation upto 5% of tendered value of work may be imposed by the Engineer-in-Charge whose decision shall be final both with regard to the justification and quantum and shall be binding on the contractor.

However, the Engineer-in-Charge, through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

FORECLOSURE OF CONTRACT BY BSCDCL/OWNER

If at any time after the commencement of the work the BSCDCL shall for any reason whatsoever is required to abandon the work or is not require the whole work thereof as specified in the tender to be carried out, the Engineer-in-Charge shall give notice in writing of the fact to the contractor, who shall have no claim to any payment of compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the foreclosure of the whole or part of the works.

DEFECTS LIABILITY PERIOD

The contractor shall be responsible for the rectification of defects in the works for a period twelve months from the date of taking over of the works by the BSCDCL or clients whichever is later. Any defects discovered and brought to the notice of the contractor forthwith shall be attended to and rectified by him at his own cost and expense. In case the contractor fails to carry out these rectifications, the same may without prejudice to any other right or remedy available, be got rectified by BSCDCL at the cost and expense of the contractor

RESTRICTION ON SUBLETTING

The contractor shall not sublet or assign the whole or part of the works except where otherwise provided, by the contract. The provision of labour

on piece work basis shall not be deemed to be a subletting under this clause.

The contractor may entrust specialist items of works like MEP services, HVAC, Lifts, Building Management System, Water Proofing, and Data &

Communication networking, interiors, landscaping etc. to the agencies specialized in the specific trade. The contractor shall give the names and details of such firm whom it is going to employ for approval of BSCDCL. These details shall include the expertise, financial status, technical manpower, equipment, resources and list of works executed and on hand of the specialist agency. Further, prior written approval is required from BSCDCL to deploy such agency / sub-contractor.

FORCE MAJEURE

Any delay in or failure to perform of either party, shall not constitute default so as to give rise to any claim for damages, to the extent such delay or failure to perform is caused by an act of God, or by fire, explosion, flood or other natural catastrophe, governmental legislation, orders or regulation etc. Failure of the client / owner to hand over the entire site and / or release funds for the project, to BSCDCL, shall also constitute force majeure. The time for performance of the obligation by the parties shall be deemed to be extended for a period equal to the duration of the force majeure event. Both parties shall make their best efforts to minimize the delay caused by the force majeure event. If the failure / delay of the client /owner in handing over the entire site and / or in releasing the funds continues even on the expiry of the stipulated date of completion, BSCDCL, may, at the request of the contractor, foreclose the

contract without any liability to either party. In the event of such foreclosure, the contractor shall not be entitled to any compensation whatsoever. If prior to such foreclosure the contractor has brought any materials to the site, the Engineer-in-Charge shall always have the option of taking over of all such materials at their purchase price or at the local current rates, whichever is lower.

NO COMPENSATION CLAUSE

The contractor shall have no claim whatsoever for compensation or idle charges against BSCDCL on any ground or for any reason, whatsoever.

DIRECTION FOR WORKS

All works under the contract shall be executed under the direction and subject to approval in all respect of the Engineer-in-Charge of BSCDCL who shall be entitled to direct at whatever point or points and in whatever manner works are to be commenced and executed.

The Engineer-in-Charge and his representative shall communicate or confirm

their instructions to the contractor in respect of the execution of work during their site inspection in a 'Works Site Order Book' maintained at the site office of Engineer-in-Charge. The contractor or his authorized representative shall confirm receipt of such instructions by signing against the relevant orders in the book.

WORK IN MONSOON AND RAIN

The execution of the work may entail working in the monsoon also. The contractor must maintain labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No special/ extra rate will be considered for such work in monsoon. The contractors' rate shall be considered inclusive of cost of dewatering due to rains required if any and no extra rate shall be payable on this account. The stipulated period for completion of project includes the monsoon period, holidays & festivals.

WORK ON SUNDAYS, HOLIDAYS AND DURING NIGHT

For carrying out work on Sunday and Holidays or during night, the contractor will approach the Engineer-in-Charge or his representative at least two days in advance and obtain his permission. The Engineer-in-Charge at his discretion can refuse such permission. The contractor shall have no claim on this account whatsoever. If work demand, the contractor shall make arrangements to carry out the work on Sundays, Holidays and in two, three shifts with the approval of Engineer-in-Charge at no extra cost to BSCDCL.

WATER AND ELECTRICITY

The contractor shall make his own arrangement for Water & Electrical power for construction and other purposes at his own cost and pay requisite electricity and water charges. The contractor shall also make standby arrangement for water & electricity to ensure un-interrupted supply.

LAND FOR LABOUR HUTS/ SITE OFFICE AND STORAGE ACCOMMODATION

The contractor shall arrange the land for temporary office, storage accommodation and labour huts at his own cost and get the clearance of local authorities for setting up/construction of labour camp and same is deemed to be included in the rates quoted by the contractor for the works. The contractor shall ensure that the area of labour huts is kept clean and sanitary conditions are maintained as laid down by the local authorities controlling the area. The labour huts shall be so placed that it does not hinder the progress of work or access to the worksite. The vacant possession of the land used, for the purpose shall be given back by contractor after completion of the work.

The security deposit of the contractor shall be released only after contractor demolishes all structures including foundations and gives back clear vacant possession of this land In the event the contractor has to shift his labour campus at any time during execution of the work on the instructions of local authorities or as per the requirement of the work progress or as may be required by BSCDCL, he shall comply with such instructions at his cost and risk and no claim whatsoever shall be entertained on this account.

WATCH, WARD AND LIGHTING OF WORK PLACE

The contractor shall at his own cost take all precautions to ensure safety of life and property by providing necessary barriers, OBSTRUCTIONS, lights, watchmen etc. during the progress of work as directed by Engineer-in- charge.

BITUMEN WORK

The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formula, before the process of painting started and shall hypothecate it to the Engineer-in-Charge. Although the materials are hypothecated to BSCDCL the Contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the written consent of the Engineer-in-charge.

If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution for reasons other than authorized changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer-in-Charge shall be made and the material return to the contractors.

SCHEDULE OF QUANTITIES / BILL OF QUANTITIES

The quantities shown against the various items of work are only approximate quantities which may vary as per the actual requirement at site. No item which is not covered in the bill of quantities shall be executed

by the Contractor without the approval of the BSCDCL. In case any Extra/Substituted item is carried out without specific-approval, the same will not be paid.

WATER PROOF TREATMENT

53.1 The water proof treatment shall be of type and specifications as given in the schedule of quantities.

The water-proofing of basement, roofs, water retaining areas shall be and remain fully effective for a period of not less than 10(Ten) years to be reckoned from the date of expiring of the Defect Liability period, prescribed in the contract. At any time during the said guarantee period if BSCDCL finds any defects in the said treatment or any evidence of re-infestation, dampness, leakage in any part of buildings or structure and notifies the contractor of the same, the contractor shall be liable to rectify the defect or give re-treatment and shall commence the work or such rectification or re-treatment within seven days from the date of issue of such letter to him. If the contractor fails to commence such work within the stipulated period, the BSCDCL may get the same done by another agency at the Contractor's cost and risk and the decision of the Engineer-in-Charge of BSCDCL for the cost payable by the contractor shall be final and binding upon him.

Re-treatment if required shall be attended to and carried out by the Contractor within seven days of the notice from Engineer-in-Charge of BSCDCL.

The BSCDCL reserves the right to get the quality of treatment checked in accordance with recognized test methods and in case it is found that the

chemicals with the required concentration and rate of application have not been applied, or the water proofing treatment is not done as per specifications, the contractor will be required to do the re-treatment in accordance with the required concentration & specifications at no extra cost failing which no payment for such work will be made. The extent of work thus rejected shall be determined by BSCDCL.

Water proofing shall be got done through approved / specialized agencies only with prior approval of Engineer-in-Charge.

The contractor shall make such arrangement as may be necessary to safe guard the workers and residents of the building against any poisonous effect of the chemicals used during the execution of the work.

During the execution of work, if any damage shall occur to the treatment already done, either due to rain or any other circumstances, the same shall be rectified and made good to the entire satisfaction of Engineer-In-Charge by the contractor at his cost and risk.

The contractor shall make his own arrangement for all equipment's required for the execution of the job. The contractor whose tender is accepted shall execute Guarantee Bond in the prescribed form as appended for guaranteeing the water proofing treatment.

INDIAN STANDARDS

Wherever any reference is made to any IS in any particular specifications, drawings or bill of quantities, it means the Indian Standards editions with up to date amendments issued till last date of receipt of tender documents.

CENTERING & SHUTTERING

Marine plywood or steel plates or any material mentioned elsewhere in the tender document or as approved by Engineer-in-Charge shall be used for formwork. The shuttering plates shall be cleaned and oiled before every repetition and shall be used only after obtaining approval of BSCDCL's Engineers at site. The number of repetitions allowed for plywood and steel shuttering shall be at the discretion of Engineer-in-Charge of BSCDCL depending upon the condition of shuttering surface after each use and the decision of Engineer-in-Charge in this regard shall be final and binding on the contractor. No claim whatsoever on this account shall be admissible.

RECORDS OF CONSUMPTION OF CEMENT & STEEL

For the purpose of keeping a record of cement and steel received at site and consumed in works, the contractor shall maintain a properly bound register in the form approved by the BSCDCL, showing columns like quantity received and used in work and balance in hand etc. This register shall be signed daily by the contractor's representative and BSCDCL's representative.

The register of cement & steel shall be kept at site in the safe custody of BSCDCL's Engineer during progress of the work. This provision will not, however, absolve the contractor from the quality of the final product.

In case cement or steel quantity consumed is lesser as compared to the

theoretical requirement of the same as per MORTH/UADD/MPPWD/CPWD (as the case may be) specifications/ norms, the work will be devalued and/ or a penal rate (i.e. double the rate at which cement/ steel purchased last) recovery for lesser consumption of cement/ steel shall be made in the item rates of the work done subject to the condition that the tests results fall within the acceptable criteria as per MORTH/UADD/MPPWD/CPWD (as the case may be) specifications otherwise the work shall have to be dismantled and redone by the contractor at no extra cost. In case of cement, if actual consumption is less than 98% of the theoretical consumption, a recovery shall be effected from the contractors bills at the penal rate for the actual quantity which is lower than 98% of theoretical consumption.

TESTS AND INSPECTION

The contractor shall carry out the various mandatory tests as per specifications and the technical documents that will be furnished to him during the performance of the work. All the tests on materials, as

recommended by UADD/MPPWD/CPWD, MORTH and relevant Indian Standard Codes or other standard specifications (including all amendments current at the last date of submission of tender documents) shall be got carried out by the contractor at the field testing laboratory or any other recognized institution/ laboratory, at the direction of the BSCDCL. All testing charges, expenses etc. shall be borne by the contractor. All the tests, either on the field or outside laboratories concerning the execution of the work and supply of materials shall be got carried out by the contractor or BSCDCL at the cost of the Contractor.

WORKS TO BE OPEN TO INSPECTION

All works executed or under the course of execution in pursuance of this contract shall at all times be open to inspection and supervision of the BSCDCL. The work during its progress or after its completion may also be inspected, by Chief Technical Examiner of Government of India (CTE) and/or an inspecting authority of State Government of State in which work is executed and/or by third party checks byowner/lients. The compliance of observations/improvements as suggested by the inspecting officers of BSCDCL/CTE/ State authorities/ Owners shall be obligatory on the part of the Contractor at the cost of contractor.

BORROW AREAS

The contractor shall make his own arrangements for borrow pits and borrow disposal areas including their approaches and space for movement of man, machinery, other equipment's as required for carrying out the works. The contractor shall be responsible for taking all safety measures, getting approval, making payment of royalties, charges etc. and nothing extra shall be paid to the contractor on this account and unit rates quoted by the contractor for various items of bill of quantities shall deemed to include the same.

60.0 CARE OF WORKS

From the commencement to the completion of works and handing over, the contractor shall take full responsibility for care thereof all the works and in case of any damage/loss to the works or to any part thereof or to any temporary works due to lack of precautions or due to negligence on part of Contractor, the same shall be made good by the Contractor.

CO-ORDINATION WITH OTHER AGENCIES

Work shall be carried out in such a manner that the work of other Agencies operating at the site is not hampered due to any action of the Contractor. Proper Co-ordination with other Agencies will be Contractor's responsibility. In case of any dispute, the decision of BSCDCL shall be final and binding on the contractor. No claim whatsoever shall be admissible on this account.

SETTING OUT OF THE WORKS

The contractor shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions and alignment of all parts of the works. If at any time during the progress of works, shall any error appear or arise in the position, levels, dimensions or alignment of any part of the works, the contractor shall at his own expenses rectify such error to the satisfaction of Engineer-in-charge. The checking of any setting out or of any line or level by the engineers of BSCDCL shall not in any way relieve the contractor of his responsibility for the correctness.

NOTICE BEFORE COVERING UP THE WORK

The contractor shall give not less than seven day's notice before covering up or otherwise placing beyond the reach of measurement any work, to the Engineer-in-charge in order that the same may be inspected and measured. If any work is covered up or placed beyond the reach of inspection/measurement without such notice or his consent being obtained the same shall be uncovered at the contractor expenses and he shall have to make it good at his own expenses.

SITE CLEARANCE

The contractor shall ensure that the working site is kept clean and free of obstructions for easy access to job site and also from safety point of view. Before handing over the work to the BSCDCL the contractor shall remove all temporary structures like the site offices, cement go-down, stores, labour hutments etc., scaffolding rubbish, debris etc. left over materials tools and plants, equipments etc., clean the site to the entire satisfaction of the Engineer-in-charge. If this is not done the same will be got done by BSCDCL at his risk and cost.

The contractor shall clean all floors, remove cement/ lime/ paint drops and deposits, clean joinery, glass panes etc., touching all painter's works and carry out all other necessary items of works to make the premises clean and tidy before handing over the building, and the rates quoted by the contractor shall be deemed to have included the same.

SET-OFF OF CONTRACTOR'S LIABILITIES

BSCDCL shall have the right to deduct or set off the expenses incurred or likely to be incurred by it in rectifying the defects and/or any claim under this agreement against the Contractor from any or against any amount payable to the contractor under this agreement including security deposit and proceeds of performance guarantee.

POSSESSION PRIOR TO COMPLETION

BSCDCL shall have the right to take possession of or use any completed or partially completed work or part of the work. Such possession or use shall not be deemed to be any acceptance of any work not completed in accordance with the contract agreement. If such prior possession or use by BSCDCL delays the progress of work an equitable adjustment in the time of completion will be made and the contract agreement shall be deemed to be modified accordingly. The decision of BSCDCL in such case shall be final binding and conclusive.

When the whole of the works or the items or the groups of items of work have been completed the contractor will give a notice to that effect to the Engineer in writing. The Engineer shall within 7 days of the date of receipt of such notice inspect the works and give instructions in writing to the contractor specifying the balance items of work which are required to be done by the contractor and shall also notify the contractor of any defect in the works affecting completion.

66.3 The contractor shall during the course of execution prepare and keep updated a complete set of 'as built' drawings to show each and every change from the contract drawings, changes recorded shall be countersigned by the Engineer-in-Charge and the contractor. Four copies of 'as built' drawings shall be supplied to BSCDCL by the contractor within 30 days of the completion. All costs incurred in this respect shall be borne by the contractor.

EMPLOYMENT OF PERSONNEL

The contractor shall employ only Indian Nationals as his representatives,

servants and workmen after verifying their antecedents and loyalty. He shall ensure that no personnel of doubtful antecedents and any other nationality in any way is associated with the works.

In case BSCDCL observed misconduct negligence or incompetence etc. on the part of any representative, agent, servant and workmen or employees etc. of the contractor, the BSCDCL shall have full power and without giving any reason to the contractor, instruct the contractor to remove such engineer / staff / worker from site and provide suitable replacements. The decision of the Engineer-in-charge shall be final and binding on the contractor. The contractor shall not be allowed any compensation on this account.

TECHNICAL STAFF FOR WORK

The contractor shall employ at his cost the adequate number of technical staff during the execution of this work depending upon the requirement of work. For this purpose the numbers to be deployed, their qualification, experience as decided by BSCDCL shall be final and binding on contractor. The contractor shall not be entitled for any extra payment in this regard.

The technical staff should be available at site, whenever required by BSCDCL to take instructions.

Within 15 days of Letter of Award, the contractor shall submit a site organizational chart and resume including details of experience of the Project-in-Charge and other staff proposed to be deputed by him and the technical team shall be deputed by them on the Project after getting approval from Engineer-in-Charge. If desired by the contractor at later date, the Project-in-Charge and other staff whose resume is approved by BSCDCL can be replaced with prior written approval of BSCDCL and replacement shall be with equivalent or superior candidate only. Decision of Engineer-in-Charge shall be final and binding on the contractor.

Even after approving the site organizational chart, the Engineer-in-Charge due to technical reasons and exigency of work can direct the contractor to depute such additional staff as in view of Engineer-in-Charge is necessary and having qualification and experience as approved by the Engineer-in-

Charge. The removal of such additional staff from the site shall only be with the prior written approval of Engineer-in-Charge. The contractor shall not

be paid anything extra whatsoever on account of deployment of additional staff and decision of the Engineer-in-Charge shall be final and binding on the contractor.

In case the contractor fails to employ the staff as aforesaid he shall be liable to

pay a reasonable amount not exceeding a sum of **Rs. 50,000** (Rupees Fifty Thousand only) for each month of default in the case of each person. The decision of the Engineer-in-charge as to number of Technical Staff to be adequate for the project and the period for which the desired strength of technical staff was not employed by the contractor and as to the reasonableness of the amount to be deducted on this account shall be final and binding on the contractor as to the amount and the contractor's liability to pay the said amount.

VALUABLE ARTICLES FOUND AT SITE

All gold, silver and other minerals of any description and all precious stones, coins, treasure, relics, antiques and all other similar things which shall be found in, under or upon the site, shall be the property of the owner/ BSCDCL.

MATERIALS OBTAINED FROM DISMANTLEMENT TO BE OWNER'S PROPERTY

All materials like stone, boulders and other materials obtained during the work of dismantling, excavation etc. will be considered BSCDCL/owner property and such materials shall be disposed off to the best advantage of BSCDCL/owner according to the instructions in writing issued by the Engineer-in-charge.

FURNISHED OFFICE ACCOMMODATION & MOBILITY COMMUNICATION TO BE ARRANGED BY CONTRACTOR

On acceptance of tender, the contractor at his own cost will construct a suitably equipped office at site with basic facilities such as telephone(s), fax, internet, photocopier, computer(s) and printer(s) along with operator(s), regular electric &

drinking water supply and staff carrying vehicles for the supervisory staff with driver, fuel and maintenance etc. as per the requirement of the project. The contractor shall maintain the aforesaid facilities

intact/operational during the tenancy of the contract or maximum up to 6 months beyond the stipulated contractual completion date if the work is delayed due to any reasons. Operation and maintenance cost of all such materials, equipments / services shall be borne by the contractor.

The contractor shall also make sufficient arrangement for photography/video-graphy so that photographs video can be taken of any specific activity at any point of time. The contractor shall also make arrangement of software like MS Project etc. for the purpose of preparing progress report etc.

The contractor shall make all arrangements for ground breaking ceremony/inaugural function etc. for the project as required and the cost

towards it deemed to be included in his rates/offer. Any expenditure already incurred/to be incurred by BSCDCL, shall be recovered from the contractor.

LABOUR LAWS

LABOUR LAWS TO BE COMPLIED BY THE CONTRACTOR

The contractor shall obtain a valid license under the contract labour (Regulation & Abolition) Act 1970 and the contract labour Act (Regulation & Abolition) Central Rules 1971 and amended from time to time, and continue to have a valid license until the completion of the work including defect liability period. The contractor shall also adhere by the provision of the child labour (Prohibition and Regulation) Act. 1986 and as amended from time to time.

The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfil above requirement shall attract the penal provisions of this contract arising out the resultant for non execution of the work before the commencement of work. No labour below the age of 18 years shall be employed on the work.

Payment of wages:

The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the BSCDCL Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.

In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the BSCDCL contractor's Labour Regulations in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorisedly made,

maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

(a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.

(b) Under the provision of Minimum Wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned

The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.

The contractor shall indemnify and keep indemnified BSCDCL against payments to be made under and for the observance of the laws aforesaid and the BSCDCL Contractor's Labour Regulations without prejudice to his right to claim indemnity from his sub-contractors.

The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

LABOUR SAFETY PROVISION

The contractor shall be fully responsible to observe the labour safety provisions:

The contractor shall at his own cost take all precautions to ensure safety of life and property by providing necessary barriers, lights, watchmen etc. during the progress of work as directed by Engineer-in-charge

In case of all labour directly or indirectly employed in work for the performance on the contractor's part of this contract, the contractor shall comply with all rules framed by Govt. from time to time for the protection of health and sanitary arrangements for workers.

OBSERVANCE OF LABOUR LAWS

The contractor shall be fully responsible for observance of all labour laws applicable including local laws and other laws applicable in this matter and shall indemnify and keep indemnified BSCDCL against effect or non observance of any such laws. The contractor shall be liable to make payment to all its employees, workers and sub-contractors and make compliance with labour laws. If BSCDCL or the client/ owner is held liable as "Principal Employer" to pay

contributions etc. under legislation of Government or Court decision in respect of the employees of the contractor, then the contractor would reimburse the amount of such payments, contribution etc. to BSCDCL and/ or same shall be deducted from the payments, security deposit etc. of the contractor.

The Contractor shall submit proof of having valid EPF registration certificate. He shall within 7 days of the close of every month, submit to BSCDCL a statement showing the recoveries of contributions in respect of each employee employed by or through him and shall furnish to BSCDCL such information as the BSCDCL is required to furnish under the provisions of para 36 B of the EPF scheme 1952 to the EPF authorities and other information required by EPFO authorities from time to time. He shall also submit a copy of challan every month in token of proof of having deposited the subscription and contribution of workers engaged on the project.

In case, the contractor is not complying the above provision BSCDCL shall withhold payment to the extent of 4.70% (Four point Seven Zero percent) of the value of the Running Account bill and shall release only after the submission of above mentioned details. If it is incumbent upon BSCDCL to deposit withhold amount with EPF authorities, the withhold amount shall be deposited by BSCDCL with EPF authorities. In such a case BSCDCL shall not refund this withheld amount to the contractor even after the production of EPF registration certificate.

MINIMUM WAGES ACT

The contractor shall comply with all the provisions of the minimum wages Act, 1948, contract labour Act (Regulation & Abolition) 1970, and rules framed there under and other labour laws/local laws affecting contract labour that may be brought into force from time to time.

LABOUR CESS

The rates of the contractor shall be inclusive of labour cess. BSCDCL shall make a recovery @ 1% on account of labour cess from each RA bill of the contractor and labour cess so recovered/deducted shall be deposited with the Labour Board of the concerned state. In case the Labour Board is not established in the state, recovery

made by BSCDCL on account of labour cess shall be retained under suspense account and will be deposited with the Labour Board at later date as & when the Labour Board is constituted in the state.

Every contractor, sub-contractor, affiliates, their legal assigns or heirs as the case may, shall be responsible for registration of every Building worker who has completed eighteen years of age but has not completed sixty years of age and who has been engaged in any Building or Other Construction Work for not less than Ninety Days during the preceding twelve months; with the Board / Funds as applicable under various sections of "THE BUILDINGS AND OTHER

CONSTRUCTION WORKERS (REGULATION OF EMPLOYMENT AND CONDITIONS OF SERVICE) ACT, 1996 and THE BUILDING AND OTHER

CONSTRUCTIONWORKERS' WELFARE CESS ACT, 1996.

The contractor shall also be responsible for maintaining register of beneficiaries i.e. the workers in such form as may be prescribed by the competent authority & the same shall be kept open at all reasonable times for inspection of relevant authority and officials of client / BSCDCL.

The contractor shall be further responsible for maintaining such register & records; giving such particulars of Building workers employed by him, the work performed by them, the number of hours of work which shall constitute a normal working day, the wages paid to them, the receipts given by them and, such other particulars in such form as may be prescribed by the authority or BSCDCL.

In the event of contractor failing to comply with the above clause(s) in part or in full, BSCDCL, without prejudice to any other rights or remedy available under law or any other clause(s) of contract, shall be at absolute liberty to forfeit any sum or sums that are payable or could become payable on account of execution of contract work and decision of Engineer-in-charge shall be final

& binding in this regard on the contractor.

RECOVERY OF COMPENSATION PAID TO WORKMEN

In every case in which by virtue of the provisions sub-section (1) of Section 12, of the Workmen's Compensation Act, 1923, BSCDCL is obliged to pay compensation to a workman employed by the contractor, in execution of the works, BSCDCL will recover from the contractor, the amount of the compensation so paid; and, without prejudice to the rights of the BSCDCL under sub-section (2) of Section 12, of the said Act, BSCDCL shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due to the contractor whether under this contract or otherwise. BSCDCL shall not be bound to contest any claim made against it under sub-section (1) of Section 12, of the said Act, except on the written request of the contractor and upon his giving to BSCDCL full security for all costs for which BSCDCL might become liable in consequence of contesting such claim.

ENSURING PAYMENT AND AMENITIES TO WORKERS IF CONTRACTOR FAILS

In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, BSCDCL is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act or under the BSCDCL Contractor's Labour Regulations, or under the Rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by BSCDCL's Contractors, BSCDCL will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to any other right or remedy available under this contract, BSCDCL shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by BSCDCL to the contractor whether under this contract or otherwise BSCDCL shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of Section 21, of the said Act, except on the written request of the contractor and upon his giving to the BSCDCL full security for all costs for which BSCDCL might become liable in contesting such claim.

CHANGE IN FIRM'S CONSTITUTION TO BE INTIMATED

Where the contractor is a partnership firm, the prior approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If prior approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 65.0 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 65.0.

INDEMNITY AGAINST PATENT RIGHTS

The contractor shall fully indemnify the BSCDCL from and against all claims and proceedings for or on account of any infringement of any patent rights, design, trademark or name or other protected rights in respect of any construction plant, machine, work or material used for in connection with the works or temporary works.

LAW COVERING THE CONTRACT

This contract shall be governed by the Indian laws for the time being in force.

LAWS, BYE-LAWS RELATING TO THE WORK

The contractor shall strictly adhere by the provisions, for the time being in force, of law relating to works or any regulations and bylaws made by any local authority or any water & lighting agencies or any undertakings within the limits of the jurisdiction of which the work is proposed to be executed. The contractor shall be bound to give to the authorities concerned such notices and take all approvals as may be provided in the law, regulations or bylaws as aforesaid, and to pay all fees and taxes payable to such authorities in respect thereof.

CONTRACT AGREEMENT

The Contractor shall enter into a Contract Agreement with the BSCDCL within

10 (TEN) days from the date of Letter of Award or within such extended time, as may be granted by the BSCDCL failing which no payment shall be released to the contractor. The cost of stamp papers, stamp duty, registration, if applicable on the contract, shall be borne by the Contractor. In case, the contractor does not sign the agreement as above or start the work within 10 (Ten) days of the issue of letter of Award, his earnest money is liable to be forfeited and Letter of award consequently will stand withdrawn.

MANNER OF EXECUTION OF AGREEMENT

The agreement as per prescribed Performa as enclosed shall be signed at the office of the BSCDCL within 10(TEN days) days from the date of issue of Letter of Award. The Contractor shall provide for signing of the Contract, appropriate Power of Attorney and the requisite documents/ materials. Unless and until a formal contract is prepared and executed, the Letter of Award read in conjunction with the Tendering Documents will constitute a binding contract.

The agreement will be signed in five originals and the Contractor shall be provided with one signed original and the other four originals will be retained by the BSCDCL

The Contractor shall provide free of cost to the BSCDCL all the Engineering data, drawings and descriptive materials submitted along with the tender, in at least three (3) copies to form an integral part of the Agreement within seven 7 days after issuing of Letter of Award.

Subsequent to signing of the Agreement, the Contractor at his own cost shall provide to the BSCDCL with at least five (5) true hard bound copies of Agreement within thirty (30) days of its signing.

JURISDICTION

The agreement shall be executed at BHOPAL on non-judicial stamp paper purchased in BHOPAL and the courts in BHOPAL alone will have jurisdiction to deal with matters arising there from, to the exclusion of all other courts.

