

MILITARY ENGINEER SERVICES

NAME OF WORK:- PROVN OF AC ALONG WITH CONNECTED WORKS FOR TECH EQUIPMENTS AT VARIOUS LOCATIONS AND PROVN OF SECURITY LIGHTING AND AREA ILLUMINATION ALONG WITH CONNECTED ACCESSORIES AT CERTAIN LOCATION AT AF STN TEZPUR.

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DRAWINGS: _____ SHEETS

TOTAL: _____ PAGES

SIGNATURE OF CONTRACTOR**FOR ACCEPTING OFFICER****DATED: _____**

Tele/Fax: 03712-258113

Military Engineer ServicesGarrison Engineer (AF)
Tezpur Post: Salonibari,
Dist.: Sonitpur PIN –
784 104 (Assam)

No.:8151/ /E8

May 2026

Shri/M/S_____

PROVN OF AC ALONG WITH CONNECTED WORKS FOR TECH EQUIPMENTS AT VARIOUS LOCATIONS AND PROVN OF SECURITY LIGHTING AND AREA ILLUMINATION ALONG WITH CONNECTED ACCESSORIES AT CERTAIN LOCATION AT AF STN TEZPUR.

Dear Sir(s),

1. Tender documents in respect of above work are uploaded on the site www.defproc.gov.in. The tender is on single stage two cover e-tendering system. The contents of Cover I & Cover II are specified in NOTICE OF TENDER.
2. Bids will be received online by ACCEPTING OFFICER upto the date of and time mentioned in the NOTICE INVITING TENDER (NIT). No tender/bid will be received in physical form and any tender/bid received in such manner will be treated as non-bonafide tender/bid.
3. Bid will be opened on due date and time fixed for opening in the presence of tenders / bidders or their authorized representative, who have uploaded their quotation bid and who wish to be present at the time of opening the bids.
4. Your attention is also drawn to instruction on filling and submission of tender attached herewith. You may forward your points on tender documents and/or depute your technical representative for discussion on tender/drawings and to clarify doubts, if any, on or before the seek clarification end date (Refer critical dates). You are requested not to write piecemeal points and forward your points duly consolidated before due date viz. the seek clarification end date (Refer critical dates).
5. Unenlisted contractors are required to submit the scanned copies (in pdf file) of documents required as per eligibility criteria mentioned in instructions for filling the tender documents and Appendix 'A' to NIT alongwith EARNEST MONEY DEPOSIT (EMD) and tender fee on e-procurement portal and submit the physical documents in the office of **Garrison Engineer AF Tezpur** within time limit specified in NIT. Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.
6. (a) Contractor having not executed standing security bond and standing security deposit in any MES formation shall upload scanned copy of EARNEST MONEY DEPOSIT (EMD) mentioned in notice of tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any of these two requirements, the finance bid will not be opened.

(b) Within 28 days of receipt of the Letter of Acceptance, the successful contractor shall deliver to the Accepting Officer a Performance Security in any of the forms given below for an amount equivalent to 5% of contract sum (See Conditions 19 of GCC (IAFW-2249)).

(i) A Bank Guarantee in the prescribed form.

(ii) Government Securities, FDR or any other Government Instruments stipulated by the Accepting Officer.

7. Enlisted contractors of MES shall submit the scanned copies (pdf file) of enlistment letter, tender fee and such other documents as mentioned in Appx 'A' to NIT on e-procurement portal and submit physical documents in the office of **Garrison Engineer AF Tezpur** before date & time fixed for this purpose.

8. The contractor must ensure that the tender/bid on the proper form is uploaded in time as the Accepting Officer will take no cognizance of any quotations/offer received in any other electronic or physical form like email/fax/by hand/through post from tenderer/bidder even if they are received in time.

9. In view of delays due to system failure or other communication related failures, it is suggested that the tender/bid be uploaded, if necessary, sufficiently in advance of the last due date and time fixed.

10. General Conditions of Contractors (IAFW-2249) (1989 Print) and errata and amendments thereto, Schedule of minimum fair wages and MES SSR (Part-Part-II and I) are not enclosed with these documents. These are available for perusal in the Office of **Garrison Engineer AF Tezpur**.

11. ANY TENDERER, WHICH PROPOSES ALTERATIONS TO ANY OF THE CONDITION, SPECIFICATIONS LAID DOWN IN THE TENDER DOCUMENTS OR ANY NEW CONDITION, WHATSOEVER, IS LIABLE TO BE REJECTED.

12. (a) Contractor having not executed standing security bond and standing security deposit in any MES formation upload scanned copy of EARNEST MONEY DEPOSIT (EMD) mentioned in notice of Tender shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any of these two requirements, the finance bid will not be opened.

(b) Within 28 days of receipt of the Letter of Acceptance, the successful contractor shall deliver to the Accepting Officer a Performance Security in any of the forms given below for an amount equivalent to 5% of contract sum (See Conditions 19 of GCC (IAFW-2249).

(i) A Bank Guarantee in the prescribed form.

(ii) Government Securities, FDR or any other Government Instruments stipulated by the Accepting Officer.

(c) Any grievances concerning this contract agreement on which contractor is not satisfied with decision of Accepting Officer shall be referred by him only to the Next Higher Engineer Authority (NHEA). The contractor shall under no circumstances communicate with any authority other than NHEA, unless he has exhausted the options to represent to all Engineer authorities upto NHEA. While representing his case to authorities above NHEA, copies of correspondences exchanged with all authorities shall be enclosed clearly bringing out his grievances on them. Any breach of this stipulation shall be treated as default on the part of the contractor and his grievance will not be entertained. In addition, he shall be liable for disciplinary action as deemed fit by the Registering Authority.

(d) Any complaint against the contractor received from a third party like suppliers of contractor, other contractors, his engineer, labour etc shall be referred to him by the GE. The contractor will be required to obtain settlement of the complaints from the originator and/or concerned authority and submit settlement letter to GE within 15 Days of receipt of referral from GE. Any failure in this regard will invite disciplinary action against the contractor by the Registering Authority.

Encls :- (As above)

**AGE (CONTRACTS)
FOR ACCEPTING OFFICER**

SIGNATURE OF CONTRACTOR

DATED: _____

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER**1. EARNEST MONEY DEPOSIT (EMD)**

Contractor(s) who are not enlisted with MES/who are enlisted but have not executed the Standing Security Bond shall submit Earnest Money Deposit as detailed in Notice of Tender in one of the following forms, alongwith their tender/bid:-

- (a) Deposit at Call Receipt from a Scheduled Bank in favour of **Garrison Engineer (AF) Tezpur, payable at Tezpur.**
- (b) Receipted Treasury Challan, the amount being credited to the Revenue Deposit of **Garrison Engineer (AF) Tezpur.**

It is advisable that Earnest Money is deposited in the form of deposit call receipt from an approved Schedule Bank for easy refund. In case the tenderer/bidder wants to lodge EARNEST MONEY DEPOSIT in any other form allowed by MES, a confirmation about its acceptability will be obtained from the Accepting Officer in advance of the bid submission end date and time. Earnest Money Deposit shall be submitted in the name of **Garrison Engineer (AF) Tezpur.**

NOTES : Earnest Money Deposit (EMD) in the form of Demand Draft/Call deposit etc. will not be accepted NON –SUBMISSION OF EARNEST MONEY DEPOSIT (EMD) (scanned copy alongwith Technical Bid & hard copy before the date & time fixed for opening of BOQ) WILL RENDER THE BID DISQUALIFIED FOR OPENING OF COVER II (FINANCE BID)

2. PERFORMANCE SECURITY

Within 28 days of receipt of the Letter of Acceptance, the successful contractor shall deliver to the Accepting Officer a Performance Security in any of the forms given below for an amount equivalent to 5% of contract sum (See Conditions 19 of GCC (IAFW-2249).

- (i) A Bank Guarantee in the prescribed form.
- (ii) Government Securities, FDR or any other Government Instruments stipulated by the Accepting Officer.

3. CONTRACTORS ENLISTED WITH CHIEF ENGINEER EASTERN COMMAND AND WHO HAVE EXECUTED STANDING SECURITY BOND AND DEPOSITED STANDING SECURITY DEPOSIT BUT OF LOWER CLASS.

In case the tender/bid is accepted, the amount of Performance Security will be for an amount equivalent to 5% of contract sum. The amount is required to be lodged within 28 (Twenty Eight) days of the receipt by the contractor of notification of acceptance of tender /bid, failing which action will be taken as per the stipulations in para 19.3 of Condition 19 of GCC (IAFW-2249).

4. CONTRACTORS ENLISTED IN MES FORMATIONS OTHER THAN CE EASTERN COMMAND.

Contractors whose names are on the approved list of any MES formation i.e. other than CE Eastern Command and who have deposited Standing Security and have executed Standing Security Bond may tender/bid without depositing Earnest Money with the bid and if the Accepting Officer decides to accept the tender/bid, such tenderers will be required to lodge Performance Security for an amount equivalent to 5% of contract sum. The amount is required to be lodged within 28 (Twenty Eight) days of the receipt by the contractor of

notification of acceptance of tender/bid, failing which action will be taken as per the stipulations in para 19.3 of Condition 19 of GCC (IAFW-2249).

5. GENERAL INSTRUCTIONS FOR COMPLIANCE

5.1 The bids received only in the electronic form will be considered. All bids shall be submitted on defproc.gov.in portal. Documents should be scanned and forwarded in 'pdf' form and 'xls' form as indicated.

5.2 Bids shall be uploaded on defproc.gov.in, portal on or before the bid closing date mentioned in the tender. No tender/bid in any other electronic or physical form like email/fax/by hand/through post will be considered.

5.3 Bid should be DIGITALLY signed using valid DSC. All pages of tender documents, corrections/alterations shall be signed/initialled by the lowest bidder after acceptance.

5.4 Drawings, if issued in physical form must be returned duly initialled by the tenderer/bidder in separate envelope indicating his name and address.

5.5 The tender shall be signed, dated and witnessed at all places provided for in the documents after acceptance, All corrections shall be initialled. The contractor shall initial every page of tender and shall sign all drawings forming part of the tender. Any tender/bid, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

5.6 In the technical bid, a scanned copy of power of Attorney in favour of the person uploading the bid using his/her DSC shall be uploaded. In case the digital signatory himself in the sole proprietor, scanned copy of an affidavit on stamp paper of appropriate value to this effect stating that he has authority to bind the firm in all matters pertaining to contract including the Arbitration Clause, shall be attached in pdf form. In case of partnership concern or a limited company, digital signatory of the bid/tender shall ensure that he is competent to bind the contractor (through partnership deed, general power of attorney or Memorandum and Articles of Association of the Company) in all the matters pertaining to the contracts with Union of India including arbitration clause. A scanned copy of the documents confirming of such authority shall be attached with the tender/bid in pdf form, if not submitted earlier. The person uploading the bid on behalf another partner(s) or on behalf of a firm or company using the DSC shall upload with the tender/bid a scanned copy (in pdf form) of Power of Attorney duly executed in his favour by such other or all of the Partner(s) or in accordance with constitution of the company. stating that he has authority to bind such other person of the firm or the Company as the case may be, in all matters pertaining to the contract including the Arbitration Clause.

5.7 Even in case of Firms or Companies which have already given Power Attorney to an individual authorizing him to sign tender in Pursuance of which bids are being uploaded by such person as a routine, fresh Power of Attorney duly executed in his favour stating specifically that the said person has authority to bind such partners of the Firm, or the Company as the case may be, including the condition relating to Arbitration Clause, should be uploaded in pdf form with the tender/id, unless such authority has already been given to him by the Firm or the Company. It shall be ensured that power of attorney shall be executed in accordance with the constitution of the company as laid down in its Memorandum & Article of Association.