SECTION-4

LABOUR SAFETY, HEALTH & SANITARY RULES AND REGULATIONS INCLUDING FORMS

LABOUR SAFETY PROVISIONS

Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable footholds and hand holds shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 (1/4 horizontal and 1 vertical).

Scaffolding or staging more than 3.6m (12 feet) above the ground or floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3 feet) high above the floor or platform of such scaffolding or staging and extending along the entire length of the

outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

Working platforms, gangways, and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6m (12 feet) above ground level or floor level, they should be closely boarded, should have adequate width & should be suitable fastened as described in (2.0) above.

Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm (3 feet).

Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30 feet) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11.5") for ladder up to and including 3m (10 feet) in length. For longer ladders this width should be increased at least 1/4" for each additional 30 cm (1 ft.) of length. Uniform step spacing shall not exceed 30 cm (12"). Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of the work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident, and shall be bound to bear the expenses of defense of every suit, action

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

EXCAVATION AND TRENCHING

All trenches, 1.2mts.(four feet) or more in depth, shall at all times be supplied with at least one ladder for each 30m.(100 feet) in length or fraction thereof, ladder shall be extended from bottom of the trench to at least 90cm (3feet) above the surface of the ground. The side of the trenches, which are 1.5 m. (5feet) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger or sides to collapsing. The excavated materials shall not be placed within 1.5m (5 feet) of the edges of the trench or half of the depth of the trench whichever is more.

Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.

Demolition - Before any demolition work is commenced and also during the progress of the work following precautions shall be observed:

All roads and open areas adjacent to the work site shall either be closed or suitably protected.

No electric cable or apparatus which is likely to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.

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

All necessary personal safety equipments as considered adequate by the Engineer-in-charge should be kept available for the use of persons employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate step to ensure proper use of equipment by those concerned. The following safety equipment shall be invariably provided.

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

Those engaged in white washing and mixing or stacking of cement bags or any materials which are injurious to the eye shall be provided with protective goggles.

8.3 Those engaged in welding works shall be provided with welders protective eye

shields.

Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe interval.

When workers are employed for works in sewers and manholes, which are in active use, the Contractors shall ensure that the manhole covers are opened

and ventilated at-least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident the public. In addition, the contractor shall ensure that the following safety measures are adhered to:

Entry for workers into the sewer line shall not be allowed except under supervision of the JE or any other higher officer.

At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manholes for working inside.

Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes color in the presence of such gases and gives indication of their presence.

Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.

Safety belt with rope should be provided to the workers. While working inside the manholes such rope should be handled by two men standing outside to enable him to be pulled out during emergency.

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

No smoking or open flames shall be allowed near the blocked manhole being cleaned.

The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.

Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-In-charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.

Gas masks with Oxygen Cylinder should be kept at site for use in emergency.

Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air-blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at-least 2 metres away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

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

The workers shall be provided with Gumboots or non sparking shoes, bump helmets and gloves non sparking tools, safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.

Workmen descending a manhole shall try each ladder step or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.

If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.

The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-In-charge regarding the steps to be taken in this regard in an individual case will be final.

The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form wherever men above the age of 18 are employed on the work of lead painting the following precautions should be taken.

- 8.6.1 No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
- 8.6.2 Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint is dry rubbed and scrapped.

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

8.6.4.1a) White lead, sulphate or lead work products containing those pigments shall not be used in painting operation except in the form of paste or of paints ready for use.

Measures shall be taken whenever required in order to prevent danger arising from the application of paint in the form of spray.

Measures shall be taken, whenever practicable to prevent danger arising out of dust caused by dry rubbing down and scrapping.

a) Adequate facilities shall be provided to enable working painter to wash during and on cessation of work.

Suitable arrangements shall be made to prevent clothing put off during working hours being spoiled by painting materials.

8.6.4.3 a) Cases of lead poisoning and of suspected lead poisoning shall be notified and shall be subsequently verified by a medical man appointed by the competent authorities of BSCDCL.

The BSCDCL may require when necessary a medical examination of workers.

Instructions with regard to the special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provisions should be made for prompt first aid treatment for all injuries likely to be sustained during the course of the work.

Use of hoisting machines and tackle including their attachment encourage and supports shall conform to the following standard of conditions.

- a) these shall be of good mechanical construction, sound material and adequate strength and free from patent, defects and shall be kept in good working order.

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

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

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

In case of BSCDCL machines, the safe working load shall be notified by the Engineer-in-Charge. As regards Contractor's machines the Contractor shall notify the safe working load of the machine to the Engineer-in-charge whenever he brings any machinery to site of work and get verified by the Engineer-in-Charge.

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

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

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

To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the Contractor shall be open to inspection by BSCDCL Official or their representatives.

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

SECTION-5

FORMS AND FORMATS

Appendix - 'N'

FORM XXV

DETAILS OF THE BALANCE WORK IN HAND AS ON _____

(UPTO THE PRECEDING MONTH OF SUBMISSION OF BID) WITH BSCDCL

(To be submitted in Envelop-1)

S. No	Name of the Unit/Zone/SBG/RGB	Contract Value	Date of start as per LOI/Contract	Date of completion as per LOI/Contract	Work done up to the preceding month of submission of bid	Balance value of work

Note: The bidder shall also include the value of all such works which are awarded to bidder but yet not started up to the preceding month of submission of bid.

Appendix - 'O'

FORM XXVI

AFFIDAVIT

(To be submitted by bidder on non-judicial stamp paper of Rs. 100/- (Rupees Hundred only) duly attached by Notary Public)

(To be submitted in Envelop-1)

Affidavit of Mr.S/o

R/o

I, the deponent above named do hereby solemnly affirm and declare as under:

That I am the Proprietor/Authorized signatory of M/s
.....

Having its Head Office/Regd. Office at
.....

That the information/documents/Experience certificates submitted by
M/s..... along with the tender for (NAME OF
WORK).....

To BSCDCL Ltd. are genuine and true and nothing has been concealed.

I shall have no objection in case BSCDCL verifies them from issuing authority(ies). I shall also have no objection in providing the original copy of the document(s), in case BSCDCL demand so for verification.

I hereby confirm that in case, any document, information & / or certificate submitted by me found to be incorrect / false / fabricated, BSCDCL at its discretion may disqualify / reject / terminate the bid/contract and also forfeit the EMD / All dues.

I shall have no objection in case BSCDCL verifies any or all Bank Guarantee(s) under any of the clause(s) of Contract including those issued towards EMD and Performance Guarantee from the Zonal Branch /office issuing Bank and I/We shall have no right or claim on my submitted EMD before BSCDCL receives said verification.

That the Bank Guarantee issued against the EMD issued by (name and address of the Bank) is genuine and if found at any stage to be incorrect / false / fabricated, BSCDCL shall reject my bid, cancel pre-qualification and debar me from participating in any future tender for three years.

I,, the Proprietor / Authorised signatory of M/s..... do hereby confirm that the contents of the above Affidavit are true to my knowledge and nothing has been concealed there from..... and that no part of it is false.

Verified at this..... day of

DEPONENT

ATTESTED BY (NOTARY PUBLIC)

APPLICATION FOR EXTENSION OF TIME

(To be completed by the Contractor)

P A R T – I

Name of Contractor

Name of the work as given in the Agreement
Agreement No.

Estimated amount put to tender

Date of commencement work as per agreement

Period allowed for completion of work as per agreement

Date of completion stipulated as per agreement

Period for which extension of time has
been give previously

Extension granted

First extension vide Engineer-in-charge letter No... ..date	Months	Days
---	--------	------

2nd extension vide Engineer-in-charge letter No..... date	Months	Days
---	--------	------

3rd extension vide Engineer-in-charge letter No..... date	Months	Days
---	--------	------

4th extension vide engineer-in-charge letter No..... date	Months	Days
---	--------	------

Total extension previously given

Reasons for which extension have been previously given (copies of the previous application should be attached)

Period for which extension is applied for:

Hindrances on account of which extension is applied for with dates on which hindrances occurred, and the period for which these are likely to last.

Serial No.

Nature of hindrance

Date of Occurrence

Period for which it is likely to last

Period for which extension required for this particular hindrance.

Over lapping period, if any, with reference to item

Net extension applied for

Remarks, if any

Total period for which extension is now applied for on account of hindrances mentioned above Month/ days.

Extension of time required for extra work.

Details of extra work and on the amount involved:

Total value of extra work

Proportionate period of extension of time based on estimated amount put to tender on account of extra work.

Total extension of time required for 11 & 12

Submitted to the Engineer-in-Charges office.

SIGNATURE OF CONTRACTOR

DATE

APPLICATION FOR EXTENSION OF TIME

(PART – II)

Date of receipt of application from Contractor for the work in the Engineer-in-charge office.

Acknowledgement issued by Engineer-in-charge vide his letter No. dated
Engineer-in-charge remarks regarding hindrances mentioned by the
Contractor.

Serial No.

Nature of hindrance

Date of occurrence of hindrance

Period for which hindrance, is likely to last

Extension of time period applied for by the contractor

Over lapping period, if any, giving reference to items which
over lap

Net period for which extension is recommended.

Remarks as to why the hindrance occurred and
justification for extension recommended.

Engineer-in-charge recommendations.

The present progress of the work should be stated and whether the work is likely to be
completed by the date up to which extension has been applied for. If extension of time is
not recommended, what compensation is proposed to be levied under the agreement.

SIGNATURTE OF ENGINEER-IN-CHARGE

PROFORMA FOR EXTENSION OF TIME

P A R T –III

To

NAME

ADDRESS OF THE CONTRACTOR

SUBJECT:

Dear Sir(s)

Reference your letter No _____ dated _____ , in connection with the grant of extension of time for completion of the work.....

The date of completion for the above mentioned work, is as stipulated in the agreement, dated

Extension of time for completion of the above mentioned work is granted upto_____, without prejudice to the right of the BSCDCL to recover compensation for delay in accordance with the provision made in Clause of the said agreement dated the ___/ ___/ ___. It is also clearly understood that the BSCDCL shall not consider any revision in contract price or any other compensation whatsoever due to grant of this extension.

Provided that notwithstanding the extension hereby granted, time is and shall still continue to be the essence of the said agreement.

Yours faithfully,

FOR Bhopal Smart City Development Corporation Ltd.

PROFORMA OF BANK GUARANTEE IN LIEU OF E M D (TENDER BOND)
(Judicial Stamp paper of appropriate value as per stamp Act-of respective state)

Bhopal Smart City Development Corporation Ltd.
Near Natraj Petrol Pump, Sector A, Berkheda,
Bhopal, Madhya Pradesh 462023

In consideration of Bhopal Smart City Development Corporation Limited, having its Registered Office at, Near Natraj Petrol Pump Sector A, Berkheda (hereinafter called "BSCDCL" which expression shall unless repugnant to the subject or context include its successors and assigns) having issued Notice Inviting Tender No..... and M/s..... having its Registered Head Office at..... (hereinafter called the "TENDERER") is to participate in the said tender for.....

Whereas BSCDCL, as a special case, has agreed to accept an irrevocable and unconditional Tender Bond Guarantee for an amount of Rs..... valid upto..... from the tenderer in lieu of Cash Deposit of Rs..... required to be made by the tenderer, as a condition precedent for participation in the said tender.

We the (hereinafter called the "BANK") having its Registered, Office at..... and branch office at..... do hereby unconditionally and irrevocably undertake to pay immediately on demand in writing and without demur/protest any amount but not exceeding Rs Any such demand made by BSCDCL shall be conclusive and binding on us irrespective of any dispute or differences that may be raised by the tenderer. Any change in the constitution of the tenderer or the Bank shall not discharge our liability under the guarantee.

We, the..... Bank, lastly undertake not to revoke this guarantee during its currency without the prior consent of BSCDCL in writing and this guarantee shall remain valid upto..... Unless a claim is made within three months from the date of expiry i.e.

..... (three months after the date of expiry), we shall be relieved of our liability under this guarantee thereafter.

FOR AND ON BEHALF OF BANK

PLACE :

DATED :

WITNESS.

1.

2

PROFORMA OF BANK GUARANTEE (PERFORMANCE)

(Judicial Stamp paper of appropriate value as per stamp Act-of respective state)

Bhopal Smart City Development Corporation Ltd.
Near Natraj Petrol Pump, Sector A, Berkheda,
Bhopal, Madhya Pradesh 462023

Whereas the Bhopal Smart City Development Corporation Limited, having its Registered Office at BSCDCL Near Natraj Petrol Pump Sector A, Berkheda, Bhopal (hereinafter called "BSCDCL" which expression shall include its successors and assigns) having awarded a work order/contract / supply order No. dated (hereinafter called the contract) to M/s. (hereinafter called the contractor / supplier) at a total price of Rs..... subject to the terms and conditions contained in the contract.

WHEREAS, the terms and conditions of the contract require the contractor to furnish a

Rs....
..... (Rupees.....) being % of the bank guarantee for) being % of the total value of the contract for proper execution and due fulfillment of the terms and conditions contained in the contract.

We, the Bank, (hereinafter called the "Bank") do hereby unconditionally and irrevocably undertake to pay to BSCDCL immediately on demand in writing and without protest/or demur all moneys payable by the contractor/supplier to BSCDCL in connection with the execution/supply of and performance of the works/equipment, inclusive of any loss, damages, charges, expenses and costs caused to or suffered by or which would be caused to or suffered by BSCDCL by reason of any breach by the contractor/supplier of any of the terms and conditions contained in the contract as specified in the notice of demand made by BSCDCL to the bank. Any such demand made by BSCDCL on the bank shall be conclusive evidence of the amount due and payable by the bank under this guarantee. However, the Bank's liability under this guarantee, shall be limited to Rs..... in the aggregate and the bank hereby agrees to the following terms and conditions:-

- (i) This guarantee shall be a continuing guarantee and irrevocable for all claims of BSCDCL as specified above and shall be valid during the period specified for the performance of the contract including the period of maintenance/warranty

i.e. up
to.....

- (ii) We, the said bank further agree with BSCDCL that BSCDC L shall have the fullest liberty without our consent and without affecting in any manner our obligations and liabilities hereunder to vary any of the terms and conditions of the said contract or to extend time for performance of contract by the contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by BSCDCL against the contractor/supplier under the contract and forbear or enforce any of the terms and conditions relating to the said contract and we shall not be relieved from our liability by reason of any such variations or extension being granted to the contractor or for any forbearance, act or omission on the part of BSCDCL or any indulgence by BSCDCL to the contractor or by any such matter or thing whatsoever, which under the law relating to the sureties would, but for this provision, have effect of so relieving us.

This guarantee/undertaking shall be in addition to any other guarantee or security whatsoever BSCDCL may now or at any time have in relation to the

performance of the works/equipment and the company shall have full re-course to or enforce this security in performance to any other security or guarantee which the BSCDCL may have or obtained and there shall be no forbearance on the part of the company in enforcing or requiring enforcement of any other security which shall have the effect of releasing the Bank from its full liability. It shall not be necessary for BSCDCL to proceed against the said contractor/supplier before proceeding against the Bank.

This guarantee/ undertaking shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of the supplier/ contractor, but shall in all respects and for all purposes be binding and operative until payment of all moneys payable to BSCDCL in terms thereof are paid by the Bank.

The Bank hereby waives all rights at any time inconsistent with the terms of this Guarantee and the obligations of the bank in terms hereof, shall not be otherwise effected or suspended by reasons of any dispute or disputes having been raised by the supplier/contractor (whether or not pending before any Arbitrator, Tribunal or

Court) or any denial of liability by the supplier/contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to BSCDCL in terms hereof.

We, the said Bank, lastly undertake not to revoke this guarantee during its currency except with the previous consent of BSCDCL in writing. Unless a claim is made in writing within three months from the date of expiry of this guarantee i.e.....
(three months after the date of expiry) we shall be relieved from all liabilities under this guarantee thereafter.

Signed this day of at.....

For and on behalf of Bank

WITNESS.

1. _____

2. _____

**PROFORMA OF BANK GUARANTEE
(FOR MOBILIZATION ADVANCE)**

(Judicial Stamp paper of appropriate value as per stamp Act-of respective state)

Bhopal Smart City Development Corporation Limited,
Near Natraj Petrol Pump, Sector A, Berkheda,
Bhopal, Madhya Pradesh 462023

1.0 In consideration of the Bhopal Smart City Development Corporation Limited, having its Registered Office at BSCDCL, Near Natraj Petrol Pump, Sector A, Berkheda, Bhopal (hereinafter called "BSCDCL" which expression shall unless repugnant to the subject or context include his successor and assigns) having agreed under the terms and conditions of Contract No..... dated..... made between..... and BSCDCL in connection with..... (hereinafter called "the said contract") to make at the request of the Contractor a Mobilization Advance of Rs..... for utilizing it for the purpose of the Contract on his furnishing a guarantee acceptable to BSCDCL, we the Bank Ltd., (hereinafter referred to the "the said Bank") and having our registered office at..... do hereby guarantee the due recovery by BSCDCL of the said advance as provided according to the terms and conditions of the Contract. We..... do hereby undertake to pay the amount due and payable under this Guarantee without any demur, merely on a demand from BSCDCL stating that the amount claimed is due to BSCDCL under the said Agreement. Any such demand made on the..... shall be conclusive as regards the amount due and payable by the..... under this guarantee and..... agree that the liability of the to pay BSCDCL the amount so demanded shall be absolute and unconditional notwithstanding any dispute or disputes raised by the Contractor and notwithstanding any legal proceeding pending in any court or Tribunal relating thereto. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs..... We Bank further agree that BSCDCL shall be the sole judge of and as to whether the amount claimed has fallen due to BSCDCL under the said agreement or whether the said Contractor has not utilized the said advance or any part thereof for the purpose of the Contract and the extent of loss or damage caused to or suffered by BSCDCL on account of the said advance together with interest not being recovered in full and the decision of BSCDCL that the amount has fallen due from contractor or the said Contractor has not utilized the said advance or any part thereto for the purpose of the contract and as to the amount or amounts of loss or damage caused to or suffered by BSCDCL shall be final and binding on us.

We, the said Bank, further agree that the Guarantee herein contained shall remain in full force and effect till the said advance has been fully recovered and its claims satisfied or discharged and till BSCDCL certify that the said advance has been fully recovered from the said Contractor, and accordingly discharges this Guarantee subject, however, that BSCDCL shall have no claims under this Guarantee after the said advance has been fully recovered, unless a notice of the claims under this Guarantee has been served on the Bank before the expiry of the said Bank Guarantee in which case the same shall be enforceable against the Bank.

BSCDCL shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee or indemnity from time to time to vary any of the terms and conditions of the said Contract or the advance or to extend time of performance by the said Contractor or to postpone for any time and from time to time of the powers exercisable by it against the said Contractor and either to enforce or forbear from enforcing any of terms and conditions governing

the said Contract or the advance or securities available to BSCDCL and the said Bank shall not be released from its liability under these presents by any exercise by BSCDCL of the liberty with reference to the matters aforesaid or by reasons of time being given to the said Contractor or any other forbearance, act or omission on the part of BSCDCL or any

indulgence by BSCDCL to the said Contractor or of any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so

releasing the bank from its such liability. 5.0 It shall not be necessary for BSCDCL to proceed against the Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding any security which BSCDCL may have obtained or obtain from the Contractor or shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.

We, the said Bank, lastly undertake not to revoke this Guarantee during its currency except with the previous consent of BSCDCL in writing and agree that any change in the constitution of the said Contractor or the said Bank shall not discharge our liability hereunder.

Dated thisday of.....

For and on behalf of Bank

(NAME AND DESIGNATION)

Dated:

**PROFORMA OF BANK GUARANTEE
(IN LIEU OF SECURITY DEPOSIT)**

(Judicial Stamp paper of appropriate value as per stamp Act-of respective state)

Bhopal Smart City Development Corporation Ltd.,
Near Natraj Petrol Pump, Sector A, Berkheda, Bhopal

In consideration of the Bhopal Smart City Development Corporation Ltd., having its

Registered Office at _____ Near Natraj Petrol Pump Sector A,
Berkheda(hereinafter called "BSCDCL") which expression shall include its successors
and assigns having awarded to M/s..... (hereinafter called "the
Supplier/Contractor") which expression shall wherever the subject or context so permits
includes its successors and assigns) a Contract in terms inter-alia of BSCDCL's letter
No..... dated..... and the Contract/Purchase Conditions of BSCDCL
and upon the condition of the Supplier/Contractor furnishing Security for the
performance of the Supplier's obligations and /or discharge of the
contractor's/supplier's liability under and/or in connection with the said supply contract
upto a sum of Rs.....
(Rupees..... only)

We,..... ((hereinafter called "The Bank") which expression shall include its
successors and assigns) hereby undertake and guarantee payment to BSCDCL forthwith
on the same day on demand in writing and without protest or demur of any and all
moneys payable by the supplier/contractor to BSCDCL under, in respect or in connection
with the said contract inclusive of all the losses, damages, costs, charges and expenses
and other moneys payable in respect of the above as specified in any notice of demand
made by BSCDCL to the Bank with reference to this guarantee upto
and aggregate limit of Rs.....(Rupees.....only) and the bank hereby
agree with BSCDCL that:

This Guarantee shall be continuing guarantee and shall remain valid and
irrevocable for all claims of BSCDCL and liabilities of Supplier/Contractor arising upto and
until midnight of.....

This Guarantee shall be in addition to any other Guarantee or Security whatsoever that
BSCDCL now or at any time have in relation to the Supplier's obligations/liabilities
under and/or in connection with the said supply/contract, and BSCDCL shall have full
authority to take recourse or to enforce this Security in
preference to any other Guarantee or Security which BSCDCL may have or obtain and
no
forbearance on the part of BSCDCL in enforcing or requiring enforcement of any other
Security shall have the effect of releasing the Bank from its liability hereunder.

BSCDCL shall be at liberty without reference to the Bank and without affecting the full
liability of the Bank hereunder to take any other security in respect of the
Supplier's/Contractor's obligations and/ or liabilities under or in connection with the said
supply/contract or to grant time and / or indulgence to the supplier / contractor or to
increase or otherwise vary the prices or the total contract value or to release or to forbear
from enforcement of all or any of the conditions under the said supply / contract and / or
the remedies of BSCDCL under any other security/securities now or hereafter held by
BSCDCL and no such dealings, increase(s) or other indulgence(s) or arrangement(s) with
the supplier / contractor or releasing or forbearance whatsoever shall have the effect of
releasing the Bank from its full liability to BSCDCL hereunder or prejudicing rights of
BSCDCL against the Bank. This Guarantee shall not be determined or affected by the
liquidation or winding up, dissolution or change of constitution or insolvency of the
supplier / contractor but shall in all respects and for all purposes be binding and operative
until payment of all moneys payable to BSCDCL in terms thereof.

5. The Bank hereby waives all rights at any time inconsistent with the terms of this
Guarantee and the obligations of the Bank in terms hereof shall not be otherwise
affected or suspended by reason of any dispute or disputes having been raised by the

supplier /contractor (whether or not pending before any Arbitrator, Tribunal or Court) or any denial or liability by the supplier/ contractor stopping/ preventing or purporting to stop or prevent any payment by the Bank to BSCDCL in terms thereof.

The amount stated in any notice of demand addressed by BSCDCL to the Guarantor as liable to be paid to BSCDCL by the supplier/contractor or as suffered or incurred by BSCDCL on account of any losses or damages, costs, charges and / or expenses shall as between the Bank and BSCDCL be conclusive of the amount so liable to be paid to BSCDCL or suffered or incurred by BSCDCL as the case may be and payable by the Guarantor to BSCDCL in terms hereof subject to a maximum of Rs (Rupees only),

Unless demand or claim under this Guarantee is made on the Guarantor in writing within three months form the date of expiry of the Guarantee i.e upto the Guarantor shall be discharged from all liabilities under this Guarantee there under.

Notwithstanding anything contained herein before our liability under this guarantee is restricted to Rs (Rupeesonly). This guarantee will expire on..... Any claim under this Guarantee must be received by us within three months from the date of expiry i.e. (date, three months after the expiry date) and if no such claim has been received by us by that date all your rights under this guarantee will cease.

For and on behalf of the Bank

Place

Date

WITNESS:

1.

2.

PROFORMA OF BANK GUARANTEE
(FOR MOBILIZATION ADVANCE WITH INTEREST BEARING)
(Judicial Stamp per Stamp Act - paper of appropriate value as respective state)

Bhopal Smart City Development Corporation Limited,
Bhopal, Pin- 462023

In consideration of the Bhopal Smart City Development Corporation Limited., having its Registered Office at Bhopal -462023 (hereinafter called "BSCDCL" which expression shall unless repugnant to the subject: or context Include his successor and assigns) having agreed under the terms and conditions of Contract No. dated made between (name of the contractor) and BSCDCL in connection with (name of work) (hereinafter called "the said contract") to make at the request of the Contractor a Mobilization Advance of Rs. _____ carrying interest @ ... % p.a. for utilizing it for the purpose of the Contract on his furnishing a guarantee acceptable to BSCDCL, we the Bank (hereinafter referred to the "the said Bank") and having our registered office at do hereby guarantee the due recovery by BSCDCL of the said advance alongwith interest as provided according to the terms and conditions of the contract. We ...

do hereby undertake to pay the amount due and payable under this Guarantee without any demur, merely, on a demand from BSCDCL stating that the amount claimed is due to BSCDCL under the said Agreement. Any such demand made on the said bank shall be conclusive as regards the amount due and payable by the said contractor under this guarantee and agree that the liability of the said bank to pay BSCDCL the amount so demanded shall be absolute and unconditional notwithstanding any dispute or disputes raised by the Contractor and notwithstanding any legal proceeding pending in any court or Tribunal relating thereto. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs ... inclusive of interest @% p.a.

We the said bank further agree that BSCDCL shall be the sole judge of and as to whether the amount claimed has fallen due to BSCDCL under the said agreement or whether the said Contractor has not utilized the said advance or any part thereof for the purpose of the Contract and the extent of loss or damage caused to or suffered by BSCDCL on account of the said advance together with interest not being recovered in full and the decision of BSCDCL that the amount has fallen due from' contractor or the said Contractor has not utilized the said advance or any part thereto for the purpose of the contract and as to the amount or amounts of loss or damage caused to or suffered by BSCDCL shall be final and binding on us.

We, the said Bank, further agree that the Guarantee herein contained shall remain

in full force and effect till the said advance has been fully recovered and its claims satisfied or discharged and till BSCDCL certify Contractor, and accordingly discharges this Guarantee subject, however, that BSCDCL shall have no claims under this Guarantee unless a notice of the claims under this Guarantee has been served on the Bank before the expiry of the said Bank Guarantee in which case the same shall be enforceable against the Bank.

BSCDCL shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee or indemnity from time to time to vary any of the terms and

conditions of the said Contract or the advance or to extend time of performance by the said Contractor or to postpone for any time and from time to time of the powers exercisable by it against the said Contractor and either to enforce or forbear from enforcing any of terms and conditions governing the said Contract or the advance or securities available to BSCDCL and the said Bank shall

not be released from its liability under these presents by any exercise by BSCDCL of the liberty with reference to the matters aforesaid or by reasons of time being given to the said Contractor or any other forbearance, act or omission on the part of BSCDCL or any indulgence by BSCDCL to the said Contractor or of any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so releasing the bank from its such liability.

It shall not be necessary for BSCDCL to proceed against the Contractor before proceeding against the Bank and Guarantee herein contained shall be enforceable against the Bank notwithstanding any security which BSCDCL may have obtained or obtain from the Contractor or shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.

We, the said Bank, lastly undertake not to revoke this Guarantee during its currency except with the previous consent of BSCDCL in writing and agree that any change in the constitution of the said Contractor or the said Bank shall not discharge our liability hereunder.

Dated this..... day of.....

Place:

Date:

Witness:

1.

**FORM FOR GUARANTEE BOND
FOR ANTI-TERMITE TREATMENT**

THIS AGREEMENT made this____ day of Two thousand _____ between M/s_____ (hereinafter called the guarantor of the one part and M/s Bhopal Smart City Development Corporation Limited, hereinafter called the BSCDCL hereinafter called the OWNER of the other part.