5.8 Hard copies of all above documents should be sent by the contractor to the Tender issuing authority well in advance to be received before the date & time fixed for the same.

5.9 Bid (Cover 1 & 2) shall be uploaded online well in time.

5.10 The contractor shall employ Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to Special Condition referred herein after and also Conditions 24 & 25 of IAFW 2249 (General conditions of contract).

5.11 Tenderers/bidders who uploaded their priced tenders/bids and are desirous of being present at the time of opening of the tenders/bids, may do so at the appointed time.

5.12 The tenderer/bidder shall quote his rate on the BOQ file only. No alteration to the format will be accepted, else the bid will be disqualified and summarily rejected.

5.13 In case the tenderer/bidder has to revise/modify the rates quoted in the BOQ (excel sheet) he can do so only in the BOQ, through defproc.gov.in site only before the bid closing time and date.

5.14 Bidders are required to thoroughly verify before uploading their bids, for any revisions in BOQ issued by the department and are required to quote in the revised BOQ only, in case of revision of BOQ. Uploading of quotation in pre-revised BOQ will be considered as a wilful negligence by the bidder and his quotation will be considered non-bonafide.

6. REVOKATION /REVISION OF OFFER UPWARD/OFFERING VOLUNTARY REDUCTION,AFTER OPENING OF FINANCIAL BIDS LOWEST BIDDER.

In the event of lowest tenderer/bidder revoking his offer or revising his rates upward/offering voluntary reduction, after closing of bid submission date & time, his offer will be treated as revoked and the Earnest Money deposited by him shall be forfeited. In case of MES enlisted Contractor the amount equal to the Earnest Money stipulated in the Notice of tender, shall be notified to the tenderer/bidder for depositing the amount through MRO. Bids of such Contractors/bidders shall not be opened till date aforesaid amount equal to the earnest money is deposited by him in Govt. Treasury. In addition, bids of such tenderer/bidder and his related firm shall not be opened in second call or subsequent calls. Reduction offered by the tenderer/bidder on the freak high rates referred for review shall not be treated as voluntary reduction.

7 Department may issue amendments/errata in form of CORRIGENDUM to tender /revised BOQ to the tender documents. The tenderer/bidder is requested to read the tender documents in conjunction with all the errata/amendments/corrigendum, if any issued by the department.

8. These instructions shall form part of the contract documents.

SIGNATURE OF CONTRACTOR
DATED: _____

AGE (CONTRACTS)
FOR ACCEPTING OFFICER

NOTICE INVITING TENDER (NIT)

1. A tender is invited for the work as mentioned in Appendix 'A' to this NOTICE INVITING TENDER (NIT).
2. The work is estimated to cost as indicated in aforesaid Appendix 'A'. This estimate however, is not a guarantee and is merely given as a rough guide and if the work cost more or less, a tenderer/bidder will have no claim on that account. The tender shall be based on as mentioned in aforesaid Appendix 'A'.
3. The work is to be completed within the period as indicated in aforesaid Appendix 'A' in accordance with phasing, if any, indicated in the tender from the date of handing over site, which will be on or about two weeks after the date of Acceptance of tender.
4. Normally contractors whose names are on the MES approved list for the area in which the work lies, and within whose financial category the estimated amount would fall, may tender/bid but in case of term contracts, contractors of categories SS to E may tender/bid. Contractors whose names are on the MES approved list of any MES Formation and who have deposited standing security and have executed standing security bond may also tender/bid without depositing Earnest money along with the tender/bid and if the tender/bid submitted by such a tenderer/bidder is accepted, the contractor will be required to deliver to the Accepting Officer the amount of 'Performance Security' within twenty eight days of the receipt by him of notification of acceptance of his tender/bid, failing which action will be taken as per the stipulations in para 19.3 of Condition 19 of GCC (IAFW-2249). Not more than one tender/bid shall be submitted/uploaded by one contractor or one firm of contractors. Under no circumstances will a father and his son(s) or other close relations who have business dealing with one another be allowed to tender/bid for the same contract as separate competitors. A breach of this condition will render the tender/bids of both the parties liable for rejection.
5. The Office of **Garrison Engineer (AF) Tezpur** will be the Accepting Officer here in after referred to as such for purpose of the contract.
6. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded by the tenderer/bidder on or before the date & time mentioned in **NIT**. A scanned copy of DD with enlistment details/documents shall be uploaded as packet 1/Cover-1 ('T' bid) of the tender/bid on e-tendering portal. DD is refundable in case T bid is not accepted resulting in non-opening of 'Q' bid. The applicant contractor shall bear the cost of bank charges for procuring and encashing the DD and shall not have any claim from Government whatsoever on this account.
 - 6.1 Tender form and conditions of contract and other necessary documents shall be available on eprocuremes.gov.in/eprocure.gov.in site for download and shall form part of contract agreement in case the tender/bid is accepted.
 - 6.2 In Case of contractor who has not executed the Standing Security Bond, the Cover-I shall be accompanied with by Earnest Money of amount as mentioned in Appendix 'A' in the form of deposit at call receipt in favour of concerned CCE/GE/GE(I)/AGE(I) (see Appendix 'A') by a scheduled Bank or in receipted treasury Challan the amount being credited to the revenue deposit of the concerned CCE/GE/GE(I)/AGE(I) (see Appendix 'A') .
 - 6.3 A contractor who is not enlisted for the area in which the work lies but whose name is in the MES approved list of any MES formation and who has deposited standing security and executed standing security Bond may bid without depositing earnest money along with tender; but if the Accepting Officer accepts the tender/bid, the contractor will be required to deliver to the Accepting Officer a 'Performance Security' within twenty eight days of the

NOTICE INVITING TENDER (NIT) Contd..

receipt by him of notification of acceptance of his tender/bid, failing which action will be taken as per the stipulations in para 19.3 of Condition 19 of GCC (IAFW-2249).

6.4 A contractor who has executed standing security Bond but not corresponding to the appropriate class as mentioned above, shall deliver to the Accepting Officer a 'Performance Security' within twenty eight days of the receipt by him of notification of acceptance of his tender/bid, failing which action will be taken as per the stipulations in para 19.3 of Condition 19 of GCC (IAFW-2249).

6.5 The GE will return the Earnest Money wherever applicable to all unsuccessful tender/bidder by endorsing an authority on the deposit-at-call receipt for its refund, on production by the tenderer/ bidder a certificate of the Accepting Officer that a bonafide tender/bid was received and all documents were returned.

6.6 The GE will return the Earnest Money to successful tender/ bidder by endorsing an authority on the deposit-at-call Receipt for its refund on receipt of an appropriate amount of Performance Security or will retain the same in part or full on account of performance security if such a transaction is feasible.

6.7 Copies of the drawings and other document pertaining to the work signed for the purpose of identification by the Accepting Officer or his accredited representative, sample of materials and stores to be supplied by the contractor will also be available for inspection by the tender/bidder at the office of Accepting Officer and concerned AGE during working hours.

7. The tenderers/bidders are advised to visit the site of work by making prior appointment with GE who is also the Executing Agency of the work (see appendix 'A'). The tenderes/bidders are deemed to have full knowledge of all relevant documents, samples, site etc., whether they have inspected them or not.

8. Any tender/bid which proposes any alteration to any of the conditions laid down or which proposes any other condition or prescription whatsoever, is liable to be rejected.

9. The uploading of bid implies that bidder has read this notice and the Conditions of Contract and has made himself aware of the scope and specification of work to be done and of the conditions and rates at which stores, tools and plants etc will be issued to him and local conditions and other factors having bearing on the execution of the work.

10. Tenders/bidders must be in possession of a copy of the MES Standard Schedule of Rates (see appendix 'A') including amendments and errata thereto.

11. Invitation for e- tender does not constitute any guarantee for validation of 'T' bid and subsequent opening of finance bid of any applicant/bidder, even of enlisted contractors of appropriate class, merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the 'T' bid and not open the finance bid of any applicant/bidder. 'T' bid validation shall be decided by the Accepting Officer based on, inter alia, capability of the firm as per criteria given in Appx 'A' to this **NIT**. The applicant contractor/bidder will be informed regarding non-validation of his 'T' bid assigning reasons thereof through the eprocurement website.

NOTICE INVITING TENDER (NIT) Contd.

The applicant contractor/bidder if he so desires may appeal to the next higher Engineer authority viz. **HQ Commander Works Engineer (Air Force) Borjhar**, on email id **afborj3-mes@nic.in / sswafborj3-mes@nic.in** with copy to the Accepting Officer on email before the scheduled date of opening of Finance Bid. The decision of the Next Higher Engineer Authority (NHEA) shall be final and binding. The contractor/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.

12. The Accepting Officer reserves the right to accept a tender submitted by Public Undertaking, giving a price preference over other Tender (s)/bids, which may be lower, as are admissible under the Government Policy. No claim for any compensation or otherwise shall be admissible from such tender/bidder whose tender/bid is rejected.

13. Accepting Officer does not bind himself to accept the lowest or any tender/bid or to given any reason for not doing so.

14. Irrespective of whatever is mentioned in condition 19.3 of IAFW-2249 with regard to suspension of tenders on account of non-submission of Performance Security, issue of tenders to such tenders shall remain suspended for a period of six months from the date of cancellation of contract under Condition 19.3 of IAFW2249 in case of unenlisted contractors. In case of MES enlisted contractors, issue of tenders shall remain suspended till deposit of EMD or six months from the date of cancellation whichever is later

15. This **Notice Inviting Tender (NIT)** including Appendix 'A' shall form part of the contract.

SIGNATURE OF CONTRACTOR
DATED: _____

AGE (CONTRACTS)
FOR ACCEPTING OFFICER

APPENDIX 'A' TO NOTICE INVITING TENDER

1	Name of work	PROVN OF AC ALONG WITH CONNECTED WORKS FOR TECH EQUIPMENTS AT VARIOUS LOCATIONS AND PROVN OF SECURITY LIGHTING AND AREA ILLUMINATION ALONG WITH CONNECTED ACCESSORIES AT CERTAIN LOCATION AT AF STN TEZPUR.
2	Estimated of Cost	Rs. 48.17 Lakh (at Par Market)
3	Period of completion	180 days
4	Cost of tender documents	Rs 500/- in the shape of DD/Bankers cheque from any schedule Bank in favour of GE (AF) Tezpur and Payble at Tezpur. (Note: - In case of retendering, the contractor who had quoted in the previous call is not required to submit the cost of tender.)
5	Website/portal address	www.defproc.gov.in
6	Type of contract	The tender shall be based on IAFW-1779-A, specifications and General Conditions of Contracts (IAFW-2249) with Schedule 'A' (list of items of work) to be priced by tenderer. The tenderers are required to quote their rates in the bill of quantities (BOQ).
7	Information & Details :	Refer critical dates on the website
	(e) Bid submission startdate	
	(b) Bid submission enddate	
	(c) Date/time for opening of bid	
8	Eligibility Criteria	
	(a) For MES enlisted contractors	Contractor shall be enlisted with MES in Class 'D' and above and category '(a)(i) or (b)(i)' subject to satisfactory remarks wrt performance in respect of works in hand as reflected in Work Load Return (WLR) or any other report circulated by competent engineer authority.
	(b) For contractors not enlisted with MES	(i) Contractor not enlisted with MES should meet the enlistment criteria of 'D' Class & '(a)(i) or (b)(i)' category contractor with regard to satisfactorily completed requisite value works with Central/State Government/Central/State PSUs/ AWHO/AFNHB/CGEWHO/ DGMAP, annual turnover, bank solvency, working capital and other requirements given in in Para 1.4 & 1.5 of Section 1 of Part I of MES Manual on Contracts- 2020 as available in all MES formations as well as MES website (www.mes.gov.in) (ii) Not carrying adverse remarks in Work Load Report (WLR) or any other similar report circulated by any competent authority, if already working in MES. (iii) Not suspended/debarred/blacklisted (either permanently or temporarily) from participating in any bid or for business dealings by any Central/State Government Department or any Central/ State Government PSU or any Autonomous Body under Central/State Government or any Local Body as on the bid submission end date. (iv) Details of works completed and under progress in MES be submitted in the following format:-