Whereas this agreement is supplementary to the contract hereinafter called the contract dated_____ made between the guarantor of the one part and National Buildings Construction Corporation Ltd., of the other part whereby the contractor inter-alia, understood to render the buildings and structures in the said contract recited, completed, termite proof. And whereas the guarantor agreed to give a guarantee to the effect that the said structure will remain termite proof for TEN YEARS to be so reckoned from the date after the maintenance period prescribed in the contract expires.

During this period of guarantee the guarantor shall make good all defects and for that matter shall replace at his risk and cost such wooden member as may be damaged by termite and in case of any other defect being found, he shall render the building termite proof at his cost to the satisfaction of the Engineer-in-charge and shall commence the works of such rectification within seven days from date of issuing notice from the Engineer-in-Charge calling upon him to rectify the defects falling which the work shall be got done by BSCDCL/ OWNER by some other contractor at the guarantor's cost and risk and in the later case the decision of the Engineer-in-charge as to the cost recoverable from the guarantor shall be final and binding.

That if the Guarantor fails to execute the Anti-Termite treatment or commits breaches hereunder then the Guarantor will indemnify BSCDCL against all losses damages, cost expenses or otherwise which may be incurred by him by reasons of any default on the part of the guarantor in performance and observance of this supplemental Agreement. As to the amount of loss and or damage and/or cost incurred by BSCDCL/ OWNER decision of the Engineer-in-charge will be final and binding on the parties.

In witness where of these presents have been executed by the Guarantor_____ and by_____ for and on behalf of BSCDCL on the day of month and year first above written.

Signed sealed and delivered by (Guarantor)

IN THE PRESENCE OF: 1.

2.

Signed for and on behalf of BSCDCL by/ in presence of:

1.

2.

GUARANTEE TO BE EXECUTED BY CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS

The agreement made this day of Two thousand One and between (hereinafter called Guarantor of the one part) and the BSCDCL (hereinafter called the Execution Agency of the other part).

WHEREAS this agreement is supplementary to a contract(hereinafter called the Contract), dated and made between the GUARANTOR OF THE ONE part and the BSCDCL of the other part, whereby the Contractor, inter-alia, undertook to render the buildings and structures in the said contract recited completely water and leak proof.

AND WHEREAS the Guarantor agreed to give a guarantee to the effect that the said structures will remain water and leak proof for ten years from the date of handing over o the structure of water proofing treatment.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given by him will render the structures completely leak proof and the minimum life of such water proofing treatment shall be ten years to be reckoned from the date after the maintenance period prescribed in the contract.

Provided that the Guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose.

Misuse of roof shall mean any operation, which will damage proofing treatment, like chopping of fire wood and things of the same nature which might cause damage to the roof.

Alternation shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts

The decision of the Engineer-in-Charge with regard to cause of leakage shall be final

During this period of guarantee, the Guarantor shall make good all defects and in case of any defect being found render the building water proof to the satisfaction of the Engineer-in-Charge at his cost and shall commence the work for such rectification within seven days from the date of issue of notice from the Engineer-in-Charge calling upon him to rectify the defects failing which the work shall be got done by the BSCDCL by some other Contractor at the guarantor's cost and risk. The decision of Engineer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if the Guarantor fails to execute the water proofing or commits breach there-under, then the Guarantor will indemnify the principal and his successors against all laws damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and / or damage and/ or cost incurred by the BSCDCL, the decision of the Engineer-in-Charge will final and binding on the parties.

IN WITNESS WHEREOF these presents have been executed by the Obligor,,,,,..... and by And for and on behalf of the BSCDCL on the day, month and year first above written.

Signed, sealed and delivered by Obligator in the presence of-

1.

2.

Signed for and on behalf of the BSCDCL by _____

In presence of:

1.

2.

**PROFORMA OF
INDENTURE FOR SECURED ADVANCE OR CREDIT**

THIS INDENTURE made this day of _____ Between _____

(hereinafter called the contractor) which expression shall where the Context as admits or implies be deemed to include his executor/administrators and assign of the one part and National Buildings Construction Corporation Ltd., having its Registered Office at BSCDCL, Bhopal (hereinafter called the Engineer) which expression shall where the context so admits or implies be deemed to include its successors and assign of the other part.

Whereas by an agreement dated (hereinafter called the said agreement). The Contractor has agreed to construct.....

And whereas the Contractor has applied to the Engineer that he may be or be given credited for materials brought by him to the site of the work subject to the said agreement for use in construction of the work.

NOW THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rs. _____ (Rupees _____ only) paid to the contractor by the Engineer. The receipt where the Contractor hereby acknowledges and of such advance or credited (if any) as may be made to him as aforesaid the Contractor hereby covenants and agrees with The Engineer and declares as follows:

That all sums given as advance or credit by The Engineer to the Contractor as aforesaid shall be employed by the Constructor in or toward the execution of the said works and for no other purpose whatsoever.

That the material for which the advance or credit is given are offered to and accepted by The Engineer as security and are absolutely the Contractor's own property and free from encumbrances of any kind the Contractor will not make any application for or receives further advance or credit on the security or material which are not absolutely his own property and free from encumbrances of any kind and the Contractor shall indemnify The Engineer against any claims to any material in respect of which advance or credit has been made to him as aforesaid.

That the said material and all other material on the security of which any further advance or advances or credit may be given as aforesaid (hereinafter called the said materials) shall be used by the Contractor s solely in the execution of the said works in accordance with the direction of the Engineer and in terms of said agreement.

That the Contractor shall make at his own cost all necessary and adequate arrangement for the proper safe custody and protection against all risks of the said material and that until used in the construction as aforesaid the material shall remain at the site of the said works in Contractor's custody and on his responsibility and shall at all times be open to inspection by The Engineer. In the events of the materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in greater degree than in due to reasonable use and wear thereof the Contractor will replace the same with other materials of like quality of repair and make good the same as required by The Engineer.

That said material shall not on any account be removed from the site of work except with the written permission of The Engineer.

That the advance shall be repayable in full when or before Contractor receives payment from The Engineer of the price payable to him for the said work under the term and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done then on the occasion of each payment The Engineer will be at liberty to make a recovery from the Contractor's bill from such payments by deducting there from the value of the said materials than actually used in the contraction and in respect of which recovery has not been made previously. The value of this purpose being determined in respect of each description of materials at the rates at which the amounts of the advance as made under these presents was calculated.

That if the Contractor shall at any time make at any default in the performance of observance in respect of any of the terms and provisions of the said agreement or of that provisions the total amount of the advance or advances that may still be owing to The Engineer, shall immediately on the happening of such default be repayable by the Contractor to The Engineer together with interest thereon at 12% p.a. from the date of respective dated to such advance or advances to the date of payment and with all costs. Damages and expenses incurred by The Engineer in or for recovery hereof or the Contractor hereby covenants and agrees with The Engineer to repay and pay the same respective to him accordingly.

That the Contractor hereby charges all the said materials with the repayment to The Engineer of all sums advances or credit as aforesaid and all costs. Charges, damages and expenses payable under these presents PROVIDED ALWAYS it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the powers contained therein if and wherever the covenant for payment and repayment herein before contained shall be become enforceable and the money owing shall not be paid in accordance therewith. The Engineer may at any time thereafter adopt all or any of the following courses he may deem best:

Seize the utilize the said material or any part thereof in the completion of the said works in accordance with the provision in that behalf contained in the said agreement debating the Contractor with the actual cost of effecting such completion and the amount due in respect of advance or credit under these presents and crediting the Contractor with value of work done as if he has carried it out in accordance with the said agreement and the rates thereby provided if the balance is against the Contractor is to pay the same to the engineer on demand.

Remove and sell by public action the seized materials or any part thereof and out of the money arising from the sale repay the engineer under these presents and pay over the surplus (if any) to the Contractor.

Deduct all or any part of the moneys owing from any sums due to the contractor under said agreement.

Expect in the event of such default on the part of contractor as aforesaid, interest on the said advance shall not be payable.

That in the event of conflict between the provisions of these presents and the said agreements, the provision of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents, the settlement of which has not been hereinbefore expressly provided for the same shall so far as is lawful be subject to jurisdiction of BHOPAL courts only.

IN WITNESS whereof the said the engineer and the contractor hereunto set their respective hands and seals the day year first above written.

Signed Sealed and delivered by

Contractor

The Engineers

AGREEMENT FORM

This agreement made this day of (Month) (Year), between the **Bhopal Smart City Development Corporation Limited (BSCDCL)**, a company incorporated under the Companies Act, 1956 having its Registered Office at BSCDCL, Bhopal 462023 (hereinafter referred to as the "BSCDCL" which expression shall include its

administrators, successors, executors and assigns) of the one part and **M/s (NAME OF CONTRACTOR)** (hereinafter referred to as the 'Contractor' which expression shall unless the context requires otherwise include its administrators, successors, executors and permitted assigns) of the other part.

WHEREAS, BSCDCL, has desirous of construction of **(NAME OF WORK)** (hereinafter referred to as the "PROJECT") on behalf of the **(NAME OF OWNER/MINISTRY)** (hereinafter referred to as "OWNER"), had invited tenders as per Tender documents vide NIT No. _____.

AND WHEREAS **(NAME OF CONTRACTOR)** had participated in the above referred tender vide their tender dated _____ and BSCDCL has accepted their aforesaid tender and award the contract for **(NAME OF PROJECT)** on the terms and conditions contained in its Letter of Intent No. _____ and the documents referred to therein, which have been unequivocally accepted by **(NAME OF CONTRACTOR)** vide their acceptance letter dated _____ resulting into a contract.

NOW THEREFORE THIS DEED WITNESSETH AS UNDER:

ARTICLE 1.0 – AWARD OF CONTRACT

SCOPE OF WORK

BSCDCL has awarded the contract to **(NAME OF CONTRACTOR)** for the work of **(NAME OF WORK)** on the terms and conditions in its letter of intent No.

_____ dated _____ and the documents referred to therein. The award has taken effect from **(DATE)** i.e. the date of issue of aforesaid letter of intent. The terms and expressions used in this agreement shall have the same meanings as are assigned to them in the "Contract Documents" referred to in the succeeding Article.

ARTICLE 2.0 – CONTRACT DOCUMENTS

The contract shall be performed strictly as per the terms and conditions stipulated herein and in the following documents attached herewith (hereinafter referred to as "Contract Documents").

BSCDCL Notice Inviting Tender vide No. _____ date _____ and BSCDCL's tender documents consisting of:

General Conditions of Contract (GCC) alongwith amendments/errata to GCC (if any) issued (Volume-I).

Special Conditions of Contract including Appendices & Annexures, Volume-II.

Bill of Quantities alongwith amendments/corrigendum of schedule items, if any (Volume-II).

(NAME OF CONTRACTOR) letter proposal dated _____ and their subsequent communication:

Letter of Acceptance of Tender Conditions dated _____

BSCDCL's detailed Letter of Intent No. _____ dated ____ including Bill of Quantities. Agreed time schedule, Contractor's Organization Chart and list of Plant and Equipment's submitted by Contractor.

All the aforesaid contract documents referred to in Para 2.1 and 2.2 above shall form an integral part of this Agreement, in so far as the same or any part thereof column, to the tender documents and what has been specifically agreed to by BSCDCL in its Letter of Intent. Any matter inconsistent therewith, contrary or repugnant thereto or deviations taken by the Contractor in its "TENDER" but not agreed to specifically by BSCDCL in its Letter of Intent, shall be deemed to have been withdrawn by the Contractor without any cost implication to BSCDCL. For the sake of brevity, this Agreement along with its aforesaid contract documents and Letter of Intent shall be referred to as the "Contract".

ARTICLE 3.0 – CONDITIONS & CONVENANTS

The scope of Contract, Consideration, terms of payments, advance, security deposits, taxes wherever applicable, insurance, agreed time schedule, compensation for delay and all other terms and conditions contained in BSCDCL's Letter of Intent No. _____ dated _____ are to be read in conjunction with other aforesaid contract documents. The contract shall be duly performed by the contractor strictly and faithfully in accordance with the terms of this contract.

The scope of work shall also include all such items which are not specifically mentioned in the Contract Documents but which are reasonably implied for the

satisfactory completion of the entire scope of work envisaged under this contract unless otherwise specifically excluded from the scope of work in the Letter of Intent.

Contractor shall adhere to all requirements stipulated in the Contract documents.

Time is the essence of the Contract and it shall be strictly adhered to. The progress of work shall conform to agreed works schedule/contract documents and Letter of Intent.

This agreement constitutes full and complete understanding between the parties and terms of the presents. It shall supersede all prior correspondence to the extent of inconsistency or repugnancy to the terms and conditions contained in Agreement. Any modification of the Agreement shall be effected only by a written instrument signed by the authorized representative of both the parties.

The total contract price for the entire scope of this contract as detailed in Letter of Intent is Rs. _____ (Rupees

_____ only), which shall be governed by the stipulations of the contract documents.

ARTICLE 4.0 – NO WAIVER OF RIGHTS

Neither the inspection by BSCDCL or the Engineer-in-Charge or Owner or any of their officials, employees or agents nor order by BSCDCL or the Engineer-in-Charge for payment of money or any payment for or acceptance of, the whole or any part of the work by BSCDCL or the Engineer-in-Charge nor any extension of time nor any possession taken by the Engineer-in-Charge shall operate as waiver of any provisions of the contract, or of any power herein reserved to BSCDCL, or any right to damage herein provided, nor shall any waiver of any breach in the contract be held to be a waiver or any other or subsequent breach.

ARTICLE 5.0 – GOVERNING LAW AND JURISDICTION

The Laws applicable to this contract shall be the laws in force in India and jurisdiction of BHOPAL Court (s) only.

Notice of Default

Notice of default given by either party to the other party under the Agreement shall be in writing and shall be deemed to have been duly and properly served upon the

parties hereto, if delivered against acknowledgment due or by FAX or by registered mail duly addressed to the signatories at the address mentioned herein above.

IN WITNESS WHEREOF, the parties through their duly authorized representatives have executed these presents (execution whereof has been approved by the Competent Authorities of both the parties) on the day, month and year first above mentioned at BHOPAL.

For and on behalf of:

For and on behalf of:

(NAME OF CONTRACTOR) (M/s Bhopal Smart City Development Corporation)

WITNESS:

WITNESS:

1.

1.

SECTION-6

SPECIAL CONDITION OF CONTRACT

SPECIAL CONDITIONS OF CONTRACT (SCC)

GENERAL-

1. The following special conditions shall be read in conjunction with General conditions of contract. If there are any provisions in these Special Conditions, which are at variance with the provisions of General Conditions of Contract, the provisions in the Special Conditions shall take precedence.
2. Where any portion of Special Conditions of Contract is repugnant to or at variance with any provision of the instructions to Tenderer and General Conditions of Contract and / or the other documents forming part of the contract then unless a different intention appears the provision of the Special Conditions of Contract shall be deemed to override the provisions of the general conditions of contract and / or the other documents forming part of the contract only to the extent such repugnant/various in the special conditions of contract as are not possible of being reconciled with the provisions in the special conditions of contract as are not possible of being reconciled with the provision with instructions to Tenderer or General Conditions of contract and / or the other documents from part of the contract.
3. Structural Drawings shall be prepared by bidder and the same shall got weighted by any reputed institute like MANIT or any other institute.
4. Working drawing shall be according to the drawing given in the Tender document.
5. Items mentioned in the BOQ may vary or any changes is needed then it should bring to the attention of BSCDCL.
6. Working drawings are given by BSCDCL in tender document; if any deviations found and correction required then it should be brought to BSCDCL for rectification.
7. The items which are missing or not defined in the given BOQ in this Tender Document, then the contractor has to submit the items for approval to BSCDCL.
8. The contractor has to submit sample of the items defined in BOQ the same to be approved by BSCDCL, before use.
9. Internal wiring work should be done as per UADD/MPPWD/CPWD/MPPWD specifications.
10. Quote should be in percentage higher or below on the SOR Rates the same is to quoted in the form of decimal only. For example if contractor wants to quote 5 percent higher then he have to quote 1.05 and if he wants to quote 5 [percent below he have to quote 0.95 in given column of financial bid sheet.

11. Applications from Joint venture and Consortium members are not allowed however they can be permitted to engage a approved agency to carryout electrical works after approval of BSCDCL as per below mentioned conditions.
- a. The applicant in such case shall submit consent letter of the Associates along with their credentials for Electrical works. However, the name(s) of the associates(s) once nominated and accepted by BSCDCL, cannot be changed afterwards without written approval of BSCDCL. Credentials of associates(s) for work experience duly supported with clients' completion certificate(s) starting reference to order, the value of completed work, date of start of work, date of completion of work, duly self-attested in respect of Electrical shall be submitted along with application itself for pre-qualification.
 - b. Similar Nature of the job for electrical work providing underground cables / Substation work(RMU,PSS) / street lighting/ Domestic wiring work value of at least three works, each of Rs.7.88 lakhs or two works, each of Rs.9.85 lakhs or one work of Rs.15.76 lakhs in single contract and should possess valid electrical license and registered in MPMKVV Co. Ltd. Bhopal.

Instructions for financial bid submission-

1. Financial Bid format is uploaded in Excel Format in www.mpeproc.gov.in. At the time of financial bidding, bidder is requested to download the file, and update the same.
2. There are five different excel sheets in financial bid s Civil_UADD_SOR ITEMS,, Civil_NONSOR_ITEMS, ELECTRICAL_UADD_SOR ITEMS, Electrical_PWD_SOR ITEMS and Electrical_NONSOR_ITEMS.
3. For bidding of SOR items bidder need to quote %high or %below the SOR rates, eg. In case bidder wants to quote 5% above the SOR rate quote 1.05 or 5% below the rate quote 0.95.
4. In case of Non SOR items bidder can quote for individual item rates in respective financial bid sheet.
5. Bidders are requested to check final figure in all the totals of all sheets. BSCDCL is not responsible for errors in the financial bid document.
6. Bidders are required to upload the updated financial bid in the prescribed excel format in the www.mpeproc.gov.in at the time of final financial bid submission.

SECTION-7

TECHNICAL SPECIFICATIONS

Technical Specifications

1. The works in General shall be carried out as per latest UADD/MPPWD/CPWD Specifications, BHOPAL (updated with correction slips issued upto last date of submission of tender) unless otherwise specified in the nomenclature of the individual item or in the particular specifications of concerned items of works.
2. For items not covered under UADD/MPPWD/CPWD specifications with correction slips or those specifications are not given in the technical specifications appended or not incorporated in the nomenclature of the individual item, the work shall be done as per latest relevant BIS Codes of Practice or as per approval of Engineer-in-charge of BSCDCL.
3. All the works shall be executed as per the approved drawings / designs. The patterns shown in the tender drawings can be modified as per the site requirements by the Engineer-in-charge and nothing extra whatsoever shall be payable over and above the quoted rates.
4. Material should be of the best approved quality obtainable and they shall comply to the respective Indian Standard Specifications.
5. Samples of all materials shall be got approved before placing order and the approved sample shall be deposited with the Client/Engineer In-Charge.
6. It shall be obligatory for the Contractor to furnish Certificate, if demanded by the Client/Engineer In-Charge from manufacturer or the material supplier that the work has been carried out by using their material and as per their recommendations.
7. All materials supplied by the Client/Engineer In-Charge any other specialized 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 work.

SITE CLEARANCE

Before the earth work is started, the area coming under cutting and filling shall be cleared of shrubs, rank vegetation, grass, brushwood, trees and saplings of girth up to 30cm measured at a height of one metre above ground level and rubbish removed up to a distance of 50 metres outside the periphery of the area under clearance. The roots of trees and saplings shall be removed to a depth of 60cm below ground level or 30 cm below formation level or 15 cm below sub grade level, whichever is lower, and the holes or hollows filled up with the earth, rammed and leveled.

The trees of girth above 30 cm measured at a height of one metre above ground shall be cut only after permission of the Engineer-in-Charge is obtained in writing. The roots of trees shall also be removed as specified in 2.4.1. payment for cutting such trees and removing the roots shall be made separately.

Existing structures and services such as old buildings, culverts, fencing, water supply pipe lines, sewers, power cables, communication cables, drainage pipes etc. within or adjacent to the area if required to be diverted/removed, shall be diverted/dismantled as per directions of the Engineer-in-Charge and payment for

such diversion/dismantling works shall be made separately.

EXCAVATION FOR FOUNDATIONS

Notes:

- 1 The excavations shall conform to the lines & levels shown in the drawings and as directed by the Engineer-in-Charge. The contractor shall not excavate outside the limits of excavation. Any excess depth/width, excavated beyond the specified levels/dimensions on the drawing shall be made good at the cost of the contractor with the concrete as specified for the foundation.
- 2 Rate includes dressing the pits and excavated materials after dumping as directed by Engineer-in-Charge.

3 CLASSIFICATION OF EXCAVATED MATERIALS

- a) **Soil** : This shall comprise top soil, turf, sand, clay, mud, peat, black cotton soil, shale, moorum, copra admixture of these and similar material which yields to the ordinary application of pick spade and/or shovel, rake or other ordinary digging equipment. Removal of gravel or any other nodular material having dimensions in any one direction not exceeding 300mm occurring in such soil shall be deemed to be covered under this category. Macadam surfaces such as water bound macadam and bitumen/tar bound, soling of roads, paths etc. in all depths/thicknesses shall be classified as soils.
- b) **Ordinary Rock** : Laterites, shales and conglomerates, varieties of lime stone and sand stone etc., cement/lime concrete, stone masonry and brick work in cement/lime mortar below ground level, reinforced cement concrete and boulders having maximum dimension in any direction of more than 300mm., loose or embedded in soil, may or may not be requiring blasting are classified as ordinary rocks.
- c) **Hard Rock (Requiring Blasting)** : This shall comprise Granites, Basalt and similar rocks for the excavation of which the use of mechanical plant and or blasting is required.
- d) **Excavation in Rocks, where blasting is prohibited** : Hard rock requiring blasting but where blasting is prohibited for any reason and excavation has to be carried out by chiseling, wedging or any other agreed method.

4 BLASTING OPERATIONS

Blasting shall be carried out in a manner that completes the excavation to the lines and levels as indicated in the drawings with the least disturbance to adjacent material. It shall be done only with the written permission of the Engineer-in-Charge. All statutory laws, regulations, rules etc. pertaining to the acquisition, transport, storage, handling and use of explosives shall be strictly followed. The contractor may adopt any method or methods of blasting consistent with the safety and job requirements. Prior to starting any phase of the operation, the contractor shall provide information describing pertinent blasting

- procedures, dimensions and notes. The magazine for storage of explosives shall be limited to the designs and specifications of the explosive department concerned and located at the approved site. No unauthorized person shall be admitted in to the magazine, which when not in use, shall be kept security locked. No matches or inflammable material shall be allowed in the magazine. Materials, tools, plants, equipments and personnel, deputed on blasting operation, should be approved by Engineer-in-Charge.
- 5 Extra rates for excavation for under water or in foul condition will be payable only for excavation below sub soil water level.
 - 6 Lift is to be calculated on the height of C.G. of lifted materials above C.G. of borrow pit. In measuring lifts no notice will be taken of lifts less than 0.5 M.
 - 7 In measuring lead, distance less than 25 meters will be ignored and 25 meters or above shall taken as 50 meters and part thereof.
 - 8 Surface dressing comprises training the uneven surface of ground to uniform surface (either horizontal or slopping) by scraping off high patches and filling in low patches with the scraped soil. The Maximum depth of cutting or filling not exceeding 15cm.
 - 9 Dry vegetation earth sand gravel, stone, deserts or brickwork, concrete, masonry etc. obtained from the excavation shall be property of Govt. of M.P. The rates of excavation include the separation of serviceable and unserviceable materials and depositing the serviceable ones in regular heaps.
 - 10 Shoring in wells, foundations and trenches will not be payable without obtaining prior approval of concern Superintending Engineer.
 - 11 **Rates:**
Rates of all items in this chapter are inclusive of the expenses of all labor, materials, T & P and all incidental and other charges required completing the item of work in full and also including hire & running expenses of all machineries required for the work, including stacking of excavated materials as directed wherever required.
 - 12 **Antiquities:**
Any ancient carvings, relics of antiquity, coins or other curiosities which may be discovered or excavated, are the property of the Government and are to be delivered to the Engineer-in- Charge.

MORTARS

NOTES :

- 1 **Cement:** Cement to be used in the works shall be any of the following types with the prior approval of the Engineer-in-charge :
 - a) Ordinary portland cement, 33 Grade conforming to IS : 269.
 - b) Ordinary portland cement, 43 Grade conforming to IS : 8112.
 - c) Ordinary portland cement, 53 Grade conforming to IS : 12269.
 - d) Sulphate resistant portland cement conforming to IS : 12330.
- 2 **Sand:** Sand to be used in the work, shall conform to IS: 1542-1960 for plaster and IS: 2166-1965 for masonry work.
- 3 **Cement Mortar:** Cement and sand shall be mixed in specified proportions given in the agreement/drawings. All mortars shall be mixed with a minimum quantity of water to produce desired workability consistent with maximum density of mortar. The mix shall be clean and free from injurious type of soil/acid/alkali/organic matter or deleterious substances.
- 4 **Water :** Water used for mixing and curing shall be clean and free from

injurious amount of oils, acids, alkalis, salts, sugar, organic or other substances. Potable water is generally considered satisfactory for preparing mortars.

- 5 The mixing shall preferably be done in a mechanical mixer operated manually or by power. Hand mixing can be resorted to as long as uniform density of the mix and its strength are assured subject to prior approval of the Engineer-in-Charge. Hand mixing operation, if permitted, shall be carried out on a clean water tight platform where cement and sand shall be first mixed dry in the required proportion by being turned over and over, backwards and forwards several times till the mixture is of uniform colour. Thereafter, minimum quantity of water shall be added to bring the mortar to the consistency of stiff paste. The mortar shall be mixed for at least two minutes after addition of water.

Mortar shall be mixed only in such quantity as required for immediate use. The mix which has developed initial set, shall not be used. Initial set of mortar with O.P.C. shall normally be considered to have taken place in 30 minutes after mixing. If the mortar has stiffened during initial setting time because of evaporation of water, same can be re-tempered by adding water as frequently as needed to restore requisite consistency but this retempering shall not be permitted after 30 minutes. Mortar, unused for more than 30 minutes, shall be rejected and removed from site.

PLAIN CEMENT CONCRETE

Notes:

- 1 **Cement:** Cement to be used in the works shall be any of the following types with the prior approval of the Engineer-in-charge :
 - a) Ordinary portland cement, 33 Grade conforming to IS : 269.
 - b) Ordinary portland cement, 43 Grade conforming to IS : 8112.
 - c) Ordinary portland cement, 53 Grade conforming to IS : 12269.
 - d) Sulphate resistant portland cement conforming to IS : 12330.

- 2 **Aggregates:** aggregate shall consist of clean, hard, strong, dense, non-porous and durable pieces of crushed stone. They shall not consist pieces of disintegrated stones, soft, flaky, elongated particles, salt, alkali, vegetable matter or other deleterious materials. All aggregate shall conform to IS: 383 and tests for conformity shall be carried out as per IS : 2386 parts I to VIII. The maximum value of flakiness Index for aggregate shall not exceed 35 percent. The aggregate shall satisfy the following requirements of grading:

Grading Requirements of Aggregate

IS Sieve passing the sieve		Percentage by weight	
	40 mm	20 mm	12.5 mm
63 mm	100	-	-
40 mm	95-100	100	-
20 mm	30-70	95-100	100
12.5 mm	-	-	90-100
10 mm	10-35	25-55	40-85
4.75 mm	0-5	0-10	0-10

Sand/Fine Aggregates :

Sand to be used for lime or cement concrete should be dry and free from all deleterious materials, and shall conform to IS: 383-2007 & fine aggregates shall

not contain dust, lumps, soft or flaky materials, mica or other deleterious materials. Fine aggregates having positive alkali-silica reaction shall not be used. All fine aggregate shall conform to IS : 383. The fineness modulus of fine aggregate shall neither be less than 2.0 nor greater than 3.5.

- 4 **Water** : Water used for mixing and curing shall be clean and free from injurious amounts of oils, acids, alkalis, salts, sugar, organic materials or other substances that may be deleterious to concrete. Potable water is generally considered satisfactory for mixing and curing of concrete.
- 5 **Concrete**: Concrete shall be mixed either in a concrete mixer or in a batching and mixing plant. Hand mixing is prohibited. Mixing shall be continued till materials are uniformly distributed and a uniform colour of the entire mass is obtained and each individual particle of the aggregate shows complete coating of mortar, containing its proportionate amount of cement. In no case, mixing shall be done for less than 2 minutes.