		Sl No	CA No. & Name of Work	Value of CA	Date of commencement	Date of completion	Extended date of completion
		Un-enlisted Contractor who have secured two works in MES should get themselves registered in the appropriate designated Class with any Registering Authority, else the firm will not be eligible for participation in tender unless until the firm is enlisted with the MES.					
9.	Tender issuing and Accepting Officer	Garrison Engineer (AF) Tezpur PO-Salonibari, PIN-784104 District-Sonitpur, Assam Tele: 03712-258113, e-mail: aftezp4-mes@nic.in					
10	Executing agency	GE (AF) Tezpur					
11	Earnesy Money	<p>Rs. 96,400/- in favour of GE (AF) Tezpur in form of Deposit at callreceipt, FDR not acceptable.</p> <p>Note:- The bidders are required to sign the Bid Securing Declaration and upload copy of the same in Cover 1(Technical Bid) as below: - I/We hereby understand and accept that if I/We withdraw or modify my/our bids during the period of validity, or if I/We are awarded the contract and on being called upon to submit the Performance Security/Security Deposit, fail to submit the Performance Security/Security Deposit before the deadline defined in the request for bid documents/Notice Inviting Tender, I/We shall be debarred from exemption of submitting Bid Security/Earnest Money Deposit for a period of 6(Six) months, from the date I/We are declared disqualified from exemption from submission of Earnest Money Deposit/Security Deposit, for all tenders issued by MES during this period.</p>					
12	Performance Security	Within 28 days of receipt of the letter of Acceptance, the successful contractor shall submit to the Accepting officer a performance security in any of the forms as prescribed for an amount equivalent to 5% of the Accepted amount (Contract Sum/ Lump sum).					

NOTES:-

1. In case after opening of Cover-I, the number of MES enlisted contractors of eligible class as well as unenlisted contractors, if any, fulfilling the other eligibility criteria given in NIT are less than 7 (Seven), applications in respect of contractors one and two class below the eligible class may also be considered subject to fulfilling the other eligibility criteria given in NIT. Therefore, MES contractors one and two class below eligible class may also bid for this tender. However, such contractors shall not be considered in case their present residual work in hand is more than 05 (Five) times their present tendering limit. However, in case such contractors fulfil the criteria of upgradation to the stipulated eligible class based on past experience of completed works (individual work experience and/or avg turnover, as applicable) and financial soundness (solvency and working capital), the ceiling of present residual work will not apply, and they will be considered for issue of tender. Such bidders shall upload in their Cover-I bid details of residual works in hand showing name of work, names of accepting officer, contract amounts, date of commencement and completion(stipulated) and progress as on bid submission end date. Such contractor, if claim to fulfil the criteria of upgradation shall also upload the requisite information/documents in support of upgradation. These details shall be verified by the Tender Issuing Authority from concerned formations in case bid of such contractors are considered for evaluation.”

2. In case after opening of Cover1, if the number of MES enlisted contractors of eligible class contractors as well as unenlisted contractors, if any, fulfilling the other eligibility criteria given in NIT are 7 (Seven) or more, applications of those ONE class below the eligible class bidders shall be considered, who have previously completed similar works satisfactorily & are meeting the criteria of up-gradation in respect of past experience of completed work (individual work experience and /or average annual turnover as applicable) & financial soundness (solvency/ financial soundness & working capital) as per details given in Manual on Contracts. Therefore, such contractors shall

NOTICE INVITING TENDER (NIT) Contd..

upload the requisite information/documents in the Cover 1.

1. Unenlisted contractor shall be considered provided he meets the criteria. Foreign firms shall not be eligible for this tender. However Indian firms having foreign national/Indian Nationals staying abroad/ Indian national having taken foreign citizenship, as director(s) shall be considered subject to security clearance from the concerned authorities.
2. Contractors enlisted with MES will upload following documents in Cover-I for checking eligibility: -
 - (a) Application for tender on Firm's letter head
 - (b) Enlistment letter issued by the Registering Authority duly renewed for the cycle period in vogue.
 - (c) Scanned copy of DD/Banker Cheque towards cost of tender and EMD instrument in case SSD bond not signed at the time of registration.
 - (d) Any other documents required as described in this Appendix.
3. Contractors not enlisted with MES will be required to upload following documents in Cover-1 for checking eligibility.
 - (a) Application for tender on Firm's letter head
 - (b) Scanned copy of DD/Banker Cheque towards cost of tender and Earnest Money Deposit (EMD) instrument.
 - (c) Copy of Police Verification Report /Police Clearance Certificate/Character Certificate from the Police authority of the area where registered office of the firm is located/notarized copy of valid passport of Proprietor/each Partner/each Director.
 - (d) All documents required for enlistment in MES for the class mentioned in Para 8(b) above as per Para 1.5 of Section 1 of MES Manual on Contracts 2020.
 - (e) Details of works being executed in MES, if any.
 - (f) Any other documents required as described in this Appendix
4. Tenders not accompanied by scanned copies of requisite DD/banker's cheque towards cost of tender and earnest money (as applicable) in Cover 1 shall not be considered for validation of T bid and their financial Bids will not be opened.
5. Contractor should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) shall reach the office of Accepting Officer **within 7 (Seven) days** of bid submission end date, failing which following actions shall be taken.
 - (a) In case of tender from enlisted contractors of MES, where scanned copies of requisite DD/Bankers Cheque towards cost of tender has been uploaded in Cover 1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will be opened. However non-submission of physical copies of cost of tender shall be considered as willful negligence of the tenderer with ulterior motives and such tenderer shall be banned from bidding for a period of six months commencing from the date of opening of Financial Bid (Cover 2).
 - (b) In case of tender from unenlisted contractor, where scanned copies of requisite DD/ Bankers Cheque towards cost of tender have been uploaded in Cover 1 but physical copies are not received within the stipulated period, their financial bids (Cover 2) will not be opened. Name of such contractors along with complete address shall be circulated for not opening of their bids for a period of six months commencing from the date of opening of Financial Bid (Cover 2).
 - (c) In case of tenders from enlisted and un-enlisted contractor, where scanned copies of instrument for Earnest Money Deposit (as applicable) have been uploaded in Cover 1, but the same are not received in physical form within stipulated time, such tenders shall not qualify for opening of Financial Bid (Cover-2).

NOTICE INVITING TENDER (NIT) Contd..

6. Contractor will not be allowed to execute the work by subletting or through power of attorney holder on his behalf to a third party/another firm on his behalf. However, a contractor can execute the work through Power of Attorney to sons/daughters/Spouse of Proprietor/ Partner/Director and firm's own employees, Director, Project Manager **provided they are not having a separate enlisted firm in MES in their name as Proprietor/Partner/Director.**
7. After opening of Cover-1 and during its technical evaluation, in case of any deficiency is noticed in the documents required to be uploaded by the tenderers as per NIT, a communication in the form of e-mail/SMS/Speed Post etc shall be sent to the contractor to rectify the deficiency within a period of seven days from the date of communication failing which their financial bid (Cover-2) shall not be opened and contractor shall not have any claim on the same.
8. Invitation for e- tender does not constitute any guarantee for validation of Technical bid and subsequent opening of financial bid of any applicant/bidder merely by virtue of enclosing DD, Accepting Officer reserves the right to reject the Technical bid and not open the financial bid of any applicant/bidder. Technical bid validation shall be decided by the Accepting Officer based on, eligibility of the firm as per the criteria given in this Appendix. Tenderer/ bidder will be informed regarding non-validation of his Technical bid assigning reasons therefore through the tender evaluation report which shall be uploaded on the website. Such tenderer if he so desires may appeal to the next higher Engineer authority viz. **HQ Commander Works Engineer (AF) Borjhar** on email id **afborj3-mes@nic.in / sswafborj3-mes@nic.in** with copy to the Accepting Officer on email before the scheduled date of opening of Cover 2. NHEA shall decide the matter within a period of seven working days from the date of receipt of appeal. The decision of the NHEA shall be final and binding. The tenderer/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.
9. In case of un-enlisted contractors is already executing work in MES, he shall not be considered eligible for the subject tender if the total value of such work is more than twice the tendering limit of the MES class of contractor for which it is eligible. For the purpose, details of the works being executed by such a contractor shall be uploaded in the Cover-I of the bid and shall be checked/verified by the Accepting Officer.
10. In case the BOQ is revised through the corrigendum and the bidder has failed to quote on the revised BOQ (i.e. he has quoted on pre revised BOQ), such bid shall be treated as wilful negligence by the bidder and his quotation shall be considered non-bonafide. In such case the lowest tender shall be determined from amongst the valid/bonafide bids only. Accepting Officer may decide whether to re-tender or consider the lowest bonafide tender for acceptance.
11. Revoking the offer or revising the rates upwards or offering voluntary reduction by the lowest tenderer after opening of Cover-2 shall be considered as a willful default. For this default, a penalty of an amount equal to Earnest Money shall be levied. In case of an unenlisted tenderer, Earnest Money deposited by him shall be forfeited. In case of MES enlisted tenderer having deposited the Sanding Security Bond, an amount equal to the Earnest Money stipulated in the NIT shall be notified to the tenderer for depositing through MRO and consideration of such tenderer in tender evaluation for future work shall remain suspended till the aforementioned amount is deposited in the Government Treasury. No other disciplinary/administrative action shall be taken against such tenderers. In such a situation, the next lowest offer shall not be considered for acceptance. Instead, retendering shall be resorted to in a transparent and fair manner and the defaulting tenderer and his related firm, if any, shall not be eligible for this tender in second call or subsequent calls.
12. Tender to related firms shall not be issued simultaneously. Firms shall be termed as

related if Proprietor/one or more Partners/Directors are common. Decision of Accepting Officer on issue/deny the tender to any one of the related firms shall be final and binding.

13. The tenderer/bidder shall upload copy of GST Registration Certificate and proof of possession of Provident Fund Code Number in addition to other mandatory documents as required. All workers employed directly or indirectly by the contractor shall be enrolled as members of provident fund and should give the Universal Account Number (UAN).
14. Court of the place from where tender has been published shall alone have jurisdiction to decide any dispute out of or in respect of this tender. After acceptance of tender, Condition 72 - jurisdiction of Courts, in GCC (IAFW-2249) shall be applicable.

SIGNATURE OF CONTRACTOR

**AGE (CONTRACTS)
FOR ACCEPTING OFFICER**

File No:8151/ /E8
Dated: May 2026

Military Engineer Services
Garrison Engineer (AF)
Tezpur Post: Salonibari,
Dist.: Sonitpur
PIN – 784104 (Assam)

IN LIEU OF IAFW-1779 A (REVISED-1955)***(To be used in conjunction with General Condition of Contracts IAFW-2249)*****MILITARY ENGINEER SERVICES**

Tele/Fax: 03712-258113

Garrison Engineer (AF)
Tezpur Post: Salonibari,
Dist.: Sonitpur PIN – 784
104 (Assam)

No.:8151/ /E8

May 2026

ITEM RATE TENDER AND CONTRACT FOR WORKS REQUIRED FOR PROVN OF AC ALONG WITH CONNECTED WORKS FOR TECH EQUIPMENTS AT VARIOUS LOCATIONS AND PROVN OF SECURITY LIGHTING AND AREA ILLUMINATION ALONG WITH CONNECTED ACCESSORIES AT CERTAIN LOCATION AT AF STN TEZPUR.