Concrete shall be transported and placed as near as practicable to its final position. Concrete shall not be freely dropped into place from a height exceeding 1.50 metres

and it shall be compacted in its final position within 30 minutes of its discharge from

the mixer. It shall be compacted thoroughly by vibration or other means during placing so as to produce a dense homogeneous void-free mass having the required surface finish. Bottom and side surfaces shall give a uniform texture, smooth surface and

good appearance. Non uniform texture and rough surface of concrete shall be treated as defective work and it has to be remedied with 1:3 cement plaster but in no case, more than 5% of area be permitted to be made good with plastering, Concrete having through, non uniform texture and honey combing in more than 5% area shall be rejected and the payment for the formwork shall also be not made.

- 6 Formwork shall include all temporary or permanent forms required for forming the concrete of the shape, dimensions and surface finish as shown on the drawings together with all props, staging, centering, scaffolding and temporary construction required for their support.
- 7 All materials shall conform to the specifications issued by the Indian Standards Institution. Materials and components used for formwork shall be examined for damage or excessive deterioration before use/reuse and shall be used only if found suitable after necessary repairs. In case of timber form work, the inspection shall not only cover physical damages but also signs of attacks by decay, rot or insect attack or the development of splits.
- 8 Form shall be constructed with metal or timber. The metal used for forms shall be of such thickness that the forms remain true to shape. All bolts should be counter sunk.
- 9 The contractor shall furnish the design and drawing of complete formwork (i.e. the forms as well as their supports) for approval of the Engineer-in-Charge before any erection is taken up. Notwithstanding any approval or review of drawing and design by the Engineer-in-Charge, the contractor shall be entirely responsible

for the adequacy and safety of form work.

- 10 The formwork shall be robust and strong and joints shall be leakproof. Staging must have cross bracings and diagonal bracings in both direction and the number of joints in the form work shall be kept to a minimum by using large size panels.
- 11 Rates in this chapter are for the finished work including the cost of all materials, labour, tools and plant required for design, construction and removal of formwork including properly supporting the members until the concrete is cured, set and hardened as required and also inclusive of lining with material approved by the Engineer-in-Charge so as to provide a smooth finish of uniform texture, appearance and to produce a finished concrete true to shape, line, levels and dimension as shown on the drawings. The material used shall leave no stain on the concrete and so fixed to its backing as not to impart any blemishes. The rate also includes coating of formwork with an approved release agent that will effectively prevent sticking and will not stain the concrete surface. Lubricating (machine oils) are prohibited for use as a coating.
- 12 The rate includes provision of gradient in formwork for terrace roof as per direction of Engineer-in-Charge and the gradient shall be provided necessarily so that water is drained out quickly and effectively.
- 13 Rates also include all leads and lifts of all materials etc. required for the work.

REINFORCED CEMENT CONCRETE

NOTES:

- 1 Cement: Cement to be used in the works shall be any of the following types with the prior approval of the Engineer-in-charge:
 - a) Ordinary portland cement, 33 Grade conforming to IS : 269.
 - b) Ordinary portland cement, 43 Grade conforming to IS : 8112.
 - c) Ordinary portland cement, 53 Grade conforming to IS : 12269.
 - d) Sulphate resistant portland cement, conforming to IS : 12330.
- 2 Steel: Steel to be used shall conform to IS: 1786. All steel shall be procured from original producers; no re-rolled steel shall be incorporated in the work. Only new steel shall be delivered to the site. Every bar shall be inspected before assembling on the work and defective, brittle or burnt bar shall be discarded. Cracked ends of bars shall be discarded.
- 3 Aggregates: aggregate shall consist of clean, hard, strong, dense, non-porous and durable pieces of crushed stone. They shall not consist pieces of disintegrated stones, soft, flaky, elongated particles, salt, alkali, vegetable matter or other deleterious materials. All aggregate shall conform to IS: 383 and tests for conformity shall be carried out as per IS: 2386 parts I to VIII. The maximum value of flakiness Index for aggregate shall not exceed 35 percent. The aggregate shall satisfy the following requirements of grading:

Grading Requirements of Aggregate

IS Sieve sieve	Percentage by weight passing the
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	40 mm	20 mm	12.5 mm
63 mm	100	-	-
40 mm	95-100	100	-
20 mm	30-70	95-100	100
12.5 mm	-	-	90-100
10 mm	10-35	25-55	40-85
4.75 mm	0-5	0-10	0-10

- 4 **Sand/Fine Aggregates:** Fine aggregates shall not contain dust, lumps, soft or flaky materials, mica or other deleterious materials. Fine aggregates, having positive alkali-silica reaction, shall not be used.
All fine aggregates shall conform to IS : 383. The fineness modulus of fine aggregate shall neither be less than 2.0 nor greater than 3.5.
- 5 **Water:** Water used for mixing and curing shall be clean and free from injurious amount of oils, acids, alkalis, salts, sugar, organic materials or other substances that may be deleterious to concrete. Potable water is generally considered satisfactory for mixing and curing of concrete.
- 6 **Concrete:** Concrete shall be mixed either in a concrete mixer or in a batching and mixing plant. Handmixing is prohibited. Mixing shall be continued till materials are uniformly distributed and a uniform colour of the entire mass is obtained and each individual particle of the aggregate shows complete coating of mortar, containing its proportionate amount of cement. In no case, mixing shall be done for less than 2 minutes. Concrete shall be transported and placed as near as practicable to its final position. Concrete shall not be freely dropped into place from a height exceeding 1.50 metres and it shall be compacted in its final position within 30 minutes of its discharge from the mixer. It shall be compacted thoroughly by vibration or other means during placing so as to produce a dense homogeneous void-free mass having the required surface finish. Bottom and side surfaces shall give a uniform texture, smooth surface and good appearance. Non uniform texture and rough surface of concrete shall be treated as defective work and it has to be remedied with 1:3 cement plaster.
- 7 Item for Ready mixed concrete has also been included in this chapter in view of changing technology.

BRICK WORK

THE GHOL BRICKS SHALL BE OF 1st GRADE QUALITY (ALLAHABAD BRICKS)

Notes :

- 1 This work shall consist of construction of structures with bricks jointed together by cement mortar in accordance with the details shown on the drawings or as approved by the Engineer in charge
- 2 Burnt clay bricks shall conform to the requirements of IS:1077. They shall be free from cracks and flaws and nodules of free lime. The brick shall have smooth rectangular faces with sharp corners and emit a clear ringing sound when struck.
- 3 Cement mortar for the work shall be as per details given in Chapter III of this SOR.
- 4 All bricks shall be thoroughly soaked in a tank filled with water for a minimum period of one hour prior to being laid. Soaked bricks shall be removed from the

- tank sufficiently in advance so that they are skin dry at the time of actual laying. Such soaked bricks shall be stacked on a clean place where they are not contaminated with dirt, earth, etc.
- 5 The thickness of joints shall not exceed 10mm. All joints on exposed faces shall be tooled to give concave finish.
- 6 The brick work shall be built in uniform layers, and for this purpose wooden straight edge with graduations indicating thickness of each course including joint shall be used. Corners and other advanced work shall be raked back. Brickwork shall be done true to plumb or in specified batter. All courses shall be laid truly horizontal and vertical joints shall be truly vertical. Vertical joints in alternate courses shall come directly one over the other. During construction, no part of work shall rise more than one metre above the general construction level, to avoid unequal settlement and improper jointing. Where this is not possible in the opinion of the Engineer in charge, the works shall be raked back according to the bond (and not toothed) at an angle not steeper than 45 degrees with prior approval of the Engineer in charge. Tothing may also be permitted where future extension is contemplated.
- 7 Where fresh masonry is to join with masonry that is partially/entirely set, the exposed jointing surface of the set masonry shall be cleaned, roughened and wetted, so as to effect the best possible bond with the new work. All loose bricks and mortar or other material shall be removed.
In the case of vertical or inclined joints, it shall be further ensured that proper bond between the old and new masonry is obtained by interlocking the bricks. Any portion of the brickwork that has been completed shall remain undisturbed until thoroughly set.
- 8 Green work shall be protected from rain by suitable covering and shall be kept constantly moist on all faces for a minimum period of seven days. Brick work carried out during the day shall be suitably marked indicating the date on which the work is done so as to keep a watch on the curing period. Watering may be done carefully so as not to disturb or wash out the green mortar.
During hot weather, all finished or partly completed work shall be covered or wetted in such a manner as will prevent rapid drying of the brickwork.
During the period of curing of brick work, it shall be suitably protected from all damages. At the close of day's work or for other period of cessation, watering and curing shall have to be maintained. Should the mortar perish i.e. become dry, white or powdery through neglect of curing, work shall be pulled down and rebuilt as directed by the Engineer in charge. If any stains, appear during watering, the same shall be removed from the face.
The scaffolding shall be sound, strong and safe to withstand all loads likely to come upon it. Putlog holes are not allowed.
- 9 Bricks having crushing strength of more than 40kg/cm². shall be used for load bearing walls.
- 10 Classification of Bricks and Masonry:-
In this schedule the following three classifications of bricks and masonry is given and shall have the minimum crushing strength when tested according to IS: 1077-1992
- (a) Class 40 TM chimney brick/grog or ghol brick: - For this item either selected chimney burnt bricks or ghol bricks are used and superior workmanship than the following varieties is required. The crushing strength when thoroughly soaked in water shall not be less than 40kg/sq.cm.
- (b) Class 25 TM chimney brick masonry: - The crushing strength when thoroughly soaked in water shall not be less than 25 kg/sq.cm.
- (c) Class 25TM open bhatta or pajaw a burnt brick :- As is clear the only difference between (b) and (c) varies in the method of burning bricks. The crushing strength when thoroughly soaked in water shall not be less than 25 kg/sq.cm.

- 11 Periodical sampling and testing of bricks shall be carried out at contractors cost to classify the brick. The record of test results shall be kept with the Executive Engineer, or Authorized officer.
- 12 When reinforcement is used in 10cm thick brick masonry, minimum lap of reinforcement should be 15cm. In case of wall joints of the main wall, reinforcement should go 15cm to the main wall.

STONE WORK

Notes:

- 1 The work shall consist of construction of structures with stone jointed together by cement mortar in accordance with the details shown on the drawings.
- 2 Stones shall be of the type specified. It shall be hard, sound, free from cracks, decay and weathering and shall be freshly quarried from an approved quarry. Stone with round surface shall not be used. The stones, when immersed in water for 24 hours, shall not absorb water by more than 5 percent of their dry weight when tested in accordance with IS: 1124. The length of stones shall not exceed three times its height nor shall they be less than twice its height plus one joint. No stone shall be less in width than the height and the width on the base shall not be greater than three-fourth of the thickness of the wall nor less than 150mm.
- 3 The type of masonry used for the structures shall be random rubble masonry (coursed or uncoursed) or Coursed rubble masonry (Second Sort) or ashler masonry.
- 4 The dressing of stone shall be as specified for individual type of masonry work and it shall also conform to the general requirements of IS:1597 and requirement for dressing of stone covered in IS : 1129.

The masonry work shall be laid to lines, levels, curves and shapes as shown in the plan. The height, in each course, shall be kept same and every stone shall be fine tooled on all beds, joints and face full and true. The exposed faces shall be gauged out, grooved, regulated and sunk or plain molded as the case may be.

Stones shall be sufficiently wetted before laying to prevent absorption of water from mortar. Stratified stones must be laid on their natural beds. All bed joints shall be normal to the pressure upon them.

Stones in the hearting shall be laid on their broadest face that gives a better opportunity to fill the spaces between stones. The practice of placing loose mortar on the course and pouring water on it to fill the gaps in stones is not acceptable. Mortar may be fluid mixed thoroughly and then poured in the joints. No dry or hollow space shall be left anywhere in the masonry and each stone shall have all the embedded faces completely covered with mortar.

Shaping and dressing shall be done before the stone is laid in the work. No dressing and hammering, which will loosen the masonry, will be allowed after it is once placed. All necessary chases for joggles, dowels and clamps should be formed before hand. Sufficient transverse bonds shall be provided by the use of bond stone extending from the front to the back of the wall and in case of thick wall from outside to the interior and vice versa. In the latter case, bond stones shall overlap each other in their arrangement. In case, headers are not available, precast headers of M 15 concrete shall be used. Cast-in-situ headers are not permitted.

Stones shall break joint on the face for at least half the height of the course and the bond shall be carefully maintained throughout.

In band work at all angle junctions of walls, the stones at each alternate course shall be carried into each of the respective walls so as to unite the work thoroughly.

The practice of building up thin faces tied with occasional through stones and filling up the middle with small stuff or even dry packing is not acceptable.

All quoins and the angles of the opening shall be made from selected stones, carefully squared and bedded and arranged to bond alternately long and short in both directions.

All vertical joints shall be truly vertical. Vertical joints shall be staggered as far as possible. Distance between the nearer vertical joints of upper layer and lower shall not be less than half the height of the course.

Only rectangular shaped bond stones or headers shall be used. Bond stones shall overlap each other by 150mm or more.

All connected masonry in a structure shall be carried up nearly at one uniform level throughout but when breaks are unavoidable, the masonry shall be raked in sufficiently long steps to facilitate jointing of old and new work. The stepping of raking shall not be more than 45 degrees with the horizontal.

- 6 Quoin stone i.e. stone specially selected and neatly dressed for forming an external angle in masonry work, shall not be less than 0.03 cubic meter in volume.
- 7 The plum stones are selected long stones embedded vertically in the interior of the masonry to form a bond between successive courses and shall be provided at about 900mm. intervals.

VITRIFIED TILE FLOORING

The tiles shall be of approved make and shall generally conform to IS 15622. They shall be flat, and true to shape and free from blisters crazing, chips, welts, crawling or other imperfections detracting from their appearance. The tiles shall be tested as per IS 13630.

on the rear side. Manufacturer/supplier and party shall choose the work size The tiles shall be square or rectangular of nominal size. Confirming IS 15622. Thickness shall be specified by the manufacturer. It includes the profiles on the visible face and of tiles in order to allow a nominal joint width upto 2mm for uncertified floor tiles and upto 1mm for rectified floor tiles. The joint in case of spacer lug tile shall be as per spacer. The tiles shall conform to IS 15622 with water absorption 3 to 6% (Group BII). The selection of tile should be as per engineer in- charge/ competent authority.

The top surface of the tiles shall be glazed. Glaze shall be either glossy or matt as specified. The underside of the tiles shall not have glaze on more than 5% of the area in order that the tile may adhere properly to the base. The edges of the tiles shall be preferably free from glaze. However, any glaze if unavoidable, shall be permissible on only upto 50 per cent of the surface area of the edges.

Base concrete or the RCC slab on which the tiles are to be laid shall be cleaned, wetted and mopped. The bedding for the tile shall be with cement mortar 1:4 (1

cement : 4 coarse sand) or as specified. The average thickness of the bedding shall be 20 mm or as specified while the thickness under any portion of the tiles shall not be less than 10 mm.

The surface of the flooring during laying shall be frequently checked with a straight edge about 2 m long, so as to obtain a true surface with the required slope. In bath, toilet W.C. kitchen and balcony/verandah flooring, suitable tile drop or as shown in drawing will be given in addition to required slope to avoid spread of water. Further tile drop will also be provided near floor trap.

The joints shall be cleaned off the grey cement slurry with wire/coir brush or trowel to a depth of 2 mm to 3 mm and all dust and loose mortar removed. Joints shall then be flush pointed with white cement added with pigment if required to match the colour of tiles. Where spacer lug tiles are provided, the half the depth of joint shall be filled with polysulphide or as specified on top with under filling with cement grout without the lugs remaining exposed. The floor shall then be kept wet for 7 days. After curing, the surface shall be washed and finished clean. The finished floor shall not sound hollow when tapped with a wooden mallet.

Length and breadth shall be measured correct to a cm before laying skirting, dado or wall plaster and the area calculated in square metre correct to two places of decimal. Where coves are used at the junctions, the length and breadth shall be measured between the lower edges of the coves.

No deduction shall be made nor extra paid for voids not exceeding 0.20 square metre. Deductions for ends of dissimilar materials or other articles embedded shall not be made for areas not exceeding 0.10 square metre. Areas, where glazed tiles or different types of decorative tiles are used will be measured separately.

PRESSED CERAMIC TILES IN SKIRTING AND DADO

The tiles shall be of approved make and shall generally conform to IS 15622. The tiles shall be pressed ceramic covered by a glaze thoroughly matured and fitted to the body. The tiles shall be sound, true to shape, flat and free from flaws and other manufacturing defects affecting their utility.

The top surface of the tiles shall be glazed. The underside of the tiles shall not have glaze on more than 5% of the area in order that the tile may adhere properly to the base. The edges of the tiles shall be free from glaze, however, any glaze if unavoidable shall be permissible on only upto 50 per cent of the surface area of edges.

The glaze shall be free from welts, chips, craze, specks, crawling or other imperfections detracting from the appearance when viewed from a distance of one metre. The glaze shall be either glossy or matt as specified. The glaze shall be white in colour except in the case of coloured tiles when colours shall be specified by the Engineer-in-Charge. There may be more than one colour on a tile.

WOOD WORK AND PVC WORK

Notes:

FRAMED WORK:

1. The timber used in the work shall conform to IS: 883.
2. Rates include cost of all materials i.e. timber spikes, nails, screws, glue etc. required for the work. Rates also include cost of all labour for making, hosting, erecting and fixing in position.
3. Timber described as "Framed and Fixed" timber include:-

- 3.1 Joints in wood work are not permitted. Unless otherwise specified, all joints shall be simple tendon and mortise joints.
- 3.2 Lapping, halving, tabling, scarping, notching, birds mouth cutting, splayed or beveled ends
- 3.3 Framing together with mortise and tendon tusk tendon or dovetailed joints
- 3.4 Framed joinery put together with white lead or glue in joints and pinned with hard wood or bamboo pins.
- 3.5 Boring for bolts
- 3.6 Hoisting erecting and fixing in position.
- 3.7 Small labours like splays, chambers, rounded angles and rounded nosing

SHUTTERS :

1. For all hard wood shutters, timber shall conform to IS : 883.
2. For factory made panelled shutters approved hard wood as per IS : 4021 duly kiln seasoned & as vacuumed pressure treated as per IS : 1141 & IS : 401 shall only be accepted.
3. Flush doors with solid block board core shall conform to IS:2201-1973.
4. The rate for glazed and partly glazed shutter include the cost of wooden fillets, plain or moulded and of the size and design depending on the type of shutter being glazed.
5. All fittings & fixtures like hinges, aldrops, tower bolts, handles, nails, screws etc. shall be as per the relevant IS specifications.
6. Glass panes shall conform to IS : 1761-1960.

STEEL WORK

Notes:

- 1 Structural steel shall be of tested, standard quality conforming to IS: 226-69 & commercial quality shall conform to IS: 1977-69.
- 2 Steel work in single section are for works, like hold fasts & iron work for wooden trusses, M.S. Square/round guard bars fixed in wooden or steel windows & ventilators frames etc.
- 3 Steel work riveted or bolted shall conform to IS: 1148-1968 and IS : 800-1962.
- 4 Welding of steel shall be electric arc welding as per IS : 816-1956 and shall be on the lines given in IS : 800-1962.
- 5 Rolling shutters should conform to IS : 6248-1971.
- 6 Rolled steel sections for fabrication of steel glazed doors, windows & ventilators shall conform to IS : 7452-1974.
- 7 Glass panes should conform to IS : 1761-1960.
- 8 Screws shall conform to IS : 4218 (Part I to V I) 1967.
- 9 Steel doors, windows & ventilators shall conform to IS : 1038-1975 and IS : 7452-1974.
- 10 The rates of steel doors, windows & ventilators include cost of all materials, labour, T&P, hire & running charges of machineries & wastages etc. and also include cost of welding, all fixtures, erecting and fixing the sections in position.
- 11 Rates of steel angle iron fencing include all forging, reducing to required size, shape & figure, drilling, tapping, punching, counter sinking for screws, nailing etc. and every description of workmanship that may be necessary to fabricate, finish, erect and fix in positions in perfect manner.
- 12 Cold rolled framed profiles of pressed steel made from commercial M.S. Sheets conforming IS-513 of 1973 and as per general specifications of IS : 4351 are to be filled with M-15 grade of concrete and rates of items with these sections are

inclusive of the cost of concrete.

FINISHING WORK

Notes:

- 1 Plastering shall be done as here shown on the drawing. Plastering shall be started from top and worked down. All putlog holes shall be properly filled in advance of the plastering while the scaffolding is being taken down. Wooden screeds 75mm wide and of the thickness of the plaster shall be fixed vertically 2.5 to 4 meters apart, to act as gauges and guides in applying the plaster. The mortar shall be laid on the wall between the screeds using the plasterer's float and pressing the mortar so that the raked joints are properly filled. The plaster shall then be finished off with a wooden straight edge reaching across the screeds. The straight edge shall be worked on the screeds with a small upward and sideways motion 50mm to 75mm at a time. Finally, the surface shall be finished off with a plasterer's wooden float. Metal floats shall not be used.
- 2 Pointing shall be carried out using mortar not leaner than 1:3 by volume of cement and sand or as shown on the drawing. The mortar shall be filled and pressed into the raked joints before giving the required finish.
- 3 Curing shall be commenced as soon as the mortar used for finishing has hardened sufficiently not to be damaged during curing. It shall be kept wet for a period of at least 7 days. During this period, it shall be suitably protected from all damages.
- 4 For a white washing, class C lime i.e. fat lime shall be used.
- 5 For colour wash the colouring material shall be of approved make and as approved by Engineer-in-Charge.
- 6 Dry distemper shall conform to I.S. 427-1965.
- 7 Oil bound distemper shall conform to I.S. 428-1969.
- 8 Cement paint shall conform to I.S. 5410-1969.
- 9 Primer on wooden surfaces is to be followed by putty of two parts of white chalk powder, one part of enamel paint and added by turpentine oil proportionately to prepare a smooth surface by sand pappering.
- 10 Primer on metal steel surfaces shall be done with red oxide zinc chromites.
- 11 Synthetic enamel paint shall conform to I.S. 2932-1974, IS 2933-1975 and IS 133-1975.
- 12 Ready mixed paints shall conform to I.S. 3631-1966.
- 13 Clear synthetic varnish shall conform to IS 525-1968.
- 14 Copal varnish shall conform to I.S. 337-1975.
- 15 Waxing - A mixture of bee's wax and turpentine oil in proportion of 2 Bee's wax : 1½ double boiled linseed oil : 1 turpentine : ½ varnish shall be used. The wax is melted and added to turpentine.
- 16 The other paints etc. should conform to the following specifications:
 - a) Aluminum paint - IS 2339-1963
 - b) Black Japan - IS 341-1968
 - c) Anti corrosive Bituminous - IS158-1969
 - d) Plastic emulsion paint - IS 5411-1974
 - e) French polish - IS 348-1986
 - f) Red oxide - IS 2074-1963
 - g) Turpentine - IS 533-1973
 - h) Double boiled linseed oil - IS 77-1977
- 17 Painting of frames and shutters of doors, windows, ventilators, steel work, and corrugated sheets etc. will be measured by multiplying the length or width by the

- height of one face only and the area thus obtained being further multiplied by factors as per I.S. 1200 of mode of measurements for building works with further amendments if any.
- 18 In case of sponge/sand faced (Non plain or equivalent) plastered surface of wall, the area measured, is to be multiplied by the factor 1.50 for payments of white wash, colour wash and distemping for one or more coats of required finish.
- 19 The rates in this chapter are for all locations like walls, ceiling, sloping roofs and in all floors and heights and depths, and for all shades with cost of all materials, labour, scaffoldings, T & P, hire & running charges of machineries, ladders, cans, brushes and other appliances etc. required for the efficient execution of work.

SANITARY INSTALLATION

Notes :

- 1 Water closets and urinals shall conform to I.S. 771-1963.
- 2 Wash hand Basin shall conform to I.S. 771-1963.
- 3 Sinks shall conform to I.S. 771-1963.
- 4 The R.S. or C.I. cantilever brackets for wash hand basin & sink shall conform to IS 775-1962.
- 5 Socket and spigot spun Iron pipes shall conform to I.S. 1534-1947
- 6 The flushing of W.C. pan shall be done by "pull and let go" Flushing cistern of valve-less symphonic type conforming to I.S. 774 -1960.
- 7 C.I. pipes shall conform to I.S. 3114-1965. The overflow pipes shall be of G.I. 15mm. diameter with fittings.
- 8 The outlet flush pipe shall be of 32 diameter. They shall be one piece lead pipe or telescopic galvanized inside and outside.
- 9 Glazed stone ware pipe shall be of grade "A".
- 10 All joints shall be made with special care, particularly those between pipes of different material. All joints shall be perfectly air and water tight. No joint shall be embedded in wall if, avoidable.
- 11 The rates include, unless otherwise specified, cost of all material, labour, T&P, hire and running charges of machineries etc. with all leads and lifts required for the work. The rates also include labour for installation, making holes in walls, excavation, cutting of floors & making good the same to its original condition.

DRAINAGE

Notes :

- 1 All soil waste pipes and accessories shall be of grade 'A'.
- 2 In brick masonry manholes/chambers, the benching of inlets and outlet lines shall not cross each other for effective drainage.
- 3 All the drainage line shall be laid as per required gradient.
- 4 Soak pits shall be constructed at least 3.00m. apart from septic tank.
- 5 Cast Iron manhole covers and frames shall conform to I.S. 17276-1960.
- 6 Septic tanks shall be constructed conforming to I.S. 2470 (Part-I) 1963.
- 7 Centre to centre spacing of each manhole shall not exceed 6.00m.
- 8 Rates include excavating soil for pipes, chambers etc. and also include refilling with the excavated stuff. Rates also include work of reinforcement and formwork required for top slab to manholes and chambers.
- 9 The rates include cost of all materials, labours, scaffolding, water, T & P, hire and running charges of machineries etc. complete with all leads and lifts for all materials required for the work.

ALUMINUM WORK

All aluminum sections shall conform to IS:733 and IS:1285, the sections shall be powder coated with minimum thickness of 50 microns.

FOR INTERIOR WORK

Gypsum board false ceiling

Frame work for false ceiling shall be made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the rate of 1200 mm centre to centre to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval.

Fixing of 12mm thick gypsum board to ceiling section and perimeter channel shall be with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes, finishing with jointing compound in 3 layers covering up to 150 mm or both sides of joint and two coats of primer suitable for board. Including cutting openings for light fittings, grills, diffusers, cut outs in perfect machine cut edges leaving no gap visible after fixture is installed and shall be with frame of perimeter channels suitably fixed. (sections shall be of gypsum India make)

Timber

The timber shall be of the best of its kind available, properly seasoned and of mature growth. It shall be free from decay and insect attack, saps, warps, cracks, knots & knot holes and any other defects which may affect the looks or harm the strength of the member. All the timber shall be seasoned as per UADD/MPPWD/CPWD Specifications.

Plywood

- i) Unless otherwise stated, only BWR / BWP grade plywood boards shall be used. Plywood shall comply with standards and specifications. Face veneers may be either commercial or decorative on both sides or one side commercial and the other decorative. Type of face veneer and grade of plywood boards shall be, as specified.

- ii) **CROSS GRAIN/ LONG GRAIN FLEXIPLY:** - Shall have flexibility and high bending quality. It can be cold formed to curved surface requirements. Made of gurjan species, exclusively with phenolic resin and conditioned to undergo any sort of rigorous climatic changes such as alternate wetting and drying. Shall not require any external heat or water sprays which are the conventional for post forming.

ELASTICITY: - Cross grain 200N/mm²

DENSITY: - 0.75gm/cc

Bending Radius

6mm 10mm diameter

8mm 12mm diameter

12mm 30mm diameter

Decorative Timber Veneer Ply

3.5 - 4.0mm thick straight grained matching approved veneers shall be used. The veneer shall be resin bonded & suitable for the intended use. The decorative veneer should have attractive appearance due to figure, colour, grain, luster etc. The decorative veneer surface shall be selected for figure, texture, color and grain characteristics. All the veneer shall be from one lot and shall be group matched so as to be similar in grain and characters. Architect's prior approval of the lots is to be obtained before the same is procured. The grains/flowers shall be strictly placed either horizontally or vertically or diagonally and matched as per instructions of the Owner. The decorative veneered surface shall be free from torn grain, dead knots, discoloration and sapwood. Where group match veneers are specified it shall refer to a certain number of decorative matched plywood panels, matching in figure, colour and grain as required to form a group to give an overall general effect, the quantity of each group unless mentioned in the schedule shall be restricted to at least one enclosed cabin space, as the case may be. The decorative veneered surfaces with figures shall not be allowed unless specified with schedule. For majority of veneers the contractor shall arrange for selection of finishing material from bulk stocks of the supplier. A joint visit shall be arranged by the contractor along with ARCHITECT? Employer for the selection process. This shall have no bearing on the cost to the employer.

Laminate Sheets

Laminate shall be of the brand, catalogue surface finish, colour as specified and approved by the Architect. All laminates shall be in finish as per design intent unless mentioned otherwise. Laminates shall comply with standards and specifications.

Gypsum board

Gypsum board as manufactured by India Gypsum Ltd. Or Saint Gobain and shall confirm to CBRI certification. Board shall be moisture resistant, light weight, strong, durable

dimensionally stable, smooth surface finished such that ready to receive directly painting, wall papering etc.

All fittings and fixtures shall be as specified in Schedule of Items or on drawing by Architect. Approved makes only shall be used for respective items. Fittings shall be guaranteed by the manufacturer for its performance.

Adhesives and glue shall be as per IS for exterior quality and water repellent.

Fasteners :

All fixing anchor, bolts, screws, nuts, washers or other miscellaneous anchoring / fixing devices shall be of non magnetic stainless steel and approved by Architect and shall provide adequate strength.

**LACQUERED
GLASS:**

6mm thick durable, humid resistance, poly urethane lacquer glass. The planilaque glass should be manufactured by industrial curtain coating process. It should meet quality standards as per BS EN 1036 1999 & confirms to person hardness test of at least 220 oscillations. The substrate of the glass should conform to standard BS EN 572 1995 parts 1 and 2: glass in building – basic soda lime glass products.

Consistency of colour, opacity and homogeneity throughout production campaigns and also to the ageing properties, mechanical resistance and resistance to humidity and to chemical agents of lacquer should remain stable when exposed to normal levels of ultra – violet light in interior applications.

Mock-ups

Before fabricating and installing interior Architectural work, mock-ups should be built for each form of construction and finish required to verify selections made under sample submitted and to demonstrate aesthetic effects and qualities of materials and execution. Build comply with the following requirements, using materials indicated for the completed work:

1. Mock-ups should be built in the location and size indicated or, if not indicated, as directed by Architect
2. Notify Architect seven days in advance of dates and times when mock-ups will be fabricated and installed.
3. Mock ups should demonstrate the proposed range of aesthetic effects and workmanship.
4. Approval of Architect for the mock-ups must be obtained before starting interior architectural work fabrication
5. Mock-ups should be maintained during construction in undisturbed conditions as a standard for judging the completed work.
6. Demolish and remove mock-ups when directed.
7. Approved mock-ups may become part of the completed work if undisturbed at time of substantial completion.

Finishing

i) All completed works shall be delivered fully finished in neat and clean condition without any stains, marks, defects, etc. and shall meet with the approval of the Architect. Unless otherwise stipulated all work shall include priming and protective treatments and finishing as required

ii) During the course of work regularly all debris swash excess material shall be cleared and removed from site. On completion clean all places / spaces thoroughly.

iii) Wood work shall be protected from defacement, marring till final completion and hand it over to the Employer.

iv) Repair and replace all defective work prior to final inspection.

v) Prior to final inspection by the Architect / Employer the contractor to check to ensure proper operations, finish and surroundings.

vi) The approval of work do not relieve the contractor of his liability to maintain to defects liability period at contractors cost.

vii) Before fabric wall covering is started in any area, it shall be broom cleaned and excessive dust shall be removed. After wall covering operations begin in a given area, broom cleaning will not be allowed. Cleaning shall then be done only with commercial vacuum cleaning equipment.

viii) The Contractor shall be responsible for protecting all the mirrors & glasses fixed by him till handing over of mirrors & glasses forming part of this contract. The contractor shall replace at his own expense any broken or damaged mirrors & glasses caused through lack of adequate protection or care in installation or handling. All installed materials shall be left in perfect condition to the satisfaction of Architect/ Owner.

ix) Upon completion of work, the contractor shall remove all adhesive from the floors, glass and other surfaces. Remove from the premises all rubbish and accumulated materials of whatever nature, not caused by others, and leave this part of the work in clean, orderly and acceptable conditions.

x) All paints / polish shall have VOC within limit as specified in Tender Documents as per Green Building requirements. Paints used in the works shall conform to the respective IS or equivalent, other international standard

DEFINITION OF ONE COAT

The painting shall be laid on evenly and smoothly by means of crossing and laying off, the latter in the direction of the grain of wood.

The crossing and laying off consists of covering the area with paint, brushing alternative in opposite directions, two or three times and then finally brushing lightly in a direction at right angle to the same. In this process no brush marks shall be left after the laying off is finished. The full process of crossing and laying off constitute one coat.

Each coat shall be applied in sufficient quantity to obtain complete coverage, shall be well brushed and evenly worked out over the entire surface and into all corners, angles and services allowed to thoroughly dry. Second coat shall be of suitable shade to match final colour, and shall be approved by the Owner, before final coat is started. Allow at least 48 hours drying time between coats for interior and 7 days for exterior work and if in the judgment of the Owner, more time is required it shall be allowed.

The contractor shall apply the final coat on all internal walls and other surfaces at the appropriate time in consultation with Owner so that the finished work is not damaged by other agencies.

POLYURETHENE MATTE/GLOSSY FINISH or POLYCOT FINISH

DIRECTION TO USE ON Proper surface preparation is a prerequisite for optimum results. The major operations involved in surface preparation are sanding, fitting & staining.

SANDING :

Sandpaper the wood surface with flint paper No. 100 and then the emery paper No. 220 along with the grains. Brush off loose dust along the grains.

FILLING :

Make PU primer putty using appropriate colour powder and apply the same by brushing. When the surface is completely dried, sand the same along the grains. Remove excess putty along the grains by a putty knife. Allow drying for 304 hrs. at room temperature. The hard dried surface is then sanded with flint paper No. 100 & then with No. 320 along the grains. Wipe off loose dust completely.

STAINING :

To match the filled surface with wood, staining has to be done. The surface can be stained to any desired shade like Walnut, Mahogany, Sesame, Rose wood, Raw sienna etc. make a fine paste of any of the above powder with mineral turpentine. Apply with a cloth. Allow drying for 20 minutes. Wipe the surface with a dry cloth thoroughly to remove excess staining.

LACQUERING:

Mix both the resin & hardener as per the specifications. Mix the constituents and shake well for at least 5 minutes. Keep it for another 5 minutes. Filter the solutions through a muslin cloth 7 spray (Note : Both components are to be shaken well before usage so that all settled articles from homogeneous mixtures) Allow the coated surface to dry at room

temperature for 3-6 hrs. Rub the first coat using an emery paper No. 320 wet with water. Wipe with cloth. Give the second coat by spray allow drying at room Temperature preferably in a dust free atmosphere.

Melamine Finish

Timber works shall be finished by the applications of two coats of an acid catalyzed clear lacquer (melamine) wherever it is indicated in the drawings. The Finish shall be a satin, semi –gloss finish & shall be carried out as follows. :-

The base shall be sand papered to desired finish & coated with a colour tinge to give it shade. This shade shall be sealed with a coat of spirit finish.

After the base, first coat of lacquer shall be applied evenly by a soft cloth or by spray to give an even coat to the veneer surface.

After the 1st coat has fully dried, the lacquered surface shall be rubbed down in the direction of the veneer grain with very fine glass paper and left completely smooth & clean before the second coat is applied.

When the 2nd coat of lacquer is fully dried, the surface shall be rubbed down in the direction of veneer grain very fine wire wool dipped in a petroleum – based wax to give lubrication.

Twenty four hour after completion of this process the lacquered veneer surface shall be finished by brushing with a soft cloth to an approved finish.

ROLLER

BLINDS

FABRIC

The fabric shall be woven from a very fine glass fiber yarn coated with a specially formulated plastisol. The fabric shall be so waved to provide view of the other side of the blind with an openness factor of 3%. The fabric shall have a composition of 36% glass fiber 64% plastisol, weigh 400 gms per sq. mtr and shall be 0.45 mm thick. The fabric shall hang straight and flat without buckling or distortion and the edges shall remain straight and free of raveling. Fabric shall be flame retardant and fade resistant.

ROLLER TUBE

Roller tube shall be of extruded Aluminum alloy 32 mm O.D. with a minimum wall thickness of 1.0 mm duly anodized for long life.

CLUTCH

Clutch shall be of wrap spring design with high strength fiberglass reinforced polyester assembly and high carbon steel springs to transmit motion from driving to driven members of clutch mechanism. Clutch shall operate by directionally with the use of an endless beaded chain. Clutch mechanism shall be crash proof, prevent slippage and shall raise and lower smoothly to any desired height. Clutch shall never need adjustment.

IDLER

Idler shall be of high strength fiberglass reinforced polyester, consisting of an outside sleeve and center shaft. Sleeve shall provide bearing surface for roller tube and rotate freely on center shaft, providing smooth, quiet and long wearing operation.

INSTALLATION BRACKETS

Brackets shall be of tomized steel powder coated to give superior finish. Bracket shall accommodate overhead, side or face mounting with clutch assembly on either end of roller.

BOTTOM WEIGHT

Bottom of the blind shall be provided with Aluminum tube powder coated in a color matching to the fabric. The fabric shall be enclosed in the suitably created pocket along with the tube. The tube shall be closed from sides with end caps to give a neat look.

FINISH

Finishes shall be fully in accordance with the drawings and schedules. Where timber is in natural finish, pieces shall be matched for colour and grain before assembly. Where timber is stained the stain shall be matched throughout.

HARDWARE

Hinges, locks, latches, door handles, nails, etc., shall be as specified or as approved substitute equal or be better than the specified. For fixing drawer slides (runner slides), auto closing hinges etc. hole pattern as recommended by the manufacturer. Cup holes shall be punched very accurately mechanically only using a drill bit, drilling template. Drilling positions shall be to suit the kind of hardware used. Marking of drill holes shall be corresponding to hinge type.

LIST OF APPROVED MANUFACTURERS / NATURAL SOURCES OF MATERIALS TO BE USED IN THE INTERIOR WORKS SUBJECT TO THE APPROVAL OF SAMPLES BY THE CONSULTANT/ ENGINEER IN CHARGE.

CARPENTRY / WOOD WORKS:

S.NO.	Material Name	Brand / Manufacturer
1	Plywood – BWR (boiled water Resistant Termite Resistant & Borer Resistant) – Confirming To IS : 303.	Green ply, Kit ply, Century, Mayur ply.
2	Laminate – Confirming To IS: 2046-1995	Greenlam / Merino / Royal Touche / Formica / Century /Archid/ Signature/Virgo
3	Glass	Triveni / Modifloat / Asahifloat / Saint Gobain Make.
4	Flush Door – Confirming To Is : 2202 (Part – 1)	Egg Wood, Euro wood

- | | | |
|----|--|---|
| 10 | Plaster Boards. | Boral |
| 11 | Soft Board. | Jolly Board |
| 12 | Screws. | GKW ,Nettlefold. |
| 13 | Adhesives. | Movicol / Fevicol Sh / Araldite |
| 14 | Paint. | Asian / ICI / Berger/Nerolac/ Jotun |
| 15 | Floor Spring. | Doorset, Hardwyn, Ozone, Ebco |
| 16 | Door Closures. | Stearling Mech, Hardwyn, Godrej |
| 17 | Textured Paint. | Terraco / Spectrum |
| 18 | Vinyl Flooring. | Armstrong Or Approved Equivalent. |
| 19 | Writing Board. | White Mark Or Approved Equivalent. |
| 20 | Ceiling Tiles. | Armstrong |
| 21 | HARD WARE FOR STORAGE CUPBOARDS AND DRAWS | |
| a | Draw and Cupboard handles | Italica Model 9DS 74 304 Grade |
| b | Cup board Hinges | Magnum 3"x1/2"x3/4"x2mm thk Jyoti brand
3"x1/2"x3/4"x2mm |
| c | Locks | Door set,MP330 HardwynHMP 510,Godrej 5117 |
| d | Magnets | Bmw/avon Medium 2 |
| 22 | Draw Channels | Hettiach/Ebco telescopic 18" for tables &12for side tables |
| 23 | Key boards | Ebco Metal Powder coated KTSM 45 |

24 HARD WARE FOR DOORS UPTO 7'-0"

- | | | |
|---|---------------------------|---|
| A | Glass Door Handles | Doorset SH 12 P SS Hardwyn HPH -141 H
Shape 32x450 |
| b | Floor Spring | Doorset FS-120 Enox EFS 2090 |
| c | Locks | Door set,MP330 HardwynHMP 510,Godrej 5117 |
| B | Solid Door Handles | Doorset SL OR SS Hardwyn HPH -105 |
| a | Dead locks | Godrej 5426,5427 Model Link 501 Model Hardwyn 455 |
| b | Hinges | Door set SSBearing Hinge Series
102x76 x2.5x12, Ebco |

NOTE: The contractor shall use only above mentioned material to be approved by the Consultant / Engineer in charge. All other materials shall conform to the specifications laid down and shall be of reputed company/brand. The tenderer shall take this into account while tendering rates / prices.

FOR ELECTRICAL WORK

General:

These special conditions shall be read in conjunction with the description of the item of work in the Bill(s) of Quantities, the particular Specifications, Local Statutory Regulations, Indian Standards Specifications/Codes and the drawings. All the above quoted documents, shall be considered supplementary to each other. However, in the case of conflict amongst the various provisions the owner's and the consultant's opinion will be final and shall be adopted. The tenderer is advised to inspect the site to ascertain the nature of site, access thereto, local facilities for procurement of materials and working labour rates prevalent in the area, in fact all matters affecting his prices and execution of the work. The tenderer shall be deemed to have full knowledge of the site and drawings whether or not he actually inspects them.

Scope :

This specification is intended to cover the requirements of supply, installation, testing and commissioning of electrical wiring installation and other accessories required for its satisfactory operation. This covers the essential requirements or precautions regarding wiring installations for ensuring satisfactory and reliable service.

Standards :

The Electrical wiring installations and other accessories shall comply with latest IS : 732 - 1989 and National Electrical code - 1985.

Construction:

Wall mounted switch boards shall be installed such that the bottom is at a minimum height of 1.35 m above finished floor level wherever applicable, as indicated in the drawing.

Equipment which is on the front of a switch board shall be so arranged that inadvertent personnel contact with live parts is unlikely during the manipulation of switches, changing of fuses or similar operation.

In every case in which switches and fuses are fitted on the same pole, these fuses, shall be so arranged that the fuses are not live when their respective switches are in 'OFF' position.

No fuses other than fuses in instrument circuit shall be fixed on the back or behind a switch board panel or frame.

Capacity of circuit :

Lighting Circuits shall not have more than a total of ten points of fans, 5A socket outlets and light points and its total load shall not exceed 800 watts. Lights, fans, and 5A socket outlets can be wired on a single common circuit. If fan circuit is drawn separately, circuit shall not be used more than eight points and load shall not exceed more than 800 watts. In the circuit, the neutral and earth wires can be looped up to 10points. From distribution boards Neutral & Earth wires shall be run for every circuit.

The power circuits shall not have more than two outlets per circuit if load to be fed by each outlet is less than 1KW, and if load is more than 2KW, each outlet shall be connected to a separate circuit.

Switches :

All switches shall be placed in the live conductor of the circuit and no single pole switch or fuse shall be inserted in the earth or earthed neutral conductor of the circuits. Single pole switches (other than for multiple control) carrying not more than 15amperes may be of the piano flush type and the switch shall be 'ON' When the knob is down.

Lamp holders : Lamp holders for use on brackets and the like shall have not less than 1.3 cm nipple and all those for use with flexible pendant shall be provided with cord grips. All lamp holders shall be provided with shade carriers. Where centre contact Edison screw lamp holders are used, the outer or screw contact shall be connected to the 'middle wire' or the neutral or to the earthed conductor of the circuit.

Lamps :

All CFL/ LED lamps, unless otherwise specified shall be hung at a height of not less than 2.5 m above the finished floor level.

Ceiling rose :

a) A ceiling rose or any other similar attachment shall not be used on circuit, the voltage of which normally exceeds 250 volts. A ceiling rose shall not embody fuse terminals as an integral part of it.

Every socket outlet shall be controlled by a switch. The switch controlling the socket shall be on the 'live' side of side line.5 Amps and 15 Amps socket-outlet shall normally be fixed at any convenient place 60 cm above the floor level or near such level as indicated in drawing. 15 Amps socket outlets in kitchen shall be fixed at convenient place 23cm above the working platform. In a room containing a fixed bath or shower, there shall be no socket

outlet and there shall be no provision for connecting a portable appliance.

Recessed MS conduit wiring system:

a) **Making of chase:** The chase in the wall shall neatly be made and shall be of suitable dimension to permit the conduit to be fixed in the manner desired by the Engineer-in-charge. In the case of buildings under construction, chases shall be provided in the wall, ceiling, etc. at the time of their construction and shall be filled up neatly after erection of conduit and brought to the original finish of the wall.

b) **Fixing of conduit in chase :** The conduit shall be fixed by means of staples or by means of saddles not more than 600 mm apart. Fixing of standard bends or elbows shall be avoided as far as practicable and all curves maintained by bending the conduit pipe itself with a long radius which will permit easy drawing-in of conductors. All the threaded joints of rigid steel conduits shall be treated with approved preservative compound to ensure protection against rust.

c) **Inspection boxes :** To permit periodical inspection and to facilitate replacement of wires, suitable inspection boxes shall be provided at convenient locations. They shall be mounted in flush with the wall. The minimum size of inspection boxes shall be 75 x 75 mm. Suitable ventilating holes shall be provided in the inspection box covers.

d) **Types of accessories to be used :** All outlets, such as switches and sockets, may be either of flush mounting type or of surface mounting type.

The switches and other outlets shall be mounted on such boxes. The metal box shall be efficiently earthed with the earth continuity wire run along the conduit.

When crossing through expansion joints in buildings, the conduit sections across the joint may be through flexible copper bellows of the same size as PVC conduit. The Number of wires that can be drawn through a

conduit shall be strictly as per IS 732 and as mentioned in Drawings.

MS Conduits:

MS conduit shall be black enameled and of thickness not less than 16SWG and of size minimum 19 mm dia. The Conduit shall conform to IS 9537/ Part II

Bunching of cables : Separate conduits shall be used for bunching of conductors of AC supply and DC supply for lighting and small power outlet circuits.

All outlets of conduit systems shall be properly drained and ventilated, but in such a manner so as to prevent the entry of insects etc. as far as possible.

Bends in conduit: Wherever necessary, bends or diversions may be achieved by bending the conduits or by employing normal bends, inspection bends, inspection boxes, elbows or similar fittings.

In case of plain conduit, heat may be used to soften the conduit for bending and forming joints. Positioning of conduit in close proximity to hot surfaces should be avoided.

Testing of wiring:

The following tests shall be carried out on all types of wiring on completion of the work & before energizing the installation :

i) Insulation resistance test, ii) Electrical continuity test, iii) Earth continuity test, iv) Earth electrode resistance test, v) Switch polarity test.

i) Insulation Resistance test :

The insulation resistance shall be measured by using 500 vmegger between the following points.

Phase and neutral conductor with all fuses in position and all switches in closed condition and main switch in OFF position with lamps and other devices removed.

Between earth and whole system of conductors with all fuses in place, all switches closed and all lamps in position.

Between all conductors connected to one phase of the supply of the above tests shall not be less than 50 divided by the number of points on the circuit. Where a whole installation is being tested, a lower value than that given by the above formula is acceptable subject to a minimum of one mega ohm.

The insulation resistance in mega ohm as obtained by each of the above tests shall not be less than 50 divided by the number of points on the circuit. Where a whole installation is being tested, a lower value than that given by the above formula is acceptable subject to a minimum of one mega ohm.

(ii) Electrical continuity test :

Each and every circuit shall be tested for electrical continuity by using a multimeter. (iii) Earth continuity test :

The earth continuity conductor including metal conduit shall be tested for electrical continuity and the resistance of the same along with the earthing lead measured from the connection with the earth electrode to any point in the earth continuity conductor in the complete installation shall not exceed one ohm.

iv) Earth electrode resistance test :

The earth electrode resistance shall be tested as specified in section

(v).Switch polarity test:

Test shall be made to verify that all switches in every circuit have been fitted in the same conductor throughout and such conductor shall be marked for connection to the phase conductor.

Distribution Boards :

All the distribution boards shall be with MCBs as described in the respective schedule.

The distribution boards shall be controlled by a switch fuse, miniature circuit breaker or an isolator as described in the respective schedule. Each outgoing circuit shall be provided either with MCB or a fuse on the phase. The neutral shall be connected to a common link and be capable of being disconnected individually for testing purposes.

The distribution boards shall be located as indicated in the respective electrical working

drawings and as directed by Engineer - in - charge. The distribution boards shall be fixed on wall in the niche provided and marked with the details of circuits, source of supply, size of incoming wires Etc., All marking shall be clear and legible.

The total load of the consuming devices shall be evenly distributed between the number of ways of distribution board.

The consuming devices circuit shall be connected to distribution board in proper sequence, so as to avoid unnecessary crossing of wires.

Cables shall be connected to a terminal only by crimped lugs.

Cables shall be rigidly fixed in such a manner that a clearance of at least 2.5cm is maintained between conductors of opposite polarity or phase and between the conductors and any material other than insulating material.

The incoming and outgoing cables shall be neatly bunched.

MOUNTING HEIGHTS :

The Mounting heights of various fixtures shall be as specified in the Drawings.

POWER CONTROL CENTRES

1. Scope :

This specification is to cover the requirement of design, supply, installation, testing and commissioning of LT power control centres / main switch boards with all components, Instruments, fittings and accessories for efficient operation without any trouble.

2. Standards :

The PCC specified herein, unless otherwise stated shall conform to the relevant and latest revisions of

Indian standards and Indian Electricity Rules.

3. Design and construction :

3.1 Design requirements : The power control centres shall be suitable for operation on 440volt, 3 phase, 4wire 50HZ system to withstand a short circuit level of 50 KA RMS symmetrical.

The PCC shall be designed for operation in high ambient temperature upto 45 degrees centigrade and high humidity upto 95% and tropical atmospheric conditions. Means shall be provided to facilitate ease of inspection, Maintenance and Servicing.

3.2 Constructional requirements : The power control centre shall be of

i) Metal clad, cubicle, indoor, free standing type suitable for Mounting on Built up Trenches with U Channels of adequate size.

ii) Made up of the requisite vertical sections, which when coupled together shall form continuous dead front switch board.

iii) Dust and damp protected, the degree of protection shall be better than IP - 54 as specified in IS-2147.

iv) Readily extendable on both sides by the addition of vertical sections after removal of the end covers.

v) Single front construction with the circuit breaker feeder and switch fuse feeders suitable for operation from the front of the panel.

The PCC shall have the feeder ratings as per the schematic diagrams enclosed with the schedule and constructed only of materials capable of withstanding the mechanical, electrical and thermal stresses as well as the effects of humidity, which are likely to be encountered in normal service.

3.3 Vertical Sections :Each vertical section shall comprise a front framed structure rolled folded sheet steel channel section of minimum 2 mm thickness rigidly bolted together. This structure shall house the components contributing the major weight of the equipment such as circuit breaker, switch fuse units, main horizontal busbars, vertical risers and other front mounted accessories. The structure shall be mounted on a rigid base frame of folded sheet steel of minimum of 2.5 mm thickness and 100mm height. The design shall ensure Structural stability during Transit and also during Operation after Commissioning Suitable cable chamber housing the cable end connections and power / control cable terminations shall be provided.

The design shall ensure generous availability of space for ease of installation and maintenance of cabling and adequate safety for working in one vertical section without coming into accidental contact with live parts in the adjacent section. A cover plate at the top of the vertical section shall be provided with necessary ventilating arrangements. Any aperture for ventilation shall be covered with a perforated sheet having less than 1 mm diameter perforations to prevent entry of vermin.

3.4 Sheet Steel Cubicle :

3.4.1 The sheet steel cubicle shall be designed in fully segregated multitier formation. Each cubicle shall have hinged front access door with easy operating fasteners. All the doors and covers shall be heavily gasketed to make the compartment dust tight. Each cubicle shall have a covering at the bottom to make a dust and vermin proof construction. Door hinges shall be of concealed type.

The cubicle shall be of minimum 2 mm thick sheet steel. Sheet steel shrouds and partitions shall be of minimum 1.6 mm thickness. All sheet steel work forming the exterior of switch boards shall be smoothly finished, leveled and free from flaws. The corners shall be rounded. The minimum Thickness of Gland plates shall be 3mm.

3.4.2 The apparatus and circuits in the power control centers shall be so arranged as to facilitate their operation and maintenance at the same time to ensure the necessary degree of safety.

Apparatus forming part of the control centers shall have the following

minimum clearance. i) between phases - 25 mm,

ii) between phase and neutral - 25 mm, iii) between phases and earth - 25 mm,

iv) Between neutral and earth - 19 mm,

When, for any reason, the above clearances are not available suitable insulation shall be provided. Clearance shall be maintained during normal service conditions. Creepage distances shall comply with those specified in relevant standards.

3.4.3 All insulating materials used in the construction of the equipment shall be non hygroscopic duly treated to withstand the effect of high humidity, high temperature and tropical ambient service conditions.

3.4.4 Functional units such as circuit breakers and fuse switches shall be arranged in multitier formation, except that not more than One air circuit breaker housed in a single vertical section.

3.4.5 Metallic/insulated barriers shall be provided within vertical sections and between adjacent sections to ensure prevention of accidental contact with :

i) Main busbars and vertical risers during operation, inspection or maintenance of functional units and front connected accessories.

ii) Cable terminations of one functional unit, when working on those of adjacent unit/units.

3.4.6. All doors / covers providing access to live power equipment / circuits shall be provided with tool operated fasteners to prevent unauthorized access.

3.4.7 Provisions shall be made for permanently earthing the frames and other metal parts of the switchgear by two independent connections.

3.5 Metal treatment and finish :

All steel works used in the construction of the switch boards shall have undergone a suitable rigorous metal treatment process so as to remove oxide scales and rust formation and to facilitate a durable coating of the paint on the metal surfaces and also to prevent the spreading of rust, in the event of the paint film being mechanically damaged.

Two coats of Anti Corrosive primer followed by a finishing coat of Epoxy spray power coating of the shade

631 of IS : 5 (i.e. Siemens grey) shall be given. The total thickness of paint shall not be less than 25 micron.

3.6 Bus Bars :

3.6.1 The busbars shall be housed in non-segregated sheet steel compartments in the cubicle at convenient locations with provision for access to the buses from the front of the panel. The busbar shall be suitably braced with DMC/SMC supports to provide a through fault withstand capacity of 50 KA RMS symmetrical for one second and a peak short circuit withstand capacity 150 KA minimum. The neutral as well as the earth bus shall be capable of withstanding the above fault level.

3.6.3 Large clearance and creeping distance shall be provided on the busbar system to minimize the possibility of a fault.

3.6.4 High tension bolts, nuts and spring washers shall be provided at all busbar joints.

3.6.5 The continuous rating of the busbar shall be 125% of the rated current. Maximum temperature of the bus and the connections shall not exceed 85 degrees centigrade. The busbars shall be of liberal design for the required current rating i.e. 0.8Amp/sq.mm.

The main phase busbars shall have continuous current rating throughout the length of each power control centre and the neutral busbars shall have continuous rating of at least 50% of phase busbars.

3.6.6 Connections from the main busbars to functional circuits shall be arranged and supported so as to withstand without any damage or deformation, the thermal and dynamic stresses due to short circuit currents.