Tenderers/Bidders who are qualified as per the eligibility criteria mentioned in the Notice Inviting Tender and having interalia sound past record is/are hereby authorised to tender for the above work. The tenderers/Bidders shall submit/upload various documents connected with the subject tender through online 'e-tendering' in website/ portal address www.defproc.gov.in before the due date and time.

THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF TO ACCEPT THE LOWEST OR ANYTENDER.

**Signature of the Officer Issuing
/Uploading the Documents:
Appointment: AGE (Contracts)
DATE: May 2026**

SCHEDULE 'A'/BOQ (LIST OF ITEMS OF WORK)

NAME OF WORK: PROVN OF AC ALONG WITH CONNECTED WORKS FOR TECH EQUIPMENTS AT VARIOUS LOCATIONS AND PROVN OF SECURITY LIGHTING AND AREA ILLUMINATION ALONG WITH CONNECTED ACCESSORIES AT CERTAIN LOCATION AT AF STN TEZPUR.

NOTES:-

1 Description of items given in various items of Schedule is brief. Unit rates shall be deemed to allow for provision of materials, labour, process, operations and all special requirements and tests etc. detailed in the tender documents and shall be amplified and read in conjunction with special conditions, particular specifications, specifications of materials and workmanship and conditions in relevant trade sections of MES Standard Schedule of rates Part I & II and working conditions, contract drawings and other documents forming part of the contract documents.

2. Unit Rates

(a) The contractor shall calculate his own details and insert his unit rates against each item of BOQ/Schedule 'A' Part(s).

(b) Unit rates shall be deemed to include for material, Labour and Plant & Machinery complete and all the connected works required for carrying out the work as mentioned in Sch'A'/BOQ unless otherwise specifically mentioned.

(c) Unit rates quoted shall be deemed to be inclusive of all taxes and levies of Govt. so applicable such as GST/Sales Tax/VAT, GST on works contract, excise duty, toll tax, entry tax, income tax, workers welfare tax/cess, service tax etc. and nothing extra shall be paid on this account. Necessary deduction at source shall be made by the GE as applicable as per the mandatory statutory requirement of Central and State Government.

3. The total amount in Schedule-A / BOQ is not firm but will be treated as contract sum as referred to in IAFW-2249.

4. The quantities shown in Schedule-A / BOQ are approximate and are inserted for guidance only. These shall, however, not be varied beyond the limit laid down in Condition 7 of IAFW-2249 (General Conditions of Contracts.)

5. Method of measurement of all works shall be as described in MES Schedule, unless otherwise specified in these documents.

6. Tenderers are required to be fully acquainted with scope of work as catered for in the tender documents and also the site of work. No claim shall be entailed subsequently for any misunderstanding or any inaccuracy with regard to site conditions and provisions made in tender documents.

7. The materials/fixtures/fittings shall be procured from any of the firms/manufacturers whose names are mentioned in BOQ/Sch 'A'/ List of manufacturers of specific makes as per LIST in Particular Specifications.

8. The items of work considered in Schedule 'A' /BOQ are required to be executed as per site requirement for construction of entire completion of the works as specified and or as shown in contract drawings. The contractor is deemed to have ascertained the scope of work by going through the contract drawings and actual site condition.

SCHEDULE 'A'/BOQ (CONTD.)

9. Unit rate quoted by the contractor against various items of Schedule 'A'/BOQ shall, interalia, be deemed to include for any minor details of construction which are obviously and fairly intended and which may not have been specifically included in the tender documents but which are essential for the execution and completion of works. In case of difference of opinion between the contractor and the GE as to whether or not, any item of work constitutes 'Minor details of construction, the decision of Accepting Officer shall be final, conclusive and binding.

10. Method of measurement of all works shall be as per relevant IS and MES Standard Schedule of Rates 2009 (Part I - Specifications) and MES Standard Schedule of Rates 2020 (Part II - Rates), unless otherwise specified in these documents.

11. The entire work under this contract shall be completed within **180 Days** from the date of commencement as ordered by GE (AF) Tezpur in the work order.

12. **COMPLETION OF DEFECT LIABILITY PERIOD.** The work shall be treated as completed within the provisions of Condition 49 of IAFW-2249 only after the whole work is completed under the contract and taken over by MES. The defects liability period shall be **two years** as mentioned in the Condition 46 of IAFW-2249 shall commence from the date of completion as mentioned in completion certificate, which will be issued only after the completion of the entire work under the contract.

13. **TESTING.** It is made clear that cost of material for testing, all field apparatus required for sampling and testing as per MES Schedule/IS codes and manpower incident to such testing will be provided along with necessary transport arrangement to and fro to the approved testing agency or laboratory by the contractor during the construction phase of the work and defect liability period.

14. Applicable to Schedule 'A': - The under mentioned remarks shall be deemed to have been inserted in the BOQ: -

- (a) See list of drawings and specifications.
- (b) See Schedule 'A' Notes.
- (c) See Schedule 'A' Notes.

15. Unless otherwise specified, unit rate against each item of work shall be deemed to be inclusive of materials and labour, all plants, equipment and tools including testing for acceptance criteria complete.

16. Please note that No foreign exchange or import license facility will be arranged by the department for any material included in the subject tender. Further form 'D' will not be issued by the department for interstate purchase or the like.

SIGNATURE OF CONTRACTOR

**AGE (CONTRACTS)
FOR ACCEPTING OFFICER**

SCHEDULE 'A' PART-II
(SCHEDULE OF CREDIT)

NAME OF WORK:- PROVN OF AC ALONG WITH CONNECTED WORKS FOR TECH EQUIPMENTS AT VARIOUS LOCATIONS AND PROVN OF SECURITY LIGHTING AND AREA ILLUMINATION ALONG WITH CONNECTED ACCESSORIES AT CERTAIN LOCATION AT AF STN TEZPUR.

NOTE:

- | | |
|---|--|
| 1 | The contractor shall take proper precaution for demolition /dismantling work. If any damage caused due to dismantling/demolition to the existing structure, the contractor shall make good the same at this own cost without any extra cost to the Govt. |
| 2 | All dismantling / taking down materials (except those included in Schedule of Credit and those re-used in the work) shall be returned to MES store without any extra cost to the Government. However useless materials as per the opinion of Engineer-in-Charge shall be removed outside MD land or thrown away at low laying area as directed by Engineer-in-Charge without any extra cost to the Government. |
| 3 | The rates inserted by the department under column 5 is the minimum recovery rate which shall be final and binding. |
| 4 | Unless specifically mentioned in Schedule 'A', the Contractor shall not be permitted to incorporate the demolished materials in the work under any circumstances. |
| 5 | The contractor shall be allowed to take away the demolished materials only after deduction of credit amount from the Contractors payment due with prior permission of Engineer-in-Charge. |
| 6 | The quantities mentioned under Col-4 are for rough guidance only. However the quantities mentioned under this column will be measured as per actual quantity obtained from demolition/ dismantling against respective items of Schedule 'A'. No claim whatsoever due to any variation in quantities shall be entertained. |

SN	Description of work	Unit	Qty	Rate (Rs) (Priced by the Dept)	Amount (Rs)
1	2	3	4	5	6
	NIL				
	Total Rs.				0.00

SIGNATURE OF CONTRACTOR
DATED: _____

FOR ACCEPTING OFFICER

SCHEDULE 'B'**ISSUE OF MATERIALS ETC TO CONTRACTOR**
(SEE CONDITION-10 OF IAFW-2249)

Sr 1 No	Description of materials	Rate at which materials will be issued to contractor		Place of issue by name	Remarks
		Unit	Rate in Rs.		
1	2	3	4	5	6

-NIL-**SIGNATURE OF CONTRACTOR****FOR ACCEPTING OFFICER****DATED:** _____**SCHEDULE 'C'**

LIST OF TOOLS AND PLANT (OTHER THEN TRANSPORT)
WHICH WILL BE HIRED TO THE CONTRACTORS)
(See Condition 15, 34 & 35 of IAFW-2249)

SN	Quantity	Particulars	Details of crew	Hire charges per unit per working day	Standby charges per unit per off day	Place of issue	Remarks
1	2	3	4	5	6	7	8

.....NIL.....

SIGNATURE OF CONTRACTOR**FOR ACCEPTING OFFICER****DATED:** _____**SCHEDULE 'D'**

TRANSPORT TO BE HIRED TO THE CONTRACTOR)
(See Condition 16 & 35 of IAFW-2249)

S N	Quantity	Particulars	Rate per unit per working day	Place of issue by name	Remarks
1	2	3	4	5	6

.....NIL.....

SIGNATURE OF CONTRACTOR**FOR ACCEPTING OFFICER****DATED:** _____

TENDER

To,

The President of India Having examined and perused the following documents: -

1. Specifications signed by AGE (Contracts)
2. Drawings details in the specifications.
3. Schedule 'A', 'B', 'C', 'D' attached hereto.
4. MES Standard Schedule Rates Part I (2009) & Part II (2020) (here-in-after referred to as the MES schedule) together with amendments Nos **01 to 03** for Part I and **1 to 122** for Part II
5. General Conditions of contracts, IAFW-2249 (1989 print) together with errata No **1 to 20** and amendments **1 to 49**.
6. **Water:** - Condition 31 of IAFW-2249 General Condition of Contract. Water will be supplied by MES

Should this tender be accepted, I/We agree

** (a) That the sum of **Rs. 96,400.00 (Rupees Ninety Six Thousand Four Hundred Only)** forwarded as Earnest Money shall either be retained as part of security deposit or be refunded by the Government on receipt of the appropriate amount of Security Deposit, as per Condition 19 of IAFW-2249.

(b) To execute all the works referred to in the said documents upon the terms and conditions contained or referred to therein at the items rates contained in the aforesaid Sch 'A' or at such other rates as may be fixed under the provision of Condition 62 of IAFW-2249 and to carry out such deviations as may be ordered vide Condition 7 of IAFW-2249 upto a maximum of 10% (TEN PERCENT) and further agree to refer all disputes, as required by Condition 70 of IAFW-2249 to the Sole Arbitration of a Serving Officer having degree in Engineering or equivalent or having passed final/direct final examination of Sub-division II of the Institution of Surveyors (India) recognised by the Govt. of India to be appointed by the ADG (NEI) Guwahati or in his absence the Officer Officiating as ADG (NEI) Guwahati if specially delegated in writing by the ADG (NEI) Guwahati whose decision shall be final, conclusive and binding.

** To be deleted where NOT applicable.

Signature of the Contractor
Date :

AGE (Contracts)
For Accepting Officer

Contd.../-

TENDER (CONTD.)

Signature _____ in the Capacity of _____ duly authorized to sign the tender for and on behalf of _____

(IN BLOCK LETTERS)

DATED : _____

SIGNATURE OF WITNESS

POSTAL ADDRESS _____

NAME _____

ADDRESS _____

TELEGRAPHIC ADDRESS _____

TELEPHONE NO. _____

ACCEPTANCE

_____ Alterations have been made in these documents and as evidence that these alterations were made before the execution of the Contract Agreement and these have been initialed by the Contractor and Shri _____

The said officer is hereby authorized to sign and initial on my behalf the documents forming part of this contract.

The above tender was accepted by me on ____ day of ____ 2026 on behalf of the President of India for the contract sum of Rs. _____

(Rupees _____

_____ Only)

Signature _____ dated this _____ day of _____ 2026.

**Appointment: GARRISON ENGINEER
ACCEPTING OFFICER**

(For and on Behalf of the President of India).