All busbars and tapings shall be provided with color coded sleeves for phase identification.

All joints/tapping points of the buses shall be suitably shrouded to prevent accidental contact.

4. Circuit Breakers

:

4.1 General :

4.1.1 Circuit breakers shall be of triple pole / four pole, air break, horizontal draw out /Fixed type, as given in the schedule of work and comply with the requirements of relevant IS with latest amendments and shall have the following :

i) A short circuit breaking capacity of not less than 50 KA RMS at 415

volts, 50 Hz AC. ii) A short circuit making capacity of 105 KA.

iii) A short time withstand capacity of 150 KA for one second.

iv) Electrical overload performance at 6 times the rated current, 100% of the rated voltage as recovery voltage at 0.5 power factor.

v) Dielectric test of 2.5 KV applied for one minute on main circuits.

4.1.2 The circuit breakers shall be fitted with detachable arc chutes on each pole designed to permit rapid dispersion, cooling and extinction of the arc. Interphase barriers shall be provided to prevent flash over between phases.

4.1.3 Arcing contacts shall be of hard wearing material copper tungsten or silver tungsten and shall be easily replaceable. Main contacts shall be of silver plated copper of high pressure type and generous cross section.

4.2 Operating

Mechanism :

The operating mechanism shall be of robust design, with minimum number of linkages to ensure maximum reliability. Manually operated circuit breakers shall be provided with spring operated closing mechanism which are independent of speed of manual operation. Electrically shall be independent of the motor which shall be used slowly for charging the closing spring.

The operating mechanism shall be such that the breaker is at all times free to open immediately when the trip coil is energized.

Mechanical operation indicators shall be provided to show open and close positions of the breaker. Electrically operated breakers shall be additionally provided with mechanical indications to show charged and discharged conditions of the charging spring.

Means shall be provided for slow closing and opening of the breaker for maintenance purposes, and for manual changing and closing of electrically operated breakers during emergencies,

4.3 Protection :

Provisions shall be available for fitting a minimum of five trip devices - three over current, as shunt trip and an under voltage release or two over current and earth fault release, a shunt trip and one under voltage release. The breakers shall be of the shunt or series trip type as specified in the schedule.

4.4 Housing of Circuit Breaker :

Circuit breakers shall be individually housed in sheet metal castle provided with hinged doors. The breaker along with its operating mechanism shall be mounted on a robust carriage moving on guide rollers within the castle. Isolating contacts for both power and control circuits shall be of robust design and fully self aligning. The assembly shall be designed to allow smooth and easy movement of the breakers within its castle.

The breaker shall have three distinct positions within the castle

as follows :

- i) 'Service' position : With main and auxiliary contacts connected.
- ii) 'Test' position : with power contacts fully disconnected and control circuit contacts connected.
- iii) 'Isolated' position : with both power and control circuit contacts fully disconnected.

It shall be possible to achieve any of the above positions with the castle doors closed. Mechanical position indicators shall be provided for the three positions of the breakers.

4.5 Interlocking

:

4.5.1. The moving portion of the circuit breaker shall be interlocked so that

- i) It shall not be possible either to isolate it from the connected position, or to plug it in from the Isolated position with the breaker closed.
- ii) The circuit breaker can be closed only when it is in one of the three positions or when it is fully out of the castle.
- iii) It shall not be possible to open the hinged door of the castle unless the breaker is drawn to the isolated position.
- iv) Inadvertent withdrawal of the circuit breaker too far beyond the supporters is prevented by the suitable stops.

4.5.2 Provisions shall be available for the padlocking of the circuit breaker access flame in any of the three positions.

4.5.3 Automatically operated safety shutters shall be provided to screen the fixed isolating contacts when the breaker is drawn out from the castle.

4.5.4 The moving portion of the circuit breaker shall be provided with a heavy duty, self aligning earth contact, which shall make before and break after the main isolating contacts during insertion into with drawl from the service position of the breaker. Even in the isolated position positive earthing contact should exist.

4.5.5 Auxiliary switches directly operated by the breaker operating mechanism and having 4 'NO' and 4 'NC' contacts, shall be provided on each breaker. The auxiliary switch contacts shall have a minimum rated thermal current of 10 amps.

5. Switch Fuse Units :

5.1 General :

The switch fuse units shall be of the load break, heavy duty, cubicle type conforming to the requirements IS and of AC 23 duty.

The switch fuse units shall be capable of withstanding the thermal and electromagnetic stresses caused by short circuits for the time of operation of the associated fuse links.

The switch fuse units shall be double break and have quick make break mechanism, designed to ensure positive operation.

All switch fuse contacts shall be silver plated at the current transfer surfaces.

The unit shall be provided with a front operating handle. The ON and OFF positions of the switch handle shall be clearly marked.

5.2 Interlocks and Safety :

Interlocks shall be provided so as to prevent opening of the unit door when the switch is in the ON position and also to prevent closing of the switch with the door not properly secured. It should however be possible for a competent person to operate the switch shall be suitable for locking with switch in the OFF position by means of a padlock.

The interior arrangement of the switch fuse unit shall be such that all 'Live' parts are shrouded.

5.3 HRC Fuses

:

The switch fuse units shall be fitted with High rupturing capacity cartridge fuse links with ISI marking for a rupturing capacity of not less than 80 KA at 415 volts. The fuse links shall be mounted in a drawout carriage, thus ensuring positive isolation of contacts during fuse replacements.

6. Current Transformers.

Current transformers shall comply with the requirements of relevant latest amendment IS. They shall have ratios, outputs and accuracy as specified in the schedule.

7.0 Indicating / Integrating Meters :

All indicating instruments shall be of flush mounted industrial pattern conforming to the relevant latest amended IS. The instrument shall have non reflecting bezels, clearly, divided and indelibly marked scales, and shall be provided with zero adjusting devices in the front. Integrating instruments shall be of flush mounted switch board pattern complying with the requirements of relevant latest IS.

8. Relays :Circuit breakers shall be provided with integrally mounted relays as specified in the schedule.

The relay shall have a set of three phase characteristics, which shall be adjustable over a wide range, to provide discrimination between a multiplicity of devices. The relay shall be able to provide over current and earth fault protection. Also UV and Shunt trip Relays are to be provided.

9. Control switches/Selector switches :Control switches/Selector switches shall be of the heavy duty rotary type, with plates clearly marked to show the operating position. They shall be of semi-flush mounted type with only the front plate and the operating handle projected.

Circuit breakers control switches shall be of the spring return to neutral type.

10. Indicating lamps and push buttons :

Indicating lamps shall be of the LED type of low watt consumption, provided with series resistors where necessary and with translucent lamp covers. Bulbs and lenses shall be easily replaceable from the front.

Push buttons shall be of the momentary contact, push to actuate type fitted with self-reset contacts and provided with plates marked with its junctions.

11. Cable terminations:

Cable entries and terminals shall be provided in the switch board to suit the number, type and size of aluminum conductor power cables and copper conductor control cables as indicated in the schematic diagram.

Provision shall be made for top or bottom entry of cables as required. Generous size of cabling chambers shall be provided, with the position of cable glands and terminals such that cables can be easily and safely terminated.

Barriers or shrouds shall be provided to permit safe working at the terminals of one circuit without accidentally touching that of another live circuit.

Cable riser shall be adequately supported to withstand the effects of rated short circuit currents without damage and without causing secondary faults.

Cable sockets shall be of copper and of the crimping type/soldering as required.

12. Control wiring: All control wiring shall be carried out with 1100/650 V grade single core Copper cable conforming to relevant IS having stranded copper conductors of minimum 2.5 sq.mm. section for CT Wiring and 1.5sq.mm for Control/indicating Instruments.

Wiring shall be neatly bunched, adequately supported and properly routed to allow easy access and maintenance.

Wires shall be identified by numbered ferrules at each end. The ferrules shall be of the ring type of non- deteriorating material. They shall be firmly located on each wire so as to prevent free movement.

All control circuit fuses shall be mounted in front of the panel and shall be easily accessible.

13. Terminal blocks and labels :

Terminal block shall be of 500 volts grade of the stud type. Insulating barriers shall be provided between adjacent terminals.

Terminal block shall have minimum current rating of 10 amps and shall be shrouded.

Provisions shall be made for label inscriptions.

Labels shall be made of anodized aluminum, with white engraving on black background. They shall be properly secured with fasteners. Danger plate of size and descriptions as recommended in the relevant IS shall be provided on the PCC.

14. Tests :

i) The power control centre shall be completely assembled, wired, adjusted and tested for operation under simulated conditions to ensure correctness of wiring and interlocking and proper functioning of all components.

ii) Each power control centre and components shall be subjected to standard routine tests as per applicable clauses of relevant standards.

iii) All current carrying parts and wiring of power control centre shall be subjected to power frequency voltage withstand test.

15. Drawings :After the award of the contract the contractors shall submit three copies of the following drawings for approval of the Department.

i) Outline dimensional drawing of the PCC showing the general arrangement

indicating the following :

- a) Busbar clearances;
 - b) power and control cable entry points;
 - c) Configuration of busbars;
 - d) Details of support insulations and spacings;
 - e) Outgoing power cable termination arrangements.
- ii) Single line diagram of power control centre showing Protection, Metering etc.
 - iii) Cubicle wiring diagram.
 - iv) List of Firements with Ratings & makes / Models

16. Installation Testing and commissioning :

The power control centre shall be installed over the cable trench/cable pit using suitable size of MS channel including grouting of the channel with necessary bolts and nuts. Proper earthing of PCC shall be done using two independent copper/GI strip of sizes as indicated in the schedule. The channel shall be painted with one coat of red oxide primer and two coats of anticorrosive enamel paint of proper shade as directed by the Engineer-in-charge.

The pre-commissioning tests as required shall be done and the PCC shall be commissioned.

LIST OF APPROVED MANUFACTURERS / NATURAL SOURCES OF MATERIALS TO BE USED IN

S.No.	Material Name.	Brand / Manufacturer / Recommended Make.
1.	Switches/Sockets	MDS (Mosaic) / MK India / Anchor Woods / Clipsal/crabtree/L&T
2.	Copper Conductor wires	Finolex / Qflex/ Lapp/ Anchor
3.	PVC conduits & Accessories	Precision / Sudhakar/ Avon plast
4.	MS Conduits	Gupta / Bharat
5.	Metal clad Sockets	MDS /L&T- Hager / Merlengerin
6.	MCBs /MCB Distribution boards	MDS /L&T- Hager / Schneider
7.	MCCBs/Switchgear	GE Power /Merlin
8.	Cable Glands	HMI /Comet
9.	Capacitor Bank	Epcos /Neptune
10.	Cable Lugs	Dowell's / 3D
11.	MV Panels (PCCs)	Manufacturers with CPRI Test Certificate.
12.	ELRs/CBCT	Prokdvs /Nagoba
13.	Measuring Instruments	Prokdvs /Enercon
14.	Selector Switches	Vaishno / Salzer / Kaycee
15.	Indication Lamps LED (protected type)	Schneider / Vaishno / Binay
16.	Resin cast CTs	AE / Kappa
17.	Telephone Wires	Lapp / Delton /National
18.	Light Fixtures	Philips / Tulip / GE
19.	Ceiling Fans & Exhaust Fans	Usha / Polar / Khaithan / Bajaj

20. **Cables LT** - Universal cables(Satna) Ravin,
Nicco,CCI(Banglore), Torrent , Kei

Or Approved by MPMKVVCo Ltd and BSCDCL.

NOTE : The contractor shall use only above mentioned material or equivalent make to be approved by the Consultant. All other materials shall confirm to the specifications laid down. The tenderer shall take this into account while tendering rates / prices. The Consultant / Owner has got every right to select any of the above Makes for the Project. However the samples of every material including all fixing accessories shall be got approved by Owner / Consultant before Execution.

NON-SOR ITEMS

Acrylic signage:

The acrylic signage shall be made of minimum 3mm translucent acrylic sheet, digitally printed as directed by engineer in-charge. The Box of the signage shall be made of Powder coated GI sheet of minimum thickness 0.5mm. The internal frame shall be made of m.s. pipes (25mmx25mm) section welded and duly coated with red oxide. The signage box shall be internally lit by T5 (40watt)/ LED (of respective wattage) (of make Bajaj, Philips, Cro mpton greeves, Havells). The wires shall be of make finolex, anchor etc.

M.S. BENCHES

The m.s. benches shall have frame of 40mmx40mm m.s. tubular section (medium weight) duly coated with red oxide. The M.S. pipe shall be duly fixed on the floor with extended member grouted on concrete at each corner. The grouting length shall not be less than 300mm. The top and back of the bench shall be made of CNC cut 6mm sheet, powder coated of shade as directed by engineer in-charge.

SAND STONE SEATING

The sand stone (rainbow/ teak wood) seating shall be made by 100mm sand stone slabs jointed to each other by cement mortar, the joint shall be groove joint and shall not be visible. The sand stone shall be of Honed finish, duly coated with two coats of stone sealer of approved brand. The vertical supports of the seating shall be fixed on 200mm thk PCC bed.

SOLID STONE SEATING

The solid stone seating shall be carved out of single stone piece. The sand stone shall be of shade 'rainbow, teak wood, chocolate brown or similar shade as approved by engineer in charge'. The contractor must insure that the carving is done in proper manner without leaving any cracks. The finished stone shall be polished with stone sealer. The seat shall be placed on already prepared M15 concrete platform.

FERROCRETE SEATING

The seat shall be pre-cast with 6mm wire mesh as reinforcement structure. The wall thickness of the seat shall not be less than 30mm. The seat shall be placed and fixed to the ground PCC bed. The surface shall be duly painted with enamel paint of required shade. The seat shall be made out of single mould no joints shall be visible.

SOLID EXPOSED CONCRETE SEATING

The exposed concrete seating shall be caste in situ by cement concrete grade M20, The centering/ shuttering shall be made of 12mm ply in desired form. The concrete finish then shall be duly polished with sealer. The base for the concrete seat shall be prepared by 150mm thick PCC bed (M15).

FIBBRE MADE DUSTBINS

The dustbins of quality as approved by engineer in charge shall be single mould cast of size 0.60m x0.60m.x0.90m. fixed on M.S. frames with sewing mechanism.

TENSILE ROOF STRUCTURE

Complete tensile membrane system shall be of coated fabric 700 GSM, fabric shall be fitted with pre-tensioning. All the corner fitting in fabric contact shall be in S.S. 316 steel. Structure shall be epoxy colour coated in selected shade. Roofing shall be fixed with 10,12mm galvanized wire with SS 316 end fitting.

12MM FIXED TOUGHENED GLASS

12mm Fixed toughened glass (of make saint gobain or equivalent) shall be fixed with the help of SS fittings, channels of make (Dorma, enox or equivalent).

BACKLIT ACRYLIC LETTERS

Backlit letters shall be made of 3mm thick acrylic sheets, CNC cut fixed with SS studs.

CIVIL WORKS

LIST OF APPROVED MAKES FOR CIVIL WORKS

Note:- Final choice of brand / make shall remain with Engineer in charge whose decision in this matter shall be final. Contractor should provide the material approved by engineer in charge without any extra cost.

S. No	MATERIALS	PROPOSEDBRAND NAMES/MANUFACTURER'S
1	OPC,PPC,PSC	Ultratech, GujratAmbuja, Lafarge, Birla
2	White cement	Grasim Industries ltd , J.K. Cement, Birla
3	Construction chemicals	white Sika India pvt. Ltd., Fosroc
4	Pigments	Chemicals(India)Ltd., Pidilite Ind. Ltd ,Cico
5	Adhesive	Tec. Ltd Tata chemicals, Sudershan
6	Reinforcement Steel bars	Chemical Industries Pidilite Ind. Ltd , Vam
7	Glass Mosaic Tiles	Organic As per IS:1786 Bizasa , Pilladio,
8	Ceramic Tile	Pixel glass Mosaic,Pearl Dakshini Murty, Bell . Johnson. Kajaria. orient. NITCO. Euro.
9	Tiles: Glazed tiles	Bell/ Somany / Johnson / Kajaria / Spartek /
10	Tiles: Vitrified Tiles	Orient / Nitco / Swastik Tile/ Ultra Bell/ Somany / H.R.Johnson / Kajaria / Spartek / Orient / Nitco /RAK / Swastik Tile/Ultra
11	Pavers & Kerb Stone	Rajesh tiles , Ultra tiles KK Manholes / Uni
12	Tiles Adesive/Grout	Stone Products (India) Pvt. Ltd/ Hindustan Tiles/ Rai tiles
13	Plastic or Acrylic Emulsion Paint, Synthetic enamel Paint, Oil Bound Distemper, Dry Distempers, Aluminium Paint, Primers (Cement wood , Metal	Asian , Nerolac , Jonson & Nicholson Super Snowcem or Snowcem plus , Duro cem All types of paints i.e. cement based paints, Oil bound distemper, acrylic paints, plastic emulsion paints etc shall be First quality of
14	Cement Based Paint (for Exterior)	ICI, Berger, Asian, Dulux, Goodlas Nerolac
15	Paint- Cement Paint	and Johnson & Nicholsan make, For Cement
16	Paint - Dry Distemper	based paint add Snowcem plus and
17	Paint - Oil Bound Distemper / Acrylic Washable Distemper	Tatacem make
18	Paints - Cement Based	
19	Paints - External Emulsion Paint	
20	Paints - Other Paints / Primer	
21	Paints - Plastic Emulsion Paint	
22	Paints - Resin Based Paints	
22	Paints - Synthetic Enamel Paints	
23	Paint Epoxy paint	Nerolac / Shalimar / Cico / Fairmate / Sika / BASF / Berger / Asian / Pidilite
24	Paints - Texture paint	Berger / J & N / Spectrum / Unilite heritage /Asian / Shalimar / ICI
25	Paver blocks (All Types)	.
26	M.S. Pipe	Jindal / Prakash – Surya / BST/ Kalinga /TATA / TT Swastik

BSCDCL
CONTRACTOR

SPECIAL CONDITIONS

1. The entire work shall be carried out conforming to relevant Indian standard code of practice and as directed by Engineer- in-Charge.
2. All material fitting's appliances etc. used in the installation shall conform to relevant Indian standard specification wherever they exists. in cases where there is not Indian standard available the item shall confirmed to specification approved by Engineer-In- Charge.
3. All Electrical installation shall comply with required Indian electricity Act 1910 as amended and Indian electricity rules 1956 as amended upto date and as per rules and regulation of MP state electricity board and to the requirement of local bodies and electrical inspectorates/ Central electricity Authority.
4. The contractor executing the work will be fully responsible for arranging inspection of the above local authorities as and when required, preparation and submission of drawing as required, getting approval of the work and drawing etc. testing of the installation preparation and submission of test reports with signature of authorized license hold persons, on behalf of BMC No payment of charges will be reimbursed to the contractor for this work. Necessary fees to MP electrical licensing board for getting charging permission shall be paid by contractor for. inspection/ Testing charges/ Supervision Charges/ System strengthening charges shall only be paid by BMC to MP state electricity board.
5. The contractor shall make his own arrangement of water supply and electricity at site for execution of work.
6. The contractor shall make his own arrangement of site office and store at site for execution of work.
7. The contractor shall finalize the latenderert of work physically at site as per approved drawing and get approved by MP electricity board taking actual measurement for quantities of items before BMC.
8. The contractor should submit the excise gate pass for the equipment / materials supplies at site.
9. All the correspondence with other department like MP electricity board/ central electricity authority/ Mp licensing board etc. will be done by contractor only, though BMC.
10. Payment of the running bill will be made only after rectification of defects if pointed out by any inspecting authority.
11. The contractor will be responsible to hand over the substation/ Lines to MPMKVVCL and submission of charge certificate to BMC.
12. The date of charging of complete installation by MPMKVVCL and handing over of all installation to MPMKVVCL will be treated as date of completion of work.
13. The contractor will be responsible for talking shut down etc. if required, by their own Efforts.
14. The contractor should be responsible for any loss/ theft, if required by their own cost.
15. All the equipments/ accessories/ materials and complete installation shall be guaranteed for the period of two year's from date of charging by MP state electricity board.
16. The contractor shall have to furnish declaration on stamp paper worth Rs. 500/- as per Annexure for related work's.
17. 5% cost of transformer and 2% total value of work will be kept in miscellaneous deposit till the line is taken over by MPMKVVCL.
18. Transformers/ VCBs/ CTs/ PTs and associated item will be inspected/ tested as per IS at works by BMC before dispatch.The above item will be accepted subject to the above specifying.
19. Guarantee against manufacturing defects for 24 months will be given in the name of MPMKVVCL directly by the manufacturer Arranged by the Tenderer.(not in case of fitting)
20. Guarantee/ warrantee offered by the manufacturer shall be given in the name MPMKVVCL be Arranged by the Tenderer.

21. If it found that the contractor has quoted abnormally high rates of the item/ items as compared to the rates as estimated by the BMC, then payment of such items in running bill shall be limited to the rates as estimated by BMC and shall be released at the time of settlement of final bill and also after the execution of necessary item for which contractor has quoted abnormally low rates as compared to the rated as estimated by BMC. Action and compensation payable in case of Bad work
22. If at any time before the security deposit is refunded to the contractor, it shall appear to the engineer -in-charge or his subordinate in charge of the work that any work has been executed with unsound, imperfect or un skillful workmanship or with material of inferior quality or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted four are otherwise not in accordance with the contract, it shall be lawful for the engineer-in-charge to intimate this fact in writing to the contractor and then notwithstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for the contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or if so required shall removed the materials or articles so specified and provide other proper and suitable materials or articles at his own proper charge and cost and in the event of his failing to do so within a period to be specified by the engineer -in-charge in written intimation as aforesaid, the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate for every day not exceeding ten days, during which the failure so continues and in the case of any such failure the engineer-in-charge may rectify or removed and re-execute the work or removed and replace the materials as described above may be accepted or maybe made use of at reduced rate then in such cases the engineer-in-charge shall submit detailed proposal for appropriate reduction (preferably supported by an analysis wherever possible) to and obtain this approval expeditiously and accept the same at such reduced rates as approved by the City Engineer.
23. Any sort of accident/fatal/Non fatal to workers or to any person. the entire full liability is on the part of contractor, BMC has not the pay any compensation in this regard.
24. The Contractor should submit completion drawing on tracing cloth and five additional copies of the same showing the position of Metering DP Transformer, panel, earthing stations, cable routes etc. at the time of final bill otherwise deduction of 1/2 percent of total amount of completed contract work will be made from the bill. This condition corresponds to the completion plan of actual work done and the same shall have to be submitted by the contractor after completion of work and before submission of final bill.
25. Rights to increase or decrease work- The competent authority reserves the right to increase or decrease work.
26. The competent authority reserves the right to increase or decrease any item of the work during the currency of the contract and the contractor will be bound to comply with the order of the competent authority without any claim for compensation.
27. Execution of agreement- The Tenderer whose tender has been accepted hereunder referred to as the contractor shall produce an appropriate solvency certificate, if so required by the executive engineer and will execute the agreement in the prescribed form within a fortnight of the date of communication of the acceptance of his tender by competent authority failure to do so will result in the earnest money being forfeited to BMC and tender being cancelled.
28. Conditions applicable for contract- All the condition of the tender notice will be binding on the contractors in addition to the conditions of the contract in the prescribed form- Following documents annexed with this NIT shall form a part of the contract, Document on
 - (i) Stamp paper
 - (ii) List of deleted clause
 - 1 Action when the contractors becomes liable for levy Penalty.
 - a) To rescind the contract and in which case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of BMC.
 - b) To employ labour paid in the PWD/Irrigation/PHE department or by employing departmental machinery and to supply materials to carry out work or any part of work

debiting the contractor with the cost of the labour or hire charge of departmental machinery and the price of the materials and crediting him with the value of the work done in all respects in the same manner and the same rate as if had been carried out by the contractor under the terms of this contract or the cost of the labour certificate of the divisional officer as to the value of the work done shall be final and conclusive against the contractor. This does not qualify the contractor to any refund if the work is carried out at lower rates than the rates quoted by the contractor saving if any will go to the BMC Bhopal.

- c) To measure up the work the contractor and to take such part thereof as shall be unexecuted out of his hand and to give it to another contractor to complete in such case any expenses which may be incurred in excess of the sum such would have been paid to the original contractor if the whole work had been executed by him shall be borne and paid by the original or any other contract with BMC or otherwise or from his security deposit or the proceeds of sale thereof or a sufficient part thereof if the work is carried out at lower rates the contractor shall not be entitled for any refund on the account saving, if any which shall go to the BMC

Alterations in specification and Designs

- 1 The engineer-in-charge shall have power to make any alterations in omissions from additions to substitution for the original specification drawings designs and instructions that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out work in accordance with any instructions which may be given to him in writing signed by the engineer-in-charge and such alterations omissions additions or substitutions shall not invalidate the contract and any above specified as part of the work shall be carried out by the contractor on the same condition in all respects on such he is freed to do the main work and at the same rates as are specified in the tender for the main work.
- 2 Extension of time in consequence of alterations- The time for the completion of the work shall be extended in the proportion that the altered additional or substituted work bears to the original contract work and the certificate of the engineer-in-charge shall be conclusive as to such proportion.
- 3 Quantities shown in the tender are approximate and no claim shall be entertained for quantities or work executed being either more or less than those entered in the tender or estimate.
- 29 No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land or in the case of clearance work on account of any delay in according sanction to estimates.
- 30 The submission of tender by tenders shall imply that he has read the Tender Notice, each and every word of this tender document, has understood its contents and scope of work within the meaning of technical and legal aspects has seen the site and has made self aware of the standard and procedure to be followed in this work.
- 31 The tender notice shall mean only an invitation extended to the contractor for making offer. It does not amount to an offer or proposal.
- 32 Issue of tender documents by Bhopal Municipal Corporation, to any tenders and subsequent participation of the latter by submitting his offer on due date shall not be an entitlement for this (Tender's) right of claim for approval by the BMC even in the event of his being the lowest offers.
- 33 On contrary to the contents of the Para 2.086 instruction 4 in the M.P. works Department manual for negotiations on the basis of offers received in First call. An intimation for negotiations shall certainly mean for withdrawal of all conditions given by tenderers and reductions of their offered rates. In the event of increase of rates or addition of any condition by any tenderer in negotiations, his original offer, without conditions, shall remain valid and open for considerations by BMC for approval, in the event of such approval of original offer the tenders shall have no right to deny the acceptance of his original offer by BMC. The tenderer withdrawing his offer shall forfeit his earnest money to BMC.
- 34 All works shall be carried out in strict accordance to the norms, procedure and

specifications issued and enforced by BIS in relevant Indian standard specifications and code of practices with up to date amendments and revisions. latest editions of National Building code and National Electric code, In additions the installation shall comply in all respects with the equipments of Indian. Electricity Act 1910 and Indian Electricity rule 1956 with up to date amendments and revisions and special requirement if any of the M.P. Madhya Kshetra Vidyut Company or chief electrical advisor to Government of Madhya Pradesh cum Chief Electrical Inspector and his subordinate office.

35. For certain items RATES ONLY have called for, in schedule of item, without mentioning their quantities. These items may, or not required for execution, In case, any or all these items are required to be executed under this contract, the same shall have to be executed for the quantities and on the rates to be decided as below:
- (a) Rates for any item falling under this category shall be the average, of rates tendered by all tenders for res pective individual item. In case, the derived average rate is more than the tendered rate of approved tenders the lesser/lower rate shall be approved and make applicable for payment under this contract.
 - (b) Quantities of all items falling under this category shall be as per requirement and up to any extent.
36. The successful tenders shall make his own arrangements for supply of water and electricity at his own expense, required for execution of work. The BMC shall neither make any such arrangements nor shall make any payments in this regard.
37. The successful tenders has to construct at his own cost his site office and store at site on a suitable place and locations a s permitted by BMC shall not provide any place or room in the building under constructions for storage of equipments required for work. No amount shall be paid to the contractor in this regard.
38. Proper upkeep, maintenance, security and safety of stores and stocks of materials brought at site installed/laid at site shall be the responsibility of the contractor. The materials got damaged due to negligence for its up keeping at site or due to mishandling at the time of installation/laying. shall have to be replaced by the contractor at his own cost. On discovery of such damages the BMC shall recover the amount paid through the running bills to the contractor which shall only be reimbursed after the replacement of the same. The BMC shall also not be responsible for theft of materials from site and the contractor has to replace all such materials at his own cost, No compensations whatsoever shall be payable to the contractor on above grounds.
39. The successful tenderer shall note that during the execution of works there is likelihood of additions of such items or works which are not included in the schedule of items annexed with this tender document for which the tenderers has not tendered his rates, for such items analysis and proposed rates shall be prepared and submitted by contractor with all supporting documents which shall be scrutinized and decided by the tender accepting authority and shall be final and binding on the contractor. The quantum of such work will not more than 25% of contract amount shall depend upon the mutual agreement by the contractor and the BMC.
40. The successful tenderer shall note that during the execution of works there is likelihood in change of tender specifications and change in quantities of items entered in the schedule of item for which the successful tenderer has tendered his rates. The value of increase or decrease in the quantities of such items may be up to 30 percent of the rates sanctioned to him in his original offer. The contractor shall, on the grounds of execution of such quantity, not entitled to procurement of additional quantities of such items due to such changes. the successful tenderer has to procure the said additional quantity on the same rates as already entered by him in the tender without claiming any loss for compensation.
41. Time being the essence of the contract, the successful tenderer shall before commencement of the work prepare a detail work program for successful completion of contract with in the allowed time, which shall be approved by the City Engineer charge of

the work.

- 42 Time schedule may under unavoidable circumstances be revised by the BMC from time to time for any reasons whatsoever. it may be necessary to stop the work at certain places due to some unavoidable reasons and restart the work at a later date. Such contingencies shall not vitiate the contract and shall not be considered a ground for extra claim.
- 43 The successful tenderer shall not be entitled to any compensation for any loss suffered by him on account of delay in commencement of execution of work whatever the cause of delay may be including delay arising out of other materials or delay in supplying the materials to be supplied by BMC or any other reasons whatever and the BMC shall not be liable any claim in this respect thereof.
- 44 The successful tenderer shall not, without the prior approval of the competent authority in writing sublet or assign to any other party, or parties, the whole or any portion of the work under contract. Even if such approval is granted the contractor shall not be relieved of any obligation of duty or responsibility which he undertakes under this contract.
- 45 All dues regarding taxed, including sales tax, service tax, octroi duties etc, levied by Government or Local Bodies or private individuals on the contractor, in connection with the after said work executed by the BMC will be payable by the contractor, the BMC will grant a certificate for the quantities actually used on the work, but will not entertain any claim on this account.
- 46 The successful tenderer shall finalize the tenderer of work, physically at site, and get it approved by MPMKVVC before placing orders for material. approval of above tenderer by MPMKVVC shall be general and shall not absolve the contractor with responsibility of its correctness.
- 47 The successful tenderer shall within 15 (fifteen) days from the date of issue of work order shall prepare and submit all relevant drawing and details for the work to be forwarded to the concerned office of MPMKVVC and to the office of Chief Electrical advisor to Government of Madhya Pradesh cum electrical inspector or its concerned subordinate office or any other competent office for approval. All required sanctions and approvals from the offices shall have to be obtained by the successful tenderer at his own cost and effort within the above stipulated period. the successful tenderer may however procure material at site within the context of clause 17 of these special conditions during this period.
- 48 Time allowed to carry out the work as entered in the tender notice shall be strictly observed by the contractor and shall reckoned from date issue of work order to commence the work.
- 49 Rates quoted in the schedule of items shall be firm not be subjected to any variation due to increase in labour wages, cost of materials, etc. any other price variation whatsoever either due to cost escalation during the stipulated period of executions or during extended period of completion if any.
- 50 The decision of City Engineer for specific make of item to be supplied and installed at site from the list of approved make of materials shall be final and binding on the contractor. Before placing the orders for materials the successful tenderer shall get approval of the specific makes of every item by the City Engineer BMC.
- 51 Rate quoted shall be applicable for works at all height unless otherwise specified in the schedule of quantities.
- 52 The successful tenderer shall afford all reasonable facilities and cooperation to the various other agencies and contractors working at the site simultaneously, so that the entire work can be preceded smoothly to the successful completion.
- 53 The successful tenderer shall submit the drawings to BMC for this work duly approved by the office of the chief electrical advisor to the Government of Madhya Pradesh and its concerned subordinate office or concerned offices of MPMKVVC with in 15 days from the date of work order. The approval of these drawing will be general and will not absolve the contractor of the responsibility of the correctness of these drawings. At least 5 sets/copies of the approved drawing shall be supplied to the City engineer BMC for its distribution to

- various agencies at site. at no cost.
- 54 The successful tenderer shall submit manufacturer's test report and drawings of the equipments to be supplied, for approval of the City engineer before supplying the equipment. The successful tenderer shall also submit the purchase bills of major items as required and directed at no cost.
- 55 (A) The Successful tenderer shall have to arrange all free of cost facilities for the inspection, such as employ of material labour etc. and any fees payable to Government or any competent Authority at his own cost, the successful tenderer shall arrange to obtain all sanctions from the concerned office of MPMKVVC and from the office of the Chief Electrical advisor to Govt. fo M.P. or his concerned subordinate office at his own cost Any fee in respect of above work paid by the successful tenderer shall not be reimbursed or refunded by the BMC and no claim for compensation shall be entertained in this regard.
- (B) If required by the Engineer-in-Charge or concerned office of MPMKVVC of Chief electrical advisor to Government of M.P. cum Chief Electrical inspector. the contractor has to get any equipment or complete installation checked and tested by any Government/Semi Government/Private Authority such as CPRI, BHEL, Testing department of MPMKVVC etc. at his own cost He shall also provide free of cost all labour material transport equipments etc. for the purpose of above testing. The contractor shall not be entitled for any compensation on this on this ground.
- 56 The authority competent to accept the tenders reserves to itself the right to accept any or reject all the tenders without assigning any reason.
- 57 The authority competent to accept the tender reserves the right to itself to accept the tender for whole works. or for part
of work. or to distribute the work between one or more contractors without assigning any reason thereof.
- 58 The contractor shall submit analysis of rates of any or all items for which he has tendered his rates in the schedule of item . if so desired by the Engineer-in-Charge at no cost.
- 59 The tender must be accompanied by a list of similar contracts executed by the tenderer since last 3 years.
- 60 Conditional Tenders are liable to be rejected.
- 61 Tenders not properly sealed shall be rejected.
- 62 The tender will be received only from the contractor/firms of repute. possessing proper valid electric license from the
office of Chief Electrical advisor to Government of MP for
executions of such work.
- 63 The successful tenderer shall make his own arrangement for transport of all materials. The BMC is not bound to arrange for priority for getting wagon for transportation of any material.
- 64 Each of the tender documents is required to be signed by the person or persons submitting the tenders.
- 65 The contractor shall be responsible for removal of all defects and shall make rectification in the work at his own cost. if any, at the time of handing over the installation of MPMKVVC without any claim for compensation.
- 66 The successful tenderer shall submit the name, qualification, experience of his site staff with copies of their certificates to
Engineer-in-Charge before
start of work.
- 67 It shall be the duty of the contractor.
- a. To arrange all clearances form Chief electrical advisor to Govt. of Mp. cum chief electrical inspector or from his subordinate office.
 - b. To coordinate and peruse the offices of MPMKVVC and office of the chief Electrical Advisor to Govt. of M.P. cum chief electrical inspector/Vidyut Anugyapan Mandal for periodical inspections during the currency of contract and to arrange final inspection of the work and get the complete installation handover to MPMKVVC and get it

electrically charged in presence of MPMKVCL representative.

All the dismantled material (including poles conductor,cables DP structure transrformers etc.) to be deposited in MPMKVCL store as per MPMKVCL return schedule and Receipt is to be produced before final payments.

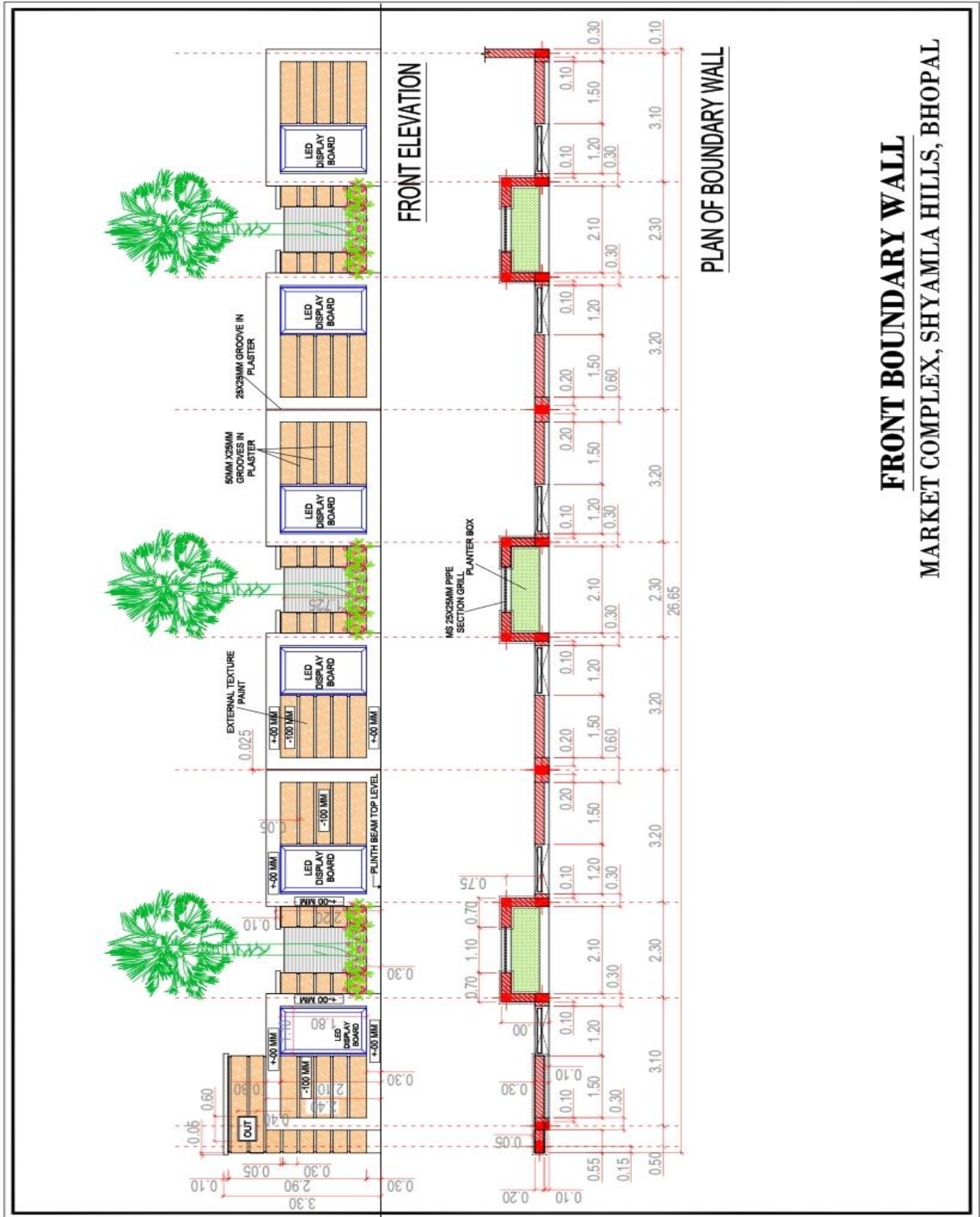
No Extra payment shall be made to the contractor in above account.

- 68 The successful tenderer at his own cost and efforts shall arrange periodical inspection of work by various officers of MPMKVCL (Superintending engineer, Divisional engineer, Rank Office) during course of execution of work and any instructions issued by the officers of MPMKVCL shall be executed by the bidder and communicated to BMC in writing and prior permission shall be taken from BMC before its compliance.
- 69 Blasting of any type shall in any case not be permitted for excavation work. the tenderer may therefore visit the site before filling up the tender. Only chiseling in hard rock shall be allowed.
- 70 The successful tenderer, during course of execution, desires to make drill holes of required dia. and depth through drill/rig machine for erection of poles shall be permitted to do so but no payment for excavation of such drilled hole shall be made. However in lieu of above amount not being paid for drill hole he shall be exempted to provide base plate at the bottom of pole as it is not required in said case.
- 71 Before entering the rates for individual items in the annexed schedule of items the tenderer must make himself fully sure of its correctness. the rates. Once entered in the schedule of items, shall be deemed to be final and any condition for deviation in above rates written separately at any place in the tender document shall not be offer valid and liable to be rejected by BMC.
- 72 The complete installation shall be guaranteed for TWENTY-FOUR calendar months. The guarantee period shall be reckoned from the date of handing over the installation to MPMKVCL The all transformers and cables shall be guaranteed for 24 calendar months from the date of handing over the installation to MPMKVCL the contractor has to replace/repair the faulty of damaged material to the full satisfaction of MPMKVCL authorities in the event of failure/damage of any item during the said guarantee period.
- 73 The tenderer has to ensure before filling up the rates regarding their availability and period of delivery, in the event of the materials of equipment of makes called for are available alternative make be approved under the conditions mentioned in Annexure. But it will not be a ground for claim of time extension or any other compensation whatsoever.
- 74 All the condition of the tender notice. Instructions in regard to submission of tender, schedule of items and rates accepted, these special conditions, general specifications and all other documents attached will be binding on the contractor and shall form part of the agreement to be executed by the contractor in addition to the conditions of the contract in the prescribed printed forms. In the event of any of these special conditions being contradictory to the condition of similar effect in printed form, condition mentioned in these special condition shall be deemed to be applicable for the contract agreement for all legal and technical matters. In the event of any of these special conditions is of the similar effect to that of any condition of printed form the former shall be read in conjunction with the latter for all legal and technical aspects within the scope of this contract.