Contd.../-

GENERAL CONDITIONS OF CONTRACTS (IAFW-2249, 1989 PRINT)
MEASUREMENT CONTRACTS (IAFW-1779 & 1779-A)

A copy of the General Conditions of Contracts IAFW-2249 (1989 Print) with errata 1 to 20 and amendments 1 to 49 has been supplied to me/us and is in my/our possession. I/We have read and understood the provisions contained in the aforesaid General Conditions of Contracts before submission of this tender and I/We agree that I/We shall abide by the terms and conditions thereof as modified, if any, elsewhere in these tender documents.

It is hereby further agreed and declared by me/us that General Conditions of Contracts IAFW- 2249 (1989 Print) including condition 70 thereof pertaining to settlement of disputes by Arbitration, containing 33 pages with errata 1 to 20 and amendments 1 to 49 form part of these tender documents.

It is also agreed by me/us that in case of any discrepancy in the interpretation of the contents between English and Hindi version, English version shall take precedence over Hindi version

SIGNATURE OF CONTRACTOR
DATED: _____

FOR ACCEPTING OFFICER

SCHEDULE OF MINIMUM FAIR WAGES

1. It is hereby agreed that the 'Schedule of Minimum Fair Wages' as published vide Govt. of India/State Govt./local authorities which is highest and which specifies minimum rates of wages for various categories of workman as applicable on the last due date of receipt of this tender and shall form part of this tender documents. The minimum rates of wages shall consist of all-inclusive rates and include also the wages for weekly day of rest.

2. My/our signature here under accounts to my/our having read and understood the provisions contained therein and I/We agree that I/We shall abide by the same and that aforesaid documents form part of this tender.

SIGNATURE OF CONTRACTOR
DATED: _____

FOR ACCEPTING OFFICER

SPECIAL CONDITIONS AND REQUIREMENTS**1. GENERAL**

- 1.1 The following Special Conditions shall be read in conjunction with the General Conditions of Contracts, IAFW-2249 (1989 print) and IAFW-2159 including errata/amendments thereto. Any provision in these special conditions if at variance with that of the aforesaid documents shall take precedence there over. The term General specification used in any of the documents forming part of the contract refer to the specification contained in the MES Schedule.

2. ADMISSION TO SITE BY CONTRACTOR AND RESPONSIBILITY TO ASCERTAIN HIS OWN INFORMATIONS

- 2.1 Refer paras 16 and 20 of Notice of Tender (IAFW-2162) and Condition 4 of IAFW-2249. The tenderer shall be deemed to have satisfied himself before submitting his tender as to the nature of the ground and sub-soil (so far as it is practicable), the climatic conditions, the form and nature of the site, nature of work and the manner of access to the site and the accommodation he may require. In general, the tenderer shall be deemed to have himself obtained all necessary information on inspection of site, as to risks, contingencies and other circumstances which may influence or effect his tender. No extra payment consequent on any mistake or misunderstanding or otherwise on this account shall be allowed.
- 2.2 The tenderer shall be deemed to have visited the site(s) before quoting rate and made themselves familiar with the working conditions, whether he actually inspect the site(s) or not.

3. AVAILABILITY OF LAND FOR STORAGE OF MATERIALS, ACCOMMODATION FOR LABOUR ETC

- 3.1 Delete the following from lines 5 to 9 of sub para 1 of Condition 24 of IAFW-2249 General Conditions of Contracts and insert as under in lieu thereof: -
"The contractor shall be permitted to store his materials including erecting temporary sheds thereof, temporary Workshops and the like at the area of land, marked for this purpose, on the site plan/shown by the Engineer in Charge free of rent, if it is on class A-1 land. For other types of land he shall be charged licence fee Re 1/- per year or part of a year for each and every separate area of land allotted to him. No land shall be allotted to the contractor for construction of huts for accommodation of labour.

4. CONDITIONS OF WORKING.

- 4.1. The work lies in '**RESTRICTED AREA**' The contractor and his workmen shall observe all the rules promulgated from time to time by the authority controlling the area VIZ prohibition of smoking lighting and fire precaution search of workmen/agents and transport on entry and exit and keeping to specified routes and working hours restrictions.
- 4.1.1 The contractor his agent(s)/representative workmen etc and his materials carts, trucks or their means of transports etc, will be allowed to entire through and leave only from such gate and at such times as the GE or authorities in charge of the Restricted Areas may at their sole discretion permit to be used. The contractor's authorized representative is required to be present at the place of entry and exit for the purpose of identifying his carts, trucks etc to the personnel in charge of the security of Restricted Area.
- 4.1.2 The contractor, his agent(s) and representative are required individually to be in possession of identity card or pass duly verified by the Garrison Engineer. The security staff will examine the identity card or pass at the time of entry into or exist from the restricted Area. Every workman shall be in possession of an identity card which shall be issued after a through investigation of the antecedents of the labour employed by the contractor and attested by Engineer-in-Charge in accordance with the Standing rules and origination of the unit. Contractor shall be responsible for the conduct and action of his workmen against on representative.

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

Passes shall be returned at any time on demand by Engineer-in-Charge and in any case on completion of work.

- 4.2. The Contractor and his work people shall observe all the rules promulgated from time to time by the authority controlling the area in which the work is to be executed viz. prohibition of smoking, lighting and fire precautions, search of persons on entry and exit and keeping to specified routes, restricted hours of working etc. Any person found violating the security rules laid down by authority, shall be immediately expelled from the area without assigning any reasons whatsoever and no payment shall be admissible for any man hours lost on this account.
- 4.3 **VISIT TO SITE WITHIN THE RESTRICTED AREA** :-Permission to enter the restricted area before submission of tenderers can be obtained through the GE/AGE(I). Tenderers are advised to send prior intimation of their agents, representatives etc., if any, dates and time of their proposed visit so that necessary arrangements may be made by GE to secure admission. Whether a tenderer visits the site or not, he shall be deemed to have full knowledge of the conditions viz., restrictions of entering into / exit from and working within the Restricted Area.
- 4.4 **WORK ON HOLIDAYS:-** The contractor shall not carry out any work on gazetted holidays, weekly holidays and other non-working days except when he is specially authorized in writing to do so by the GE . The GE may at his sole discretion declare any day as holiday or non- working day without assigning any reason for such declaration. Nothing extra shall be admissible on this accounted for any man hours lost.
- 4.4.1 The units controlling restricted area, usually work during six days in a week and remain closed on the 7th day. The working hours available to the contractor's labour and staff are however, appreciably reduced because of the time taken in security checks observed at the time of entry, exit and during working hours.
- 4.4.2 The exact working hours, days and non-working days observed for the restricted area, where works are to be carried out, shall be deemed to have been ascertained by contractor before submitting his tender. The tenderers attention is invited to the fact that the total number of working hours for a unit are prescribed in regulations and they cannot be increased by the Garrison Engineer.
- 4.4.3 Contractor's materials, transport etc shall normally be permitted to come in/go out of the areabetween 8 AM to 6 PM only
- 4.4.4 Contractor may also be allowed to carry out the work beyond 6.00 PM and upto 8.00 PM (day and night). However no movements of materials and transport to/out of site of works shall be permitted during night unless special permission is obtained from the factories/ unit authority.
- 5. CONTRACTOR'S REPRESENTATIVES AND WORKMEN**
- 5.1 Refer Condition 25 of IAFW -2249 which shall be deemed to be modified to the extent mentioned here in before. The contractor shall employ only Indian Nationals as his representatives, servants and workmen and verify their antecedents and loyalty before employing them for the works. He shall ensure that no person of doubtful antecedents and nationality is in any way associated with works. If for reasons of technical collaboration, or other consideration employment of any foreign national is unavoidable, the contractor shall furnish full particulars to this effect to the Accepting Officer at the time of submission of his tender.

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

5.2 **ENTRY / EXIT:-** The contractor, his agent (s) / representatives, workmen etc., and his materials, carts, trucks or other means of transports, tools, plants etc., will be allowed to enter through and leave only from such gate or gates and at such times as the GE or authorities in charge of the Restricted Area may at their sole discretion permit to be used.

The contractor's authorised representative is required to be present at the place of entry and exit for the purpose of identifying his carts, truck etc., to the personal incharge of the security of Restricted Area.

5.3 **IDENTITY CARDS OR PASSES**

The contractor, his agents and representatives are required individually to be in possession of an identity card or pass duly verified by the GE. The identity card or pass will be examined by the security staff at the time of entry into or exit from the restricted area and also at any time or number of times inside the Restricted Area.

5.4 **IDENTITY OF WORKMEN**

5.4.1 Every workmen shall be in possession of an identity card. The identity card will be issued after thorough investigation of the antecedents of the labourers employed by the contractors and attested by the officer-in-charge of the unit concerned in accordance with the standing rules and regulations of the units.

5.4.2 Contractor shall be responsible for the conduct and action of his workmen, agents or representatives.

5.4.3 The contractor, his agent & representatives are required individually to be in possession of an identity card or pass or numbered token as issued by the Officer-in-charge of the unit, which will be examined by the security staff at the time of entry into or exit from the restricted area at any time or number of times inside restricted area.

6. **SECURITY OF CLASSIFIED DOCUMENTS.**

6.1 Contractor's special attention is drawn to Conditions 2-A and 3 of IAFW-2249 (General Conditions of Contracts). The contractor shall not communicate any classified information regarding the work either to subcontractors or others without the prior approval of the GE. The contractor shall also not make copies of the design/drawings and other documents furnished to him in respect of the work, and shall return all document on completion of the works or earlier on determination/Termination/cancellation of the contract. The contractor shall alongwith the final bill, attach a receipt of his having returned the classified documents as per Condition 3 of IAFW-2249 (General Conditions of Contracts).

7. **MINIMUM WAGES PAYABLE.**

7.1 Refer Condition 58 of IAFW-2249. The contractor shall not pay wages lower than minimum wages for labour as fixed by the Govt. of India/State Govt./Union Territory under Minimum Wages Act or Contract Labour (Abolition and Regulation Act) whichever is higher.

7.2 The fair wage referred to in condition 58 of IAFW-2249 shall be deemed to be the same as the minimum wages payable as referred to above.

7.3. The contractor shall have no claim whatsoever, if on account of local factors and/or regulations, he is required to pay the wages in excess of minimum wages as described above during the execution of work.

8. **CO-OPERATION WITH OTHER AGENCIES**

8.1 The contractor shall permit free access and generally afford reasonable facilities

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

to other agencies or departmental workmen engaged by the Govt. to carryout their part of the work, if any, under separate arrangements. The contractor shall not be allowed any extra payment on this account.

9. QUARRIES

Quarries are not available on land, which is in the charge of the MES authorities; Condition 14 of IAFW-2249 shall thus be treated as deleted.

10. WATER

10.1 Refer condition 31 of IAFW-2249. If contractor desires to buy water from Government, water will be supplied by the department at the point(s) as indicated in the site plan or as directed by GE. The water supply shall be metered and the contractor shall pay for after used in works and by his workmen at the rate of **Rs.3.75 per every Rs 1000.00** worth of work done priced at contract rates. The supply of water may not be continuous, the contractor shall be deemed to have ascertained the hours of availability of water before submitting his tender. MES does not guarantee for break down in the system or if supply is not sufficient. The contractor shall make his own arrangements to store and supplement the water supply at his own cost.

10.2 The contractor if he so desires, will be allowed to augment the department's water supply by boring wells at his own cost at site(s) approved by the GE/AGE (I). On completion of the work, the contractor shall remove pipe etc. installed and make good the site as directed by Engineer- in-Charge without any extra cost of Government. No rebate shall be given for augmentation of water by the contractor and charges for water shall be recovered at the rate mentioned above. The contractor shall, however, ensure that water drawn from such sources is clean and free from all impurities and is suitable for mixing concrete, mortar, washing aggregate and curing of concrete as specified in IS 456.