SECTION-8

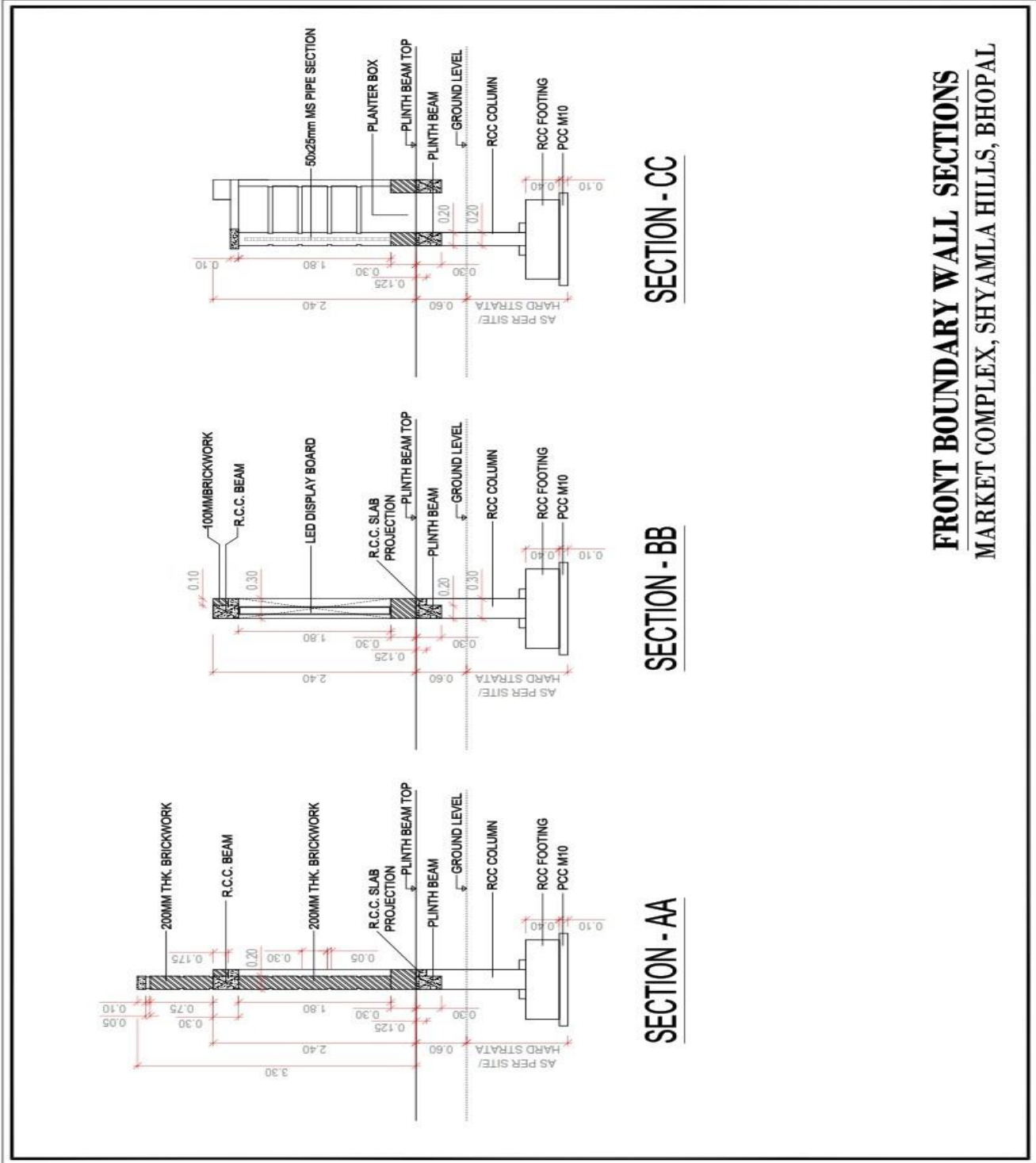
DRAWINGS

Front Boundary Wall Detail



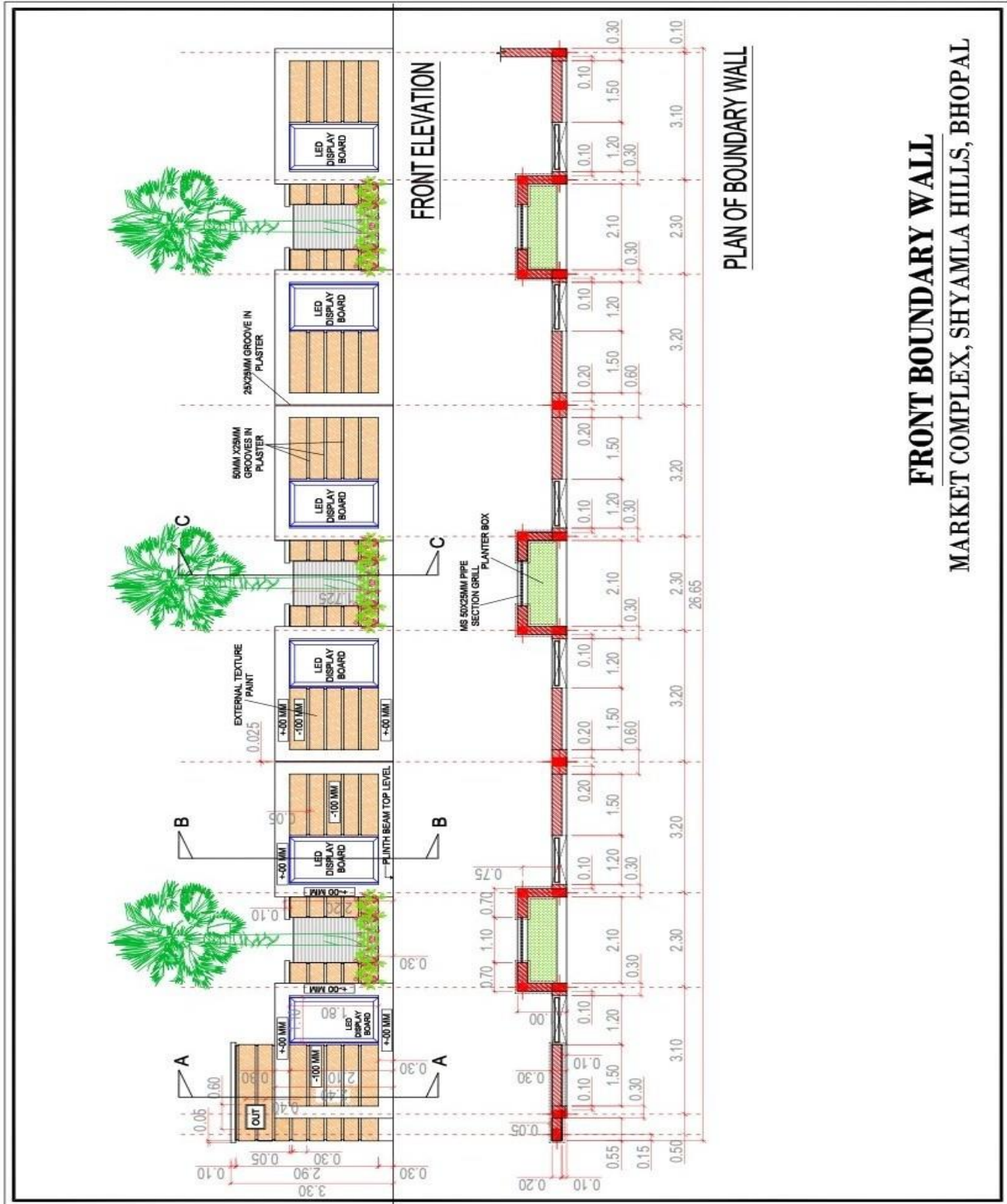
FRONT BOUNDARY WALL
 MARKET COMPLEX, SHYAMLAK HILLS, BHOPAL

FRONT BOUNDARY WALL SECTIONS



FRONT BOUNDARY WALL SECTIONS MARKET COMPLEX, SHYAMLAK HILLS, BHOPAL

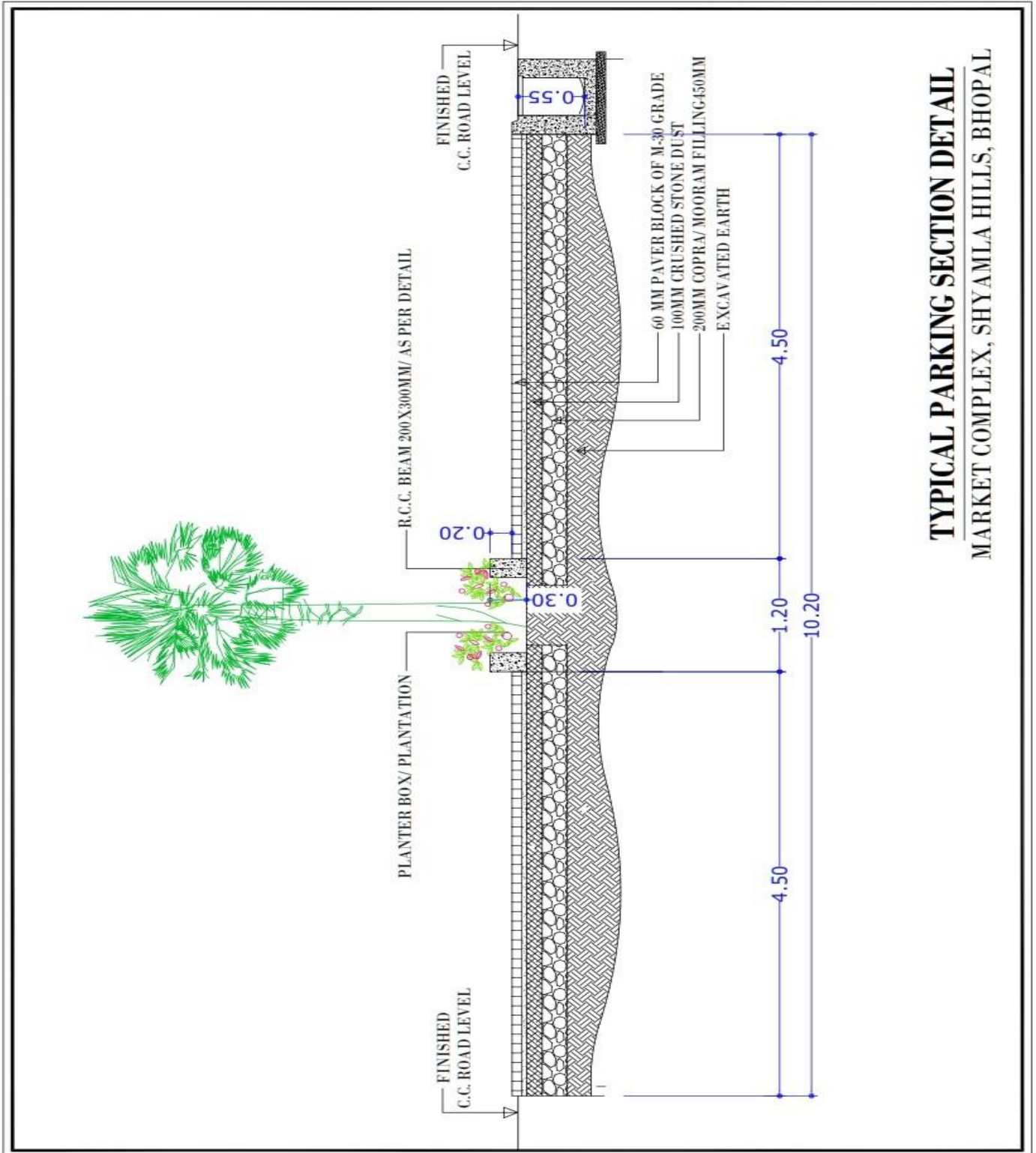
FRONT BOUNDARY WALL



FRONT BOUNDARY WALL

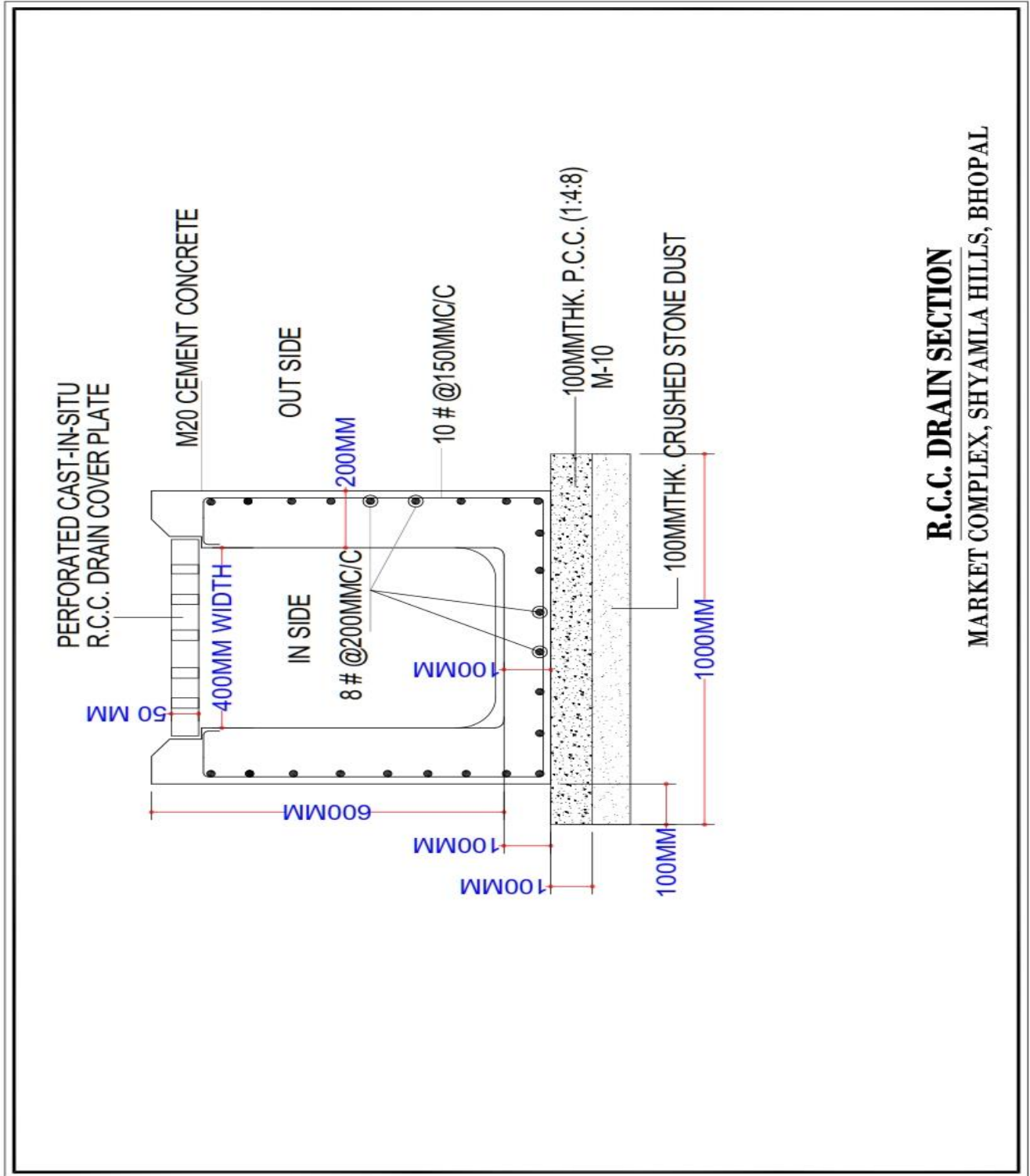
MARKET COMPLEX, SHYAMLA HILLS, BHOPAL

Parking Section Detail



TYPICAL PARKING SECTION DETAIL
 MARKET COMPLEX, SHYAMLAKHILLS, BHOPAL

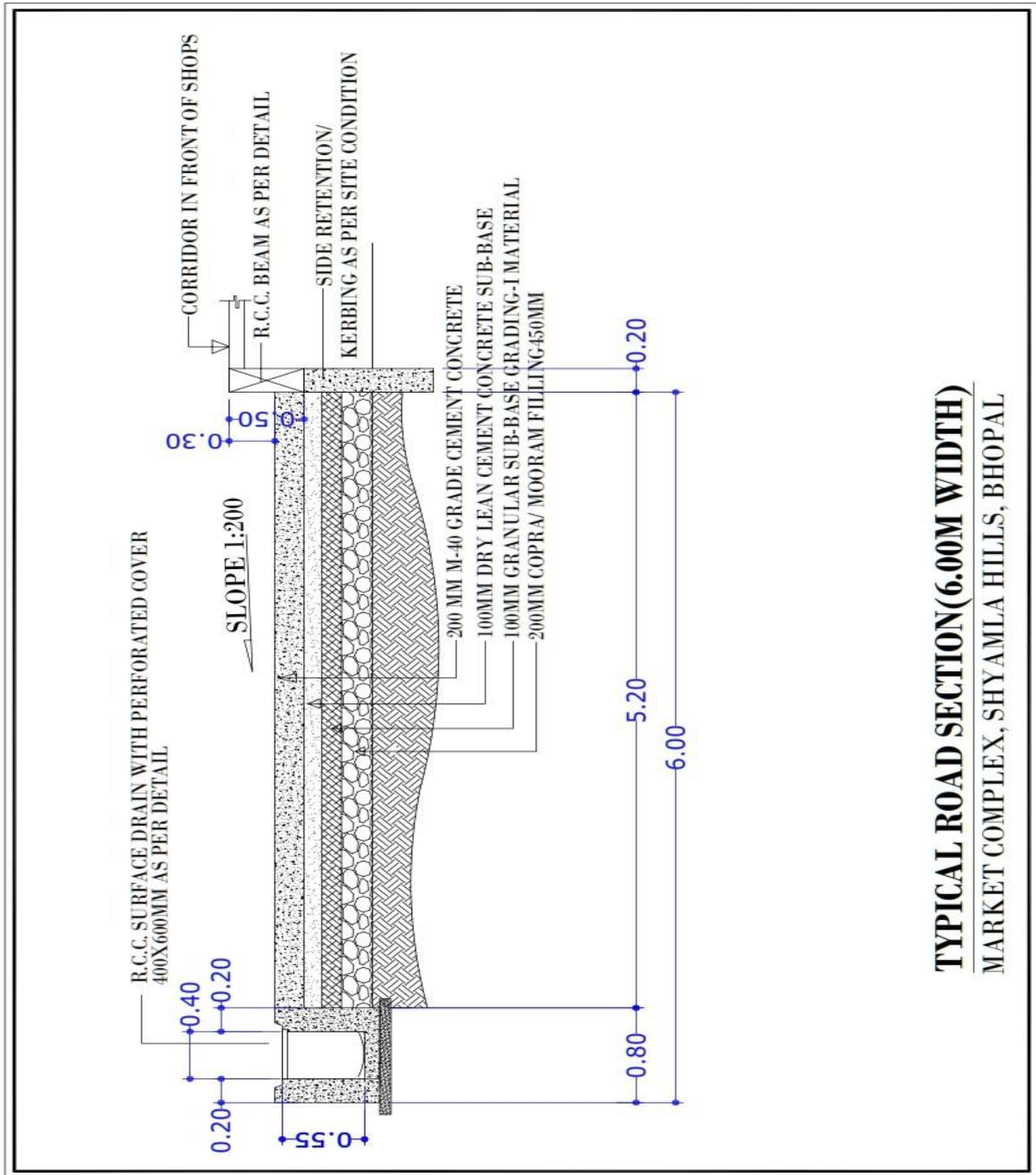
RCC Drain Section



R.C.C. DRAIN SECTION

MARKET COMPLEX, SHYAMLAK HILLS, BHOPAL

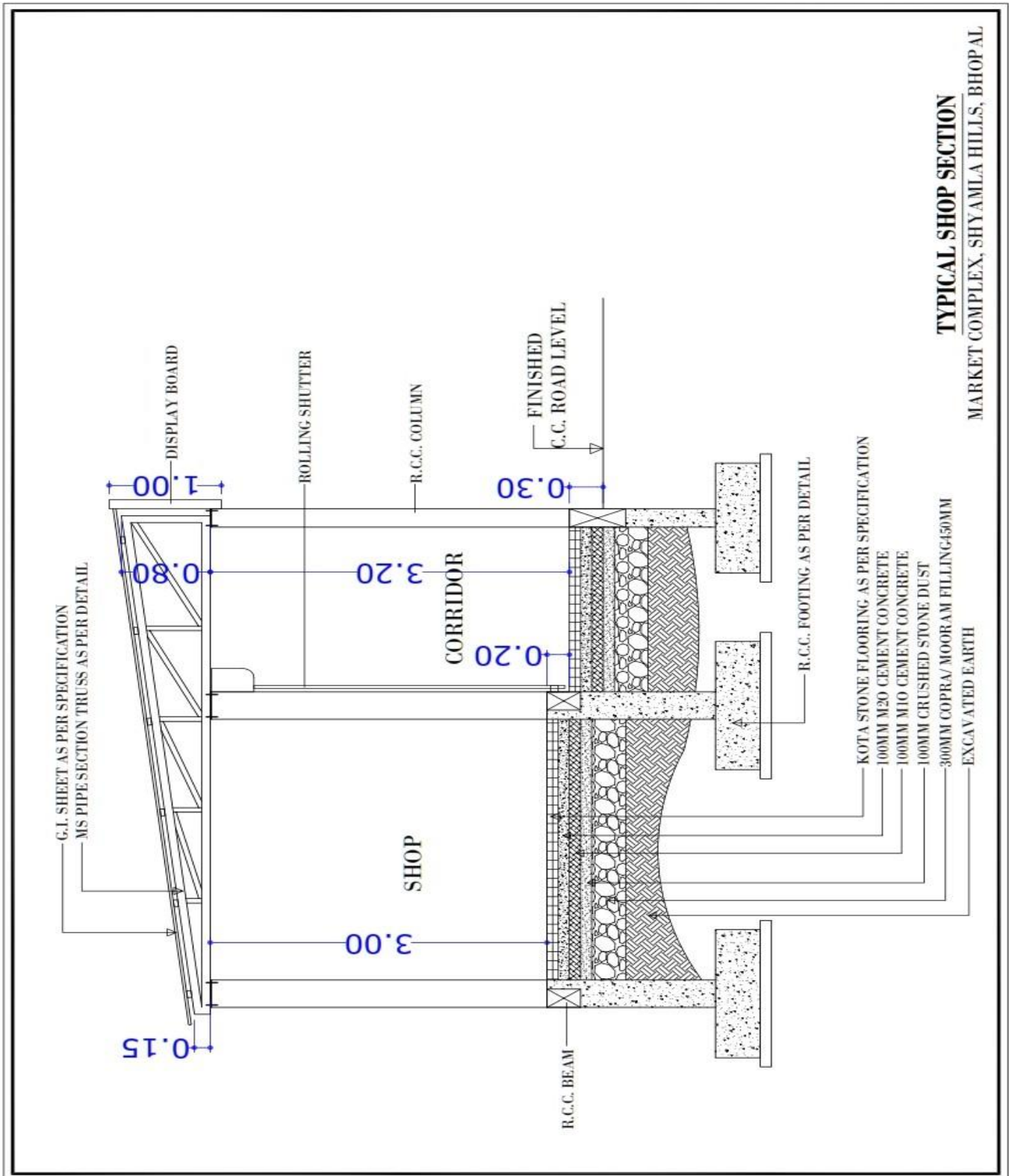
Typical Road Section



TYPICAL ROAD SECTION(6.00M WIDTH)

MARKET COMPLEX, SHYAMLA HILLS, BHOPAL

Typical Shop Section



SECTION-9

BILL OF QUANTITY

CIVIL UADD SOR ITEMS

S.No.	Items	Qty.	Unit	Rate	Amount
1	Excavation for Roadway in soil including loading in truck for carrying of cut earth to embankment site with all lifts and lead upto 1000 meters and as per relevant clauses of section-300. V3_3.1	402.00	cum	98.00	39396.00
2	Construction of Embankment/ subgrade/ earth shoulders, as per clause 305 and its sub-clauses, where required but with approved materials/ soil like moorum CBR value not less than 7% i/c all lead and lifts i/c excavation, cost of watering, compaction and maintenance of surface during construction to ensure shedding & preventing ponding of water (clause 305.3.6) shaping & dressing (clause 305.3.7), finishing, etc. complete but excluding scarifying existing granular/ bituminous road surface vide clause 305.6. V3_3.11	268.00	cum	272.00	72896.00
3	Construction of granular sub-base by providing coarse graded material, spreading in uniform layers with on prepared surface, mixing by mix in place method at OMC, and compacting with vibratory roller to achieve the desired density, complete in all respect and as per relevant clauses of section -400.for Grading -I Material. V3_4.1 (i)	134.00	cum	604.00	80936.00
4	Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS :383, the size of coarse aggregate not exceeding 25mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table of MORTH Specifications 600-1, cement content not to be less than 200kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with paver with electronic sensor/ mechanical paver, compacting with 8-10 tonnes vibratory roller, finishing and curing and as per relevant clauses of section - 603.	134.00	cum	2715.00	363810.00

	V3_6.1				
5	Construction of Dowel jointed, plain cement concrete pavement in M-40 grade concrete over a prepared sub-base with 43 or higher grade cement. Maximum size of coarse aggregate not exceeding 25mm, mixed in a batching and mixing plant as per approved mix design, transported to site. laid with a fixed form or slip form paver with electronic sensor, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, placing of dowel bar and tie rod, admixtures as approved, curing compound, finishing to lines and grades as per IRC-15 2002 and as per relevant clauses of section-602 of MORTH specifications complete but excluding cost of steel in dowel bar and tie rod etc. V3_6.3	268.00	cum	4792.00	1284256.00
6	Mild Steel Dowel Bars - V3_6.12.1	0.50	MT	47850.00	23925.00
7	Tor steel tie rod - V3_6.12.2	0.50	MT	52800.00	26400.00
8	Earthwork in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth. Lead upto 50m and lift upto 1.5m disposed earth to be levelled and neatly dressed. V2_2.6.1-All kinds of Soil	189.00	cum	127.00	24003.00
9	Supplying and Filling in Plinth under floors including watering, ramming, consolidating and dressing complete. V2_2.27.3-Moorum/Hard Copra	126.00	cum	570.00	71820.00
10	Supplying and Filling in Plinth under floors including watering, ramming, consolidating	63.00	cum	628.00	39564.00

	and dressing complete. V2_2.27.1-Crusher Stone Dust				
11	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade reflective type rubber moulded glossy colour paving block made by block making machine with strong vibratory compaction and of approved size and shape laid in required colour and pattern over and including 60mm thick compacted bed of stone dust filling the joints with sand etc. all complete as per the direction of Engineer in charge including locking edges wherever required with cement concrete M15 grade or cement mortar 1:3 with pigment of required shade to match the colour/shade of block including cost of labour, material, etc. all complete. V2_11.47	630.00	SQM	570.00	359100.00
12	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc upto floor two level excluding cost of centering, shuttering, finishing and reinforcement. V2_5.2.1 - Cement concrete grade M-20(Nominal Mix) with 20mm maximum size of stone aggregate. Beams	26.00	cum	5050.00	131300.00
13	Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding including cost of binding wire upto floor two level including all wastage etc. complete. V2_5.20.4- Hot rolled deformed bars	2750.00	KG	60.00	165000.00
14	Centering and shuttering including strutting, propping etc. and removal of form for: V2_20.1.5	260.00	SQM	203.00	52780.00
15	Earthwork in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth. Lead upto 50m and lift upto 1.5m disposed earth to be levelled and neatly dressed. V2_2.6.1-All kinds of Soil	46.00	cum	127.00	5842.00
16	Providing and laying in position cement concrete of specific grade excluding the cost of centering and shuttering. All work upto Plinth level. V2_4.1.4 - Cement	6.00	cum	3595.00	21570.00

	concrete Grade M-10(Nominal Mix) with 20mm maximum size of stone aggregate				
17	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc upto floor two level excluding cost of centering, shuttering, finishing and reinforcement.V2_5.1.1 - Cement concrete grade M-20(Nominal Mix) with 20mm maximum size of stone aggregate				
18	Foundation,Columns,Beams	34.00	cum	4728.00	160752.00
19	Centering and shuttering including strutting, propping etc. and removal of form for:				
20	V2_20.1.1 Foundation	94.00	SQM	138.00	12972.00
21	V2_20.1.6 Column	63.00	SQM	282.00	17766.00
22	V2_20.1.5 Beams	120.00	SQM	203.00	24360.00
23	Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding including cost of binding wire upto floor two level including all wastage etc. complete. V2_5.20.4- Hot rolled deformed bars	6500.00	KG	60.00	390000.00
24	Brickwork with well burnt chimney bricks in bulls patent trench kiln, crushing strength not less than 25kg/sqcm and water absorption not more than 20% in foundation and plinth.V2_6.2.2.Cement Mortar 1:6 (1 cement : 6 coarse sand). 20 mm cement plaster of mix: 1:5 (1 cement: 5 fine sand).V2_13.3.2	27.00	CUM	3813.00	102951.00
25	Finishing walls with textured exterior paint of required shade.V2_13.45.1 - New work (Two or more coats applied @ 3.28lbs/ 10sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/ 10sqm	360.00	SQM	125.00	45000.00
26	Steel work in built-up tubular trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.V2_10.16.1 - Hot finished	300.00	KG	83.00	24900.00

	welded type tubes				
27	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade.V2_13.61.1 - Two or more coats on new work	360.00	SQM	45.00	16200.00
28	Earthwork in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth. Lead upto 50m and lift upto 1.5mdisposed earth to be levelled and neatly dressed.V2_2.6.1-All kinds of Soil	135.00	CUM	127.00	17145.00
29	Supplying and Filling in Plinth under floors including watering, ramming, consolidating and dressing complete. V2_2.27.1-Crusher Stone Dust	15.00	CUM	628.00	9420.00
30	Providing and laying in position cement concrete of specific grade excluding the cost of centering and shuttering. All work upto Plinth level.c - Cement concrete Grade M-10(Nominal Mix) with 20mm maximum size of stone aggregate	15.00	CUM	3595.00	53925.00
31	Providing and laying in position cement concrete of specific grade excluding the cost of centering and shuttering. All work upto Plinth level.V2_5.1.1 - Cement concrete Grade M-20(Nominal Mix) with 20mm maximum size of stone aggregate	55.00	CUM	4728.00	260040.00
32	Centering and shuttering including strutting, propping etc. and removal of form for.Walls(any thickness) including attached pilasters,butteresses, plinth and string.V2_20.1.2	379.00	SQM	216.00	81864.00
33	Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding including cost of binding wire upto floor two level including all wastage etc. complete.V2_5.20.4- Hot rolled deformed bars	3750.00	KG	60.00	225000.00
34	Earthwork in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth. Lead upto 50m and lift upto 1.5mdisposed earth to be levelled and	243.00	CUM	127.00	30861.00

	neatly dressed.V2_2.6.1-All kinds of Soil				
35	Supplying and Filling in Plinth under floors including watering, ramming, consolidating and dressing complete. V2_2.27.3-Moorum/Hard Copra	298.00	CUM	570.00	169860.00
36	Supplying and Filling in Plinth under floors including watering, ramming, consolidating and dressing complete. V2_2.27.1-Crusher Stone Dust	97.00	CUM	628.00	60916.00
37	Providing and laying in position cement concrete of specific grade excluding the cost of centering and shuttering. All work upto Plinth level.V2_4.1.5 - Cement concrete Grade M-10(Nominal Mix) with 40mm maximum size of stone aggregate	97.00	CUM	3528.00	342216.00
38	Providing and laying in position cement concrete of specific grade excluding the cost of centering and shuttering. All work upto Plinth level.V2_5.1.1 - Cement concrete Grade M-20 (Nominal Mix) with 20mm maximum size of stone aggregate	97.00	CUM	4728.00	458616.00
39	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc upto floor two level excluding cost of centering, shuttering, finishing and reinforcement.V2_5.2.1 - Cement concrete grade M-20(Nominal Mix) with 20mm maximum size of stone aggregate	257.00	CUM	5050.00	1297850.00
40	Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding including cost of binding wire upto floor two level including all wastage etc. complete				
41	V2_5.20.4- Hot rolled deformed bars	12500.00	KG	60.00	750000.00
42	Centering and shuttering including strutting, propping etc. and removal of form for:				
43	V2_20.1.1 Footing	1286.00	SQM	138.00	177468.00
44	V2_20.1.6 Columns	600.00	SQM	282.00	169200.00
45	V2_20.1.5 Beams	899.00	SQM	203.00	182497.00

46	Brickwork with well burnt chimney bricks in bulls patent trench kiln, crushing strength not less than 25kg/sqcm and water absorption not more than 20% in foundation and plinth.V2_6.2.2. Cement Mortar 1:6 (1 cement : 6 coarse sand)	181.00	CUM	3813.00	690153.00
47	20 mm cement plaster of mix: 1:5 (1 cement: 5 fine sand). V2_13.3.2	1361.00	SQM	146.00	198706.00
48	Finishing walls with textured exterior paint of required shade. V2_13.45.1 - New work (Two or more coats applied @ 3.28lts/10sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10sqm	2387.00	SQM	125.00	298375.00
49	Supplying and fixing rolling shutters of Approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade no.2 and M.S.top cover of required thickness for rolling shutters.V2_10.6.2 80x1.20mm M.S.laths with 1.20mm thick top cover	446.00	SQM	1395.00	622170.00
50	Kota stone slab 25mm thick flooring over 20mm (average) thick base laid over and jointed with thick grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar (1 cement: 4 coarse sand) 1:4 (minimum size of kota stone 0.25 sq.m.).V2_11.26	913.00	SQM	819.00	747747.00
51	Marble Stone flooring with 16mmthk marble stone (sample of marble shall be approved by Engineer-in-charge of minimum size 0.45sqm) over 20mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry including rubbing and polishing complete with.V2_11.23.1 Makrana White second quality	80.00	SQM	1415.00	113200.00

52	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edge to give high gloss finish etc. complete at all levels. Granite of any colour and shade. V2_8.2.8.2- Area of Slab over 0.50 sqm	60.00	SQM	2544.00	152640.00
53	Steel work in built-up tubular trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete. V2_10.16.1 - Hot finished welded type tubes	12400.00	KG	83.00	1029200.00
54	Supply and Installation of pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer in charge) 0.50mm +5% total coated thickness (TCT) thick Zinc coating 120gsm as per IS: 277 in 240mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratched while transportation and should be supplied in single length upto 12 meter or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling/ self tapping screws of size (5.5x55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and GI limpet and washers filled with white lead complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. V2_12.50	999.00	SQM	578.00	577422.00
55	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade. V2_13.61.1 - Two or more coats on new work	2025.00	SQM	45.00	91125.00

CIVIL NON SOR ITEMS

S.No.	Items	N	Qty.	Unit
I	ENTRANCE TENSILE STRUCTURE			
1	Construction, Procurement and Installation of Tensile membrane structure at the Entrance of the Market complex, complete with all necessary fittings and fixtures along with labour required for the completion of work, inclusive of all type of civil and fabrication work including site visit and transportation. Membrane should in any way not be less than 800 GSM and range upto 1200 GSM as per design and drawing provided.	1	96.0	Sq.m.

ELECTRICAL UADD SOR ITEMS

SR NO	PARTICULAR	UNIT	QTY.	RATE	AMT
1	Point wiring including metallic switch box, sheet, switch, socket lamp holders/cealing roses etc with 1.5 sq mm. PVC insulated cable FR with copper multi strand conductucor ISI marked in conceled rigid steel conduit ISI marked of suitable size of 1.5 sq mm PVC insulated copper earthed continuity conductor of green color inside inside conduit including painting etc as required as per specifications. (Medium points)	each	180	1064	191520
2	Circuit wiring - Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid P.V.C. conduit (MMS) of ISI marked suitable size including painting etc. as required as per specification. 4x2.5 sq.mm.	meter	120	129	15480
3	Circuit wiring - Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid P.V.C. conduit (MMS) of ISI marked suitable size including painting etc. as required as per specification. 6x2.5 sq.mm.	meter	120	148	17760

4	Modular switch boxes- Supplying & fixing of approved make modular type metal box with modular frame/ base plate and cover plate including fixing in concealed/ surface excluding switch, socket etc. as required for: 8 module	each	60	202	12120
5	Modular switch boxes- Supplying & fixing of approved make modular type metal box with modular frame/ base plate and cover plate including fixing in concealed/ surface excluding switch, socket etc. as required for: 12 module	each	60	255	15300
6	Power wiring in PVC casing capping system with modular accessories: point wiring including metallic switch box, sheet for 3 pin 16 amp. Socket outlet point with 4 sq.mm. PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid P.V.C. casing and capping ISI marked of suitable size including painting etc. with 16 amp. F.T. switch & socket / S.S. combined 16 Amp. of ISI marked and 4 sq.mm. PVC insulated copper earth continuity conductor of green colour inside capping as per specification for: on separate board: c. Long point	each	120	1580	189600
	Supply of XLPE Insulated power cable (conforming IS- 7098) 1100 Volt grade/Heavy duty power cable conforming to IS 1554-1100 Volts grade , 2 core /3½ core/4 core ISI MARKED with Alu. Stranded /solid conductor				
	ARMOURED 3½ CORE				0
7	70 Sq.mm(XLPE) V4_14.1.6.4	M	100	597.00	59700
8	150 Sq.mm.(XLPE) V4_14.1.7.10	M	200	1084.00	216800
	ARMOURED 4 CORE				0
9	16 Sq.mm.(XLPE) V4_14.1.8.3	M	2500	229.00	572500
10	Supplying and laying 25mm X 5mm G.I. strip at 0.5 meter below ground level as strip earth electrode including soldering etc. as required. V4_11.8	M	40	65.00	2600
11	Supplying, installing, testing of earth Coil (coil of 115 turns of 50mm dia, and 2.5 Mtrs. Lead of 4 mm G.I wire.	EA	12	219.00	2628

	Supplying and fixing heavy duty cable gland for P.V.C. insulated armoured cable with brass washer, Rubber ring complete erected with cable and lead connection etc. as per specification complete.				
12	Gland Size 22mm suitable for cable 2,3, 3½, 4 x 10 Sq.mm or 2x 16 Sq.mm	EA	100	44.00	4400
13	Gland size 28mm for 3,4 x 16 Sq.mm	EA	50	66.00	3300
14	Gland Size 45mm 3/3½ x 120 Sq.mm 3½ x 95 Sq.mm 3 x 150 Sq.mm.	EA	20	149.00	2980
15	Gland Size 50 mm 3½ x 150 Sq.mm 3 x 185 Sq.mm	EA	20	191.00	3820
	LUGS:- Supplying and fixing cramping type Alum. lugs as per I.S.S. Specification suitable for following size of cable with Alu./Copper solid/stranded conductor evently cramped with high/pressure tool and connected to switch gear/Bus/M.C.C.B./ M.C.B. etc. as required complete.For Conductor Size-				
16	16 Sq.mm	EA	240.00	5.00	1200
17	70 Sq.mm	EA	40.00	22.00	880
18	150 Sq.mm.	EA	75.00	44.00	3300
19	Laying of underground cable armoured./ unarmoured as per specification with approved type of iron clamps complete. 2 / 3 / 4 Core cable upto 16 Sq.mm V4_14.12.1	M	2000	20.00	40000
20	3 / 3½ / 4 Core cable 25 Sq.mm to 120 Sq.mm V4_14.12.2	M	50	28.00	1400
21	3 / 3½ / 4 Core cable 150 Sq.mm and above V4_14.12.3	M	150	36.00	5400
TOTAL					1362688

PWD SOR

SR NO	PARTICULAR	UNIT	QTY.	RATE	AMT
1	MCB 4 Pole 32 Amp Rating	Nos	60	1391	83460
2	MCCB Current Rating -200 Amps, 4 Pole & Adjustable: 80% -100% thermal	Nos	3	14289	42867
3	Suppling and laying G I pipe 150 mm dia B Class	meter	0.5	1425	712.5

4	Suppling and laying G I pipe 150 mm dia A Class	meter	0.5	1197	598.5
5	Suppling and laying G I pipe 100 mm dia B Class	meter	0.5	800	400
6	Suppling and laying G I pipe 100 mm dia A Class	meter	0.5	750	375
7	providing and laying of 3 core 2.5 sqmm flexible coper cable	km	0.1	50000	5000
8	Supplying and laying 50mm X 5mm G.I. strip at 0.5 meter below ground level as strip earth electrode including soldering etc. as required.	M	30	110	3300
9	Supply and installation of 150 watt LED street light complete with accesaries such as suitable bracket with technical specification enclosed with tender docment	nos	16	16200	25920 0
				TOTAL	39591 3

ELECTRICAL NON SOR ITEMS

SR NO	PARTICULAR	UNIT	QTY.
1	Supplying, fixing, testing & commissioning wall / floor mounted LT Panel primer coated with powder coated paint & provided with required gasket for dust / vermin proof with degree of protection IP54 suitable for 415V 3 phase, 50 Hz, 4 wire system fabricated out of CRCA sheet up to 2 mm thick (1.6 mm for doors) duly compartmentalized for incomer, bus section, outgoing, cable alleys & CT, PT Ampere Meter, Volt Meter, selector switches, Frequency Meter, phase indicating lamps, Energy Meter complete including cost of busbar supports, detachable cable gland plates, 2 earthing terminals, internal wiring & fixing of separately supplied MCBs, MCCBs , ACB, panel mounted Changeover switch / SFUs, etc. as required but excluding cost of bus bar strips, Ampere Meter, Volt Meter, Selector switch as per approved design & specification (3 Nos. for 20 Nos. 3 phase energy meter with separate door for every energy meter compartment)	Kg	1800
	Supplying and fixing of LT Panel accessories of approved make in existing LT Panel including connections etc.as required as per specefication		
2	Digital Ampere Meter with CTs with selector switch	Nos	3
3	Digital Volt Meter with selector switch & HRC fuse	Nos	3
4	Frequency Meter	Nos	3
5	Copper Bus bar strips with PVC sleeves	Kg	30
6	Aluminium bus bar strips with PVC sleeves	Kg	100

7	LED lamp indicator	Nos	9
8	Supply of steel tubular pole swaged type as per IS:2713- 1980 Complete with baseplate and top Canopy 410 SP-65 - 12.00 meter with camera (4K resolution) for surveillance.	EA	2.00
9	Designing & casting with M-20 cement concrete foundation suitable for 12 mtrs. Tubular poles considering the safe soil bearing capacity at site as 10 T/sqm at 2 mtrs. Depth including excavation, foundation nut bolts in an approved manner.	EA	2
10	R.C.C. trench for cable laying with separator	RM	300