11. SUPPLY OF ELECTRICITY

11.1 In case the contractor desires to by electricity from MES, he shall be charged for the electric energy consumed at **Rs. 8.98** for lighting and power.

11.2 Electric supply required for the work shall be made available by the MES. The main switch and KWH metres to register the electric energy supplied shall be provided and installed by the MES. Contractor shall provide all necessary cables, fittings etc, from the main switch in order to ensure a proper and suitable supply of electricity for execution fo work. All contractors' installation shall conform to and be strictly in accordance with Indian Electricity Act and Rules. More over the layout of cables etc as proposed by him shall be as per plan approved by the Engineer-in-Charge.Any risk either for materials or personnel will be the contractor's responsibility.

11.3 GE or his representative shall be free to inspect all power consuming devices or any electric lines provided by the contactor. Any device or electric lines provided by the contractor which is not to the satisfaction of the GE shall be disconnected from the supply, if so desired by him.

11.4 MES do not guarantee for continuity for supply and no compensation whatsoever shall be allowed for supply becoming intermittent or for breakdown in the system.

12. SAMPLE OF MATERIALS

12.1 Refer Condition 10 of I.A.F.W. 2249 and Clause No.1.6 & 1.7 of MES Schedule Part I.

12.2 The tenderers are advised to inspect sample of the materials which are displayed in the office of the GE before submitting his tender. The tenderers

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

shall be deemed to have inspected the samples and satisfied himself as to the nature and quality of materials, he is required to incorporate in the work, irrespective of whether he has actually inspected or not. The materials to be incorporated in the work by the contractor shall conform to or shall be superior in quality to the sample displayed and shall comply with the specifications given hereinafter.

- 12.3 The contractor shall not procure materials unless the samples are first approved by the GE.
- 12.4 The materials other than materials of local origins shall comply with the requirement of the latest IS.
- 12.5 The cost of testing of material shall be borne by the contractor, unit rates quoted shall include this provision. This aspect shall be kept in mind and nothing extra shall be admissible on this account.

13. RECORD OF MATERIALS.

- 13.1 The quantity of materials such as cement, steel, paints, water proofing compound, chemicals for antitermite treatment and the like, as directed by the Engineer in Charge (the quantity of which cannot be checked after incorporation in the works), shall be recorded in measurement books and signed by the contractor and the Engineer in Charge as a check to ensure that the required quantity has been brought to site for incorporation in the work.
- 13.2 All materials brought to site shall be checked by the Engineer in Charge and stored as directed by the Engineer in Charge and those already recorded in Measurement Book shall be suitably marked for identification.
- 13.3 Contractor shall produce vouchers/invoices from the manufacturers and/or their authorized agents for the full quantity of the following materials as a prerequisite before submitting claims for payment for advances on account of the work done and/or materials collected in accordance with Condition 64 of General Conditions of Contracts-IAFW-2249 :

(i) All items for which payment is claimed in RAR as " material lying at site"	(ii) Cement
(iii) Reinforcement/ Structural steel.	(iv) Water proofing compound
(v) Paint	(vi) Aluminium Window/Door/ Grill
(vii) Tank	(viii) U- PVC / GI/PVC(SWR)/HDPE/ PP-R Pipe & fittings
(ix) EWC/Cistern/Urinal/WHB	(x) Sink/Plate Rack
(xi) Air Conditioner/Voltage Stabiliser	(xii) PCGI Lead Lined Door
(xiii) XLPE/PVC Cable	(xiv) Flame proof fittings/ switch /socket/fan
(xv) MCB DB/MCB/Earthing	(xvi) LED light fittings

- 13.4 The contractor shall ensure that the materials are brought to site, in original sealed containers / packing, bearing manufacturer's marking except in the case of the requirement of materials(s) being less than smallest packing.
- 13.5 The vouchers/invoices will clearly indicate the contract number and the IS No., specific alternative to which the material conforms in case of various alternative in IS.

14. VALIDITY OF TENDER

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

- 14.1 The tender shall remain open for acceptance for a period of **60 (Sixty) Days** from the date on which the tender are due to be submitted. For the purpose of calculating this period, the day on which the tenders are due to be submitted shall be excluded.

15. CPM NET WORK DIAGRAM

- 15.1 The time and progress chart to be prepared as per Condition 11 of General Conditions of Contracts (IAFW-2249) shall consist of detailed network analysis and a time schedule.

The critical path network shall be drawn jointly by the Engineer in Charge and the contractor soon after acceptance of tender and using software's like MS PROJECT or PRIMAVERA or any other suitable software. The time scheduling of the activities shall be done by the contractor so as to finish the work within the stipulated time. On completion of the time schedule a firm calendar date schedule shall be prepared and submitted by the contractor to the GE who shall approve it after due scrutiny. The schedule shall be submitted in four copies within two weeks from the date of handing over the site. In case the contractor fails to submit the CPM network diagram, the network prepared by the Engineer in Charge shall be binding on him.

- 15.2 During the currency of the work, the contractor is expected to adhere to the time schedule and this adherence shall be a part of his/their performance under the contract. During the execution of the work, the contractor is expected to participate in the reviews and updating of the network undertaken by the Engineer in Charge. These reviews may be undertaken at the discretion of the Engineer in Charge, either as a periodic appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation orders or otherwise. Any revision of the time schedule as a result of the review, shall be submitted within a week by the contractor to the Engineer in Charge. for his approval after due scrutiny.
- 15.3 The contractor shall adhere to the revised time schedule thereafter. In case of contractor disagreeing with revised schedule, the same shall be referred to the Accepting Officer whose decision shall be final, conclusive and binding. Engineer in Charge's 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. Extension of time shall be considered and decided by the appropriate authority mentioned in Condition 11 of IAFW-2249 and separately regulated.
- 15.4 Contractor is expected to mobilize and employ sufficient resources to achieve the detailed schedule within the broad frame work of the accepted methods of working and safety.
- 15.5 No additional payment will be made to 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 department.
16. **RELEASE OF ADDITIONAL SECURITY DEPOSIT.**
- 16.1 Refer Conditions 22 and 68 of IAFW-2249. In case the contractor, has to deposit additional security for the contract, it is advised to deposit the additional security in two equal parts so as to facilitate its release in accordance with condition 68 of IAFW-2249.

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)**17. SITE FOR EXECUTION WORK**

17.1 Site for execution of work shall be available as soon as the work is commenced on the date as mentioned in the work order No 1. However, in case due to unavoidable circumstances it is not possible to make the entire sites available on the date of the commencement, the contractor shall have to arrange his programme accordingly. No claim whatsoever for not getting the entire site on the date of commencement of work & for giving the site gradually shall be tenable.

18. BLANK**19. SAFETY PRECAUTION**

19.1 The contractor shall take every safety precaution at the time of execution of the work and to control traffic of road keeping danger boards, necessary lighting arrangements, fencing and watchman to avoid any damage.

In case due to excavation or others the road is to be blocked the contractor shall, without any extra cost to the Govt. provide separate bypass so that normal traffic is not disturb.

19.2 Any damages to the existing road/building etc., shall be made good by the contractor with the same specifications as per existing work, without any extra cost to the Govt. In the e Engineer in Charge, the Engineer in Charge may provide the same for which the expenses incurred shall be recovered from the Contractor.

20. RECORD OF CONSUMPTION OF CEMENT

20.1 The contractor shall maintain a pucca bound register with serially numbered pages with all pages initialled by Engineer in Charge against numbering showing quantities of cement records and used in the work daily and balance at the end of each day. The form of record shall be as approved by Engineer in Charge. The register shall be signed daily by therepresentative of MES and the contractor in token of verification of its correctness and shall be checked by Engineer in Charge, at least once a week and on the days cement is issued to the contractor.

20.2 The register shall be kept at site safe custody of the contractor representative during the progress of the work and shall on demand, be produced for verification to the inspectingofficers.

20.3 On completion of the work the contractor shall deposit the cement register with the Engineer inCharge for record.

21. REIMBURSEMENT /REFUND ON VARIATION IN TAXES DIRECTLY RELATED TO CONTRACT VALUE.

21.1.1 The rates quoted by the contractor shall be deemed to be inclusive of all taxes (including Sales tax/VAT on materials, Sales Tax/VAT on Works Contracts, turnover tax, Service tax, Labour welfare Cess/tax etc.), duties, Royalties, Octroi & other levies payable under the respective statutes. No reimbursement/ refund for variation in rates of taxes, duties Royalties, Octroi & other levies, and/or imposition/abolition of any new/existing taxes, Royalties, Octroi & other shall be made except as provided in sub para 23.1.2 here-in-below.

21.1.2 The taxes which are levied by Government at certain percentage rates of contract Sum/Amount shall be termed as "taxes directly related to Contract value" such as sales tax/VAT on Works Contracts, turnover tax, Service tax, Labour welfare cess/tax and like but excluding Income tax. The tendered rates shall be deemed to be inclusive of all "taxes directly related to Contract value" with existing percentage rates as prevailing on last due date for

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

receipt of tenders. Any increase in percentage rate of “taxes directly related to Contract value “with reference to prevailing rates on last due date for receipt of tenders shall be reimbursed to the Contractor and any decrease in percentage rates of “taxes directly related to contract value” with reference to prevailing rates on last due date for receipt of tenders shall be refunded by the Contractor to the Govt./deducted by the Government from any payments due to the Contractor. Similarly imposition of any new “taxes directly related to Contract value’ after the last due date for receipt of tenders shall be reimbursed to the Contractor and abolition of any “taxes directly related to Contract value” prevailing on last due date for receipt of tenders shall be refunded by the Contractor to the Govt./deducted by the Government from the payments due to the Contractor.

21.1.3 The contractors shall within a reasonable time of his becoming aware of variation aware in percentage rates/and or imposition of any further “taxes directly related to Contract value” give written notice thereof to the Engineer in Charge stating that the same is given pursuant to this Special Condition, together with all information relating thereto which he may be in a position to supply. The Contractors shall also submit the other documentary proof/information as the Engineer in Charge may require.

21.1.4 The Contractor shall, for the purpose of this condition keep such books of account and other documents as are necessary and shall allow inspection of the same by a duly authorized representative of Government, and shall further, at the request of the Engineer in Charge furnish, verified in such a manner as the Engineer in Charge may require, any documents so kept and such other information as the Engineer in Charge may require.

21.1.5 Reimbursement for increase in percentage rates/imposition of “taxes directly related to Contract value “shall be made only if Contractors necessarily and properly pays additional “taxes directly related to Contract value “to the Government without getting the same adjusted against any other tax liability or without getting the same refunded from the concerned Government Authority and submits documentary proof for the same as the Engineer in Charge may require”.

22. RETENTION MONEY/COMPENSATION FOR DELAY

22.1 Refer Condition 64 of IAFW-2249 (Advances on account) and Condition 50 of IAFW-2249(Compensation for Delay).

22.2 For the purpose of calculating retention money and liquidated damages under condition 64 of IAFW-2249 and compensation for delay in completion of work under condition 50 of IAFW-2249, the value of contract as revised by above mentioned price variation under modified Condition 63 of IAFW -2249 shall be taken into account.

23. OFFICIAL SECRET ACT

23.1 Refer Condition 24 of General Condition of Contract IAFW-2249. The contractors attention is invited to Indian Official Secret Act 1923 (xxx of 1923) particularly Sec 5 thereof. The contractors shall be bound by the provision of this Act.

24. DAMAGE TO EXISTING STRUCTURE/BUILDING

24.1 Any damage caused to the existing structure during the execution of work shall be made good by the contractor at his own cost and the site of work left

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

clean and tidy on completion. Rectifications/ making good etc. shall conform to the standard of materials originally used in the work and finished work shall match with existing work in all respects to the entire satisfaction of the Engineer in Charge. In case of any dispute on this account the matter shall be referred to the Accepting Officer whose decision in writing shall be final, conclusive and binding.

25. ROCK MET IN EXCAVATIONS

- 25.1 If during excavation, rock is met with GE shall be informed of this in writing by the contractor. The nature/type of rock met with shall be decided by the Engineer in Charge, whose decision is final and binding. If the nature of rock met with is 'Hard Rock' the same shall be priced and paid as excavation in hard rock at the rates as applicable to this contract. Hard rock obtained from excavation shall be properly stacked, measured and recorded in measurement book and will be the property of the Contractor. Credit at the rate of Rs. 950.00 per cubic metre of hard rock obtained shall be recovered from the Contractor. The measurement shall be signed by Engineer in Charge and contractor. Hard rock obtained thus can be reused in the execution under this contract subject to fulfilment of requisite specification specified here-in- after and after written approval of Engineer in Charge.

26. ADVANCE ON ACCOUNT OF MATERIALS WHICH DOES NOT LOOSE IDENTITY

- 26.1 Refer Condition 64 of the General Condition of Contract (IAFW- 2249) Advance on Account for following materials will be paid:-

1	TMT Bars and Structural Steel	10	Sanitary Fittings
2	Floor/Wall Tiles,	11	Galvanised Iron Pipes
3	Salt Glazed Stoneware Pipes	12	Water Supply Fittings/Fixtures
4	Cast Iron/Ductile Iron Pipes	13	Street Light Luminaries
5	Electrical Fittings/ Fixtures & Equipment	14	Galvalume Sheet
6	Steel Tubular Poles	15	Voltage Stabiliser
7	Factory Made Door Shutters,	16	Air Conditioner
8	Steel Windows/Ventilators	17	MCB DB /MCB
9	Aluminium Items	18	XLPE/PVC Cable

27 FEMALE LABOUR

If the contractor desires to employ female labour on works to be carried out inside the area of a Factory, Depot, Park etc and a female searcher is not borne on the authorised strength of the Factory, Depot, Park etc, at the time of submission of the tender, he shall be deemed to have allowed in his tender for pay and allowances etc. for a Female Searcher (Class (IV) servant/GP 'D' servant) calculated for the period, female labour is employed by him inside that area. If more than one contractor has/have to employ female searcher in addition to the authorised strength of the Factory, depot, park etc the salary and allowances paid to additional female searcher(s) shall be distributed on an equitable basis between the contractors employing female labour taking into consideration the value and period of completion of their contracts. The GE's decision in regard to the amount recoverable on this account from any contractor shall be final and binding.

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)**28. GUARANTEE FOR ANTITERMITE TREATMENT**

28.1 Should the GE at any time during construction or reconstruction or prior to the expiration of period of **10 (Ten) years** after the certified date of completion of work as per contract finds that buildings have been infested with termites, the contractor shall on demand in writing from the GE , specifying the building(s) complained or not with standing the same may have been in advertantly passed, certified and paid for forthwith under take to carry out such treatment as may be necessary to render (the said building) free from termite infestation at his own expense for period of ten years from the certified date of completion and in the event of failing to do so with in a period to be specified by the GE in his demand aforesaid, the GE shall under take such treatment at the risk and expenses in respect of the contractor. The liability of the contractor under this condition shall not extend beyond the period of ten years from the certified date of completion unless the GE has previously given notice to the contractor. Conditions of contract (IAFW 2249) shall be deemed to be amended to the extent as mentioned above.

28.2 An amount of security deposit equal to the individual security deposit calculated, based on the amount of antitermite treatment at contract rates for the buildings for which treatment to be carried out shall be retained out of the final bill amount towards security deposit for antitermite treatment and will be refunded to the contractor after expiry of the period of ten years from the certified date of completion by the PM provided there are no termite infestation in the buildings. Conditions 10, 46 and 68 of General Conditions of Contracts (IAFW 2249) shall be deemed be to amended to the extent mentioned above.

29. GUARANTEE FOR WATER PROOFING TREATMENT

29.1 The period of guarantee for the water proofing treatment shall be ten years from the certified Date of completion. The Contractor shall be responsible for effectiveness of the water proofing treatment during this period and any leakage noticed therein during this period shall be made good by him at his own cost.

The Contractor shall furnish guarantee in favour of the Garrison Engineer for the efficacy of the water proofing treatment during the guarantee period.

29.2 An amount of security deposit equal to the individual security deposit calculated based on the amount of water proofing treatment at Schedule 'A' rates for treatment carried out shall be retained from the contractor's final bill as security deposit for the water proofing treatment which shall be released to the contractor only after expiry of guarantee period. The contractor may alternatively furnish a fixed deposit receipt in favour of GE in lieu of sum to be retained as security deposit for water proofing treatment from any approved Schedule Bank.

29.3 Condition 46 of the General Conditions of Contracts (IAFW 2249) shall be deemed to be amended to the extent mentioned above.

30. ARBITRATION CONCILIATION ACT

30.1 The scope of conciliation shall be restricted to the following types of disputes with financial limits as indicated therein:-

(a) Disputes relating to levy of compensation for delay in completion actual amount of compensation.

(b) Disputes relating to technical examination of works.

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

(c) Disputes relating to interpretation of the provisions of the contract with reference to their application to parties.

(d) Disputes relating to non return of Schedule 'B' stores over issued to the contractor.

(e) Any other disputes having fair chances of being resolved by conciliation and considered fit to be referred to conciliation by the parties.

For item (b), (c), (d) and (e) each as stated above the financial limit shall be Rupees two lakhs or one percent of the contract amount whichever is less.

30.2. COMMENCEMENT OF CONCILIATION PROCEEDINGS

30.2.1. The party initiating conciliation shall send to the other party a written invitation to conciliate briefly identifying their subject of the dispute.

30.2.2. Conciliation proceedings shall commence when the other party accepts in writing the invitation of conciliate.

30.2.3. If the other party rejects the invitation, there will be no conciliation proceedings. If the party initiating conciliation does not receive a reply within 30 days from the date on which he sends or within such other periods of time as specified in the invitation he may elect to treat this as a rejection of the invitation to conciliate and if he so elects, he shall inform in writing the other party accordingly.

31. **NUMBER OF CONCILIATORS.** There shall be a Sole Conciliator.

31.1. **APPOINTMENT OF CONCILIATOR.** All disputes brought out in Para 27.1 (a) to (e) above shall be referred to the Sole Conciliator viz serving officer not below the rank of Superintending Engineer/Superintending Engineer (QS&C) having degree in Engineering or equivalent or having passed final/direct final examination of Sub Division II of Institution of Surveyors (India) to be appointed by the Chief Engineer Air Force Shillong or in his absence the officer officiating as Chief Engineer Air Force Shillong or in his absence the officer officiating as Chief Engineer Air Force Shillong specifically delegated by the Chief Engineer Air Force Shillong.

31.2. **STATUS OF EFFECT OF SETTLEMENT AGREEMENT.** The settlement agreement signed by the parties as a result of conciliation proceedings shall have the same status and effect as it is an arbitral award on agreed terms.

32. QUALIFIED TRADESMEN:

32.1 The compliance with the Condition 26 of IAFW-2249 (General Conditions of Contract), the contractor shall employ skilled/semi-skilled tradesmen who are qualified and possessing certificate in particular trade from Industrial Training Institute (ITI)/National Institute of Construction Management and Research (NICMAR)/ National Academy of construction (NAC) Hyderabad Similar reputed and recognised Institute by State/Central Government to execute the works of their respective trade.

32.2 The number of such qualified tradesmen shall not be less than 25% of total skilled/semi-skilled tradesmen required in each trade. The contractor shall submit the list of such tradesmen along with requisite certificates to Engineer in Charge for verification and approval. Notwithstanding the approval such tradesmen by, if the tradesmen are found to have inadequate skill to execute the work of their trades, leading to unsatisfactory workmanship, the contractor shall revoke such tradesmen within a week after written notice to this effect by **the Engineer in Charge** and shall engaged other qualified tradesmen after prior approval of Accepting Officer's decision whether a particular tradesmen possesses requisite qualification, skill and expertise commensurate with nature of work, shall be final and binding. No. compensation whatsoever on this account shall be admissible.

33. CLEANING DOWN

SPECIAL CONDITIONS AND REQUIREMENTS(Contd..)

- 33.1 Refer Condition 49 of IAFW-2249 (General Conditions of Contracts).
- 33.2 The contractor shall clean all floor, walls, remove cement/lime/paint marks/drops, etc. clean the joinery glass panes etc., touch up all painters work and carryout all other necessary items of work in connection herewith and leave the whole premises clean and tidy before handing over the building(s).

34. FEES CHARGABLE BY POLICE AUTHORITIES FOR VERIFICATION OF CHARACTER AND ANTECEDENTS

- 34.1 Verification of Character and antecedents of Proprietor/Partners/Directors of the firm in connection with issue of tender and of Enlistment will be done by Govt. and accordingly payment to police authorities if any towards verification of character and antecedents shall be borne by the Contractor.
- 34.2 Verification of antecedents of Contractor's representatives/labour deployed at site in connection with execution of work under the contract, as per security requirement of User Unit/Installation shall be the responsibility of the contractor and all expenses in connection with verification of antecedents by Police Authority/Security Agency shall be borne by the contractor.

SIGNATURE OF CONTRACTOR
Dated :

AGE (CONTRACTS)
FOR ACCEPTING OFFICER

PARTICULAR SPECIFICATION**1. GENERAL REQUIREMENTS**

1.1 These particular specifications shall be read in conjunction with MES Schedule 2009 (Part I) Specification and 2020 Part II for Rates.

1.2 General Specifications referred to in IAFW-2249(1989 Print) and in other documents mean specifications including other provision given in MES Schedule 2009 Part-I and 2020 Part II including errata, amendments as applicable thereto.

1.3 Reference to some paragraphs of MES Schedule has been made in these particular specifications but other paragraphs and provisions as applicable are also to be followed e.g, reference to paras pertaining to general workmanship for brickwork, joinery, iron and steel work etc. have not been made but provisions therein as required for work are applicable.

1.4 Where specifications for any item of work are not given in MES Schedule or in these particular specifications, specifications given in relevant Indian Standard or Code of practice shall be followed.

1.5 Where specifications provisions given in these particular specifications are at variance with the provisions / specifications given in MES Schedule, specifications / provisions given in these particular specifications shall be followed.

2 STANDARD OF QUALITY & WORKSMANSHIP**2.1 GENERAL**

The Work shall strictly comply with the provisions contained in the Latest Edition of INDIA STANDARD CODE OF PRACTICE and/or IS SPECIFICATION as applicable, Works except where such Regulations and Rules are modified by these Particular Specifications.

All Works shall be carried out by properly Skilled Tradesman. The Contractor on demand, shall produce such evidence of Qualifications of his Workmen/Skilled Tradesman/ Supervisors/ Engineers, either at the commencement of Work or at any time thereafter/during currency of the Contract. The entire Work shall be High Class with the best Workmanship and to the entire satisfaction of GE.

3 MATERIALS AND THEIR TESTS.

3.1 As far as practicable all manufactured materials/articles other than those manufactured in contractor's workshop at site shall bear IS certification marks. In case, any article not bearing ISI certification marks but conforming to relevant specification is proposed to be incorporated in the work, samples of the same shall be got approved in writing from GE before their incorporation in work. The contractor shall submit sufficient evidence to the GE to show that such articles conform to the relevant specifications and no plus adjustment shall be made on the account.

3.2 Manufactured material/articles shall be brought at site in original sealed containers/packing bearing manufactures marking unless the quantity required is a fraction of smallest packing.

3.3 Materials such as bricks, aggregate etc., shall generally conform to the samples kept in GE's office in addition to their conformity with relevant specifications given in the tender documents. The sources for all such materials shall be got approved from GE in writing before these materials are brought at site in bulk.

3.4 The rates quoted are deemed to include for all tests as specified and as required in IS. The tenderer shall not be allowed any claim on this account. All tests are mandatory and shall be carried out as per standard method of testing. The charges for the tests carried out shall be borne by the contractor.

3.5 All the proprietary items like paints, creosote oil, water proofing compound, chemicals for anti- termite etc. shall be entered in MB duly signed by Engineer in Charge and Contractor and marked as NOT TO BE ABSTRACTED as and when brought by contractor at site.

PARTICULAR SPECIFICATION(Contd...)**4 APPROVED MAKES/BRAND OF MATERIALS**

4.1 Materials/Accessories/Equipments for which MAKE have not been specified in these Particular Specifications, shall be of Standard Makes and shall strictly comply with Current Appropriate IS Specifications, for which IS Specification has not been issued/available, they shall comply with the Current BS Specifications or as approved by GE.

4.2 A list of certain items for which specific manufacturers/ make only are to be provided in this contract are as listed here in after.

5. APPROVED SOURCES OF LOCAL ORIGIN MATERIALS

Materials such as Bricks, Aggregates, Sand etc., shall generally conform to the Samples kept in GE's Office in addition to their conformity with relevant Specifications given in the Tender documents. The Sources and Sample for all such Materials shall be got approved from GE in writing before these Materials are brought at Site in bulk.

The sources of some of the Materials as applicable to the place of execution of the work are indicated here in below are for the guidance of the Tenderer.

- (i) Coarse Aggregates : Bhaluk pong/ Shijusa/ Bagori
- (ii) Fine & Coarse Sand : Mara Bharali
- (iii) Bricks : Locally Available Best Quality

Notes:-

- (a) The above sources are given for guidance only. This does not absolve the contractor from his responsibility of incorporating various materials in the work as per specifications mention in contract. Contractor has to ascertain the availability of material at the source given above. In case of non-availability/scarcity of material mentioned at the source above the contractor has to arrange the materials from other sources without any extra cost to the Government. No claim whatsoever shall be entertained by the department on this account at later stage.
- (b) In case coarse aggregate and fine aggregate do not conform to contract specifications, the same shall be modified by addition or subtraction of appropriate materials by the contractor without any extra cost so that aggregate conform to contract specifications.

Contractor at his own may procure materials from any other sources superior to the quality of the sources (local) approved without any extra cost to the Department provided that the same conform to respective IS as stated here-in-before with the prior approval of GE.

6. APPROVAL OF SAMPLES/MATERIALS

6.1 Approval of Samples/Materials by GE shall be recorded in a Register labelled as 'SAMPLE APPROVAL REGISTER' to be maintained by the GE which interalia shall mention Sources of Supply, Name of Manufacturer, Trade Name/Brand (if applicable) and reference to Clauses of Tender Documents containing Specifications of Particular Materials.

6.2 Letters conveying Approval of Samples/Materials by GE shall interalia mention sources of Supply, Name of Manufacturer, Trade Name/Brand (if applicable) and reference to Clause of Tender documents containing Specifications of Particular Materials.

7. SCOPE OF WORK

7.1 This contract includes for the full, final and entire completion of works described in Schedule 'A'/BOQ included in General Summary, and specified in these particular specification and /or shown in drawings and other documents forming part of the tender documents.

7.2 The rates quoted are deemed to include for all tests as specified and as required in IS. The tenderer shall not be allowed any claim on this account. All tests are mandatory and shall be carried out in nearest Engineering College/Institute, Regional Research Laboratory, Regional Testing Institute and any other Govt. approved laboratory as approved by GE unless otherwise specified specifically in the Particular Specification.

7.3 Rates quoted by the tenderer against each item shall be deemed to include for any details/items of work and/or construction which are obviously and fairly intended and

PARTICULAR SPECIFICATION(Contd...)

which may not have been included in these documents but which are essential for the execution and entire completion of the item.

7.4 Decision of the Accepting Officer as to whether any minor detail of work and/or construction is obviously and fairly intended to be included in the contract shall be final, conclusive and binding.

8. SITE OF WORK

8.1 The Works shall be carried out at Airforce Station Tezpur. The Contractor shall finalize the programme with the Engineer in Charge well in advance in such a way that the work is not delayed due to any kind of hindrances which may arise due to lack of coordination.

8.2 The Contractor shall make himself aware about the Nature of the Work involved for carrying out Works against the Items catered in SCHEDULE 'A'/BOQ . The Contractor is deemed to have inspected the Site of Work and nothing extra shall be admissible to Contractor on this ground.

8.3 The proposed Location of Various Works shall be as directed by the Engineer in Charge at Site(s) of Works.

9. VISIT OF SITE

9.1 Tenderers are advised to visit the SITE(S) and ascertain for themselves the exact scope of Work and its Working Conditions, viz. Remoteness of area, Working Hours, Availability of Site(s), etc. and quote their Tenders accordingly. Any Claim whatsoever, on such/these accounts will not be entertained by the Government at a later Date/Stage.

9.2 The Tenderers are advised to Contact GE on any Working Day during Working Hours, who will arrange for their Visit to Site of Work.

9.3 The Tenderer shall be deemed to have visited the Site of Work before Quoting their UNIT RATES/PERCENTAGE/ AMOUNT and no Claim for any EXTRA PAYMENT on account of any misunderstanding, etc. will be entertained by the Department, irrespective of the fact whether they have actually visited the Site or not.

10. DIMENSION

10.1 In laying out building and other structure, the dimensions mentioned in drawing or deduced there from shall be strictly followed.

10.2 Any drawing which is mentioned in the drawings forming part of the tender but not specifically mentioned in the list of drawings shall deemed to be forming part of the tender. The tenderer shall see such drawings/details in the office of the Accepting Officer.

10.3 In all above and similar cases, the details indicated elsewhere in the drawings which are similar or near similar to the missed out items of work shall be followed. In the absence of any other similar or near similar details, minimum essential requirement for completion of the work from structural and utility point of view and in sound engineering practice shall deemed to be included in the quoted rates. In the event of any dispute, decision of the Accepting Officer shall be final and binding.

11. SITE CLEARANCE AND SURFACE DRESSING

11.1 Site clearance and surface dressing for the areas covered by the building & up to 3.00 meters around the building (from external walls) shall be carried out as per Para 3.6 and 3.10 of MES Schedule Part-I (2009). All rubbish obtained from site clearance and all spoil obtained from surface dressing shall be removed, spread and levelled as directed by Engineer in Charge to a distance not exceeding 50 meters.

11.2 If the buildings are sited in areas after site development, no further surface excavation need to be carried out unless specifically ordered by GE in writing.

12.0 DISMANTLING / DEMOLITION / TAKING DOWN

12.1 The work of dismantling/ demolition/ taking down shall be done carefully and in a workman like manner. Any damage done by the contractor or his workmen to the electric fittings and appliances fitted in the buildings etc while working shall be made good by him at his own expenses. In case it becomes inevitable, the contractor shall dismantle the fittings/ fixtures carefully and refix after carrying out repair. Nothing extra

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shall be paid to him on this account.

12.2 All the materials retrieved from demolition/ dismantling/ taking down shall become the Government property except those listed in Credit Schedule. The rates inserted by the MES or quoted by the contractor (whichever is more) shall be deemed to include removal or disposal of all waste materials from site of work and site shall be left clean and tidy to the entire satisfaction of Engineer-in-Charge.

13.0 WINDOW AND SPLIT TYPE AIR CONDITIONER**13.1 WINDOW TYPE AIR CONDITIONER**

The unitary type air conditioner shall conform to IS 1391 Part (I&II) 1992, suitable for operation on 230 volts +10% single phase AC supply. The unit shall be capable of cooling, dehumidifying, air circulation, ventilation and filtering in the sizes of nominal cooling capacities provided with environment friendly refrigerant. The cabinet shall be made out of GI sheet powder coated anticorrosive pretreatment comprising of degreasing, phosphating and passivation. The unit shall be fitted with energy efficient rotary or reciprocating compressor. The air conditioners shall be provided with Bureau of Energy Efficiency (BE Star rating) ratings

13.2 SPLIT TYPE AIRCONDITIONER

The machinery shall have similar specifications as above for condenser and compressor outdoor unit. The indoor unit i.e. Fan coil unit shall be fitted with bacteriological filters, remote operation sensors and suitable drainage arrangement for dehumidified water in fan coil unit.

The connection piping between outdoor and indoor unit shall conform to relevant IS. The wiring between indoor and outdoor unit shall be with copper stranded conductor of adequate size.

14. CEMENT (TO BE SUPPLIED BY CONTRACTOR)

14.1 CEMENT:- Refer para 4.3 and 4.3.1 of MES Schedule Part – I. Full quantity of cement required for this work shall be supplied by contractor under his own arrangements.

14.1.1 TYPE OF CEMENT: Quality of cement shall be ordinary Portland Cement Grade 43 and Higher, conforming to IS 8112-1989 (Latest revision) or Portland Pozzollana cement conforming to IS 1489 (Part-I) - 1991.

14.1.2 The following checks and procedures shall be followed before the cement supplied by the contractor is accepted and is approved for incorporation in the work.

14.2 PROCUREMENT: Cement supplied by the contractor shall be procured from main producers of Cement.

14.2.1 The following are the main producers of OPC/ PPC

(i) M/s The Associated Cement Companies Ltd 414-421 Splendor Forum (4 th Floor) 3 District Center Jasola, New Delhi-110044 Brand: "ACC"	(ii) M/s Ultra Tech Cement Ltd., Andheri(East), Mumbai-400093 Brand:"ULTRATECH"
(iii) The India Cement Dhun Building, 827,Anna Salai, Chennai-600002	(iv) M/s Dalmia Cement (Bharat) Ltd. Dalmiapuram, Dist- Truchirappali, Tamil

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	Nadu, PIN-621651 Brand:"DALMIA INFRA PRO"
(v) Century Cements, Industry House, 159 Churce Gate, Reclamation, Mumbai- 400020 Brand:"CENTURY"	(vi) M/s Saurashtra Cement, Andheri(East), Mumbai- 400093 Brand:"SAURASHTRA"
(vii) The Ramco Cements Ltd Auras Corporate Centre,98-A, Dr.Radhakrishnan Salai, Mylapore, Chennai-600004 Brand: "RAMCO"	(viii) Mangalam Cement Ltd PO- Adityanagar, Morak, Dist- Kota, Rajasthan- 326520 Brand:"MANGALAM"
(ix) Birla Corporation Ltd. Birla Building (3 rd & 4 th Floor) 9/1 RN Mukharjee Road, Kolkata Brand:"BIRLA"	(x) Orient Cement 5-9-22/57/D,2 nd &3 rd Floor, GP Birla Centre, Adarsh Nagar, Hyderabad-500063 Brand:"BIRLA-A1"
(xi)Nuvoco Vistas Corporation Ltd Equinox Business Park, Tower-3, East Wing, 4 th Floor, LBS Marg, Kurla(West), Kurla Mumbai, Maharashtra- 400070 Brand:"NUVOCO"	(xii) Shree Cement Ltd Bangur Nagar,Bewar, Dist- Ajmer, Rajasthan-305901 Brand:"SHREE"
(xiii) J K Cement Kamla Tower, Kanpur- 208001 Brand:"J K"	(xiv) J K Lakshmi Cement Ltd Jaykapuram, Dist- Sirohi, Rajasthan-307019 Brand:"J K LAKSHMI"
(xv) Jaypee Rewa Cement Jaypee Nagar, Rewa- 486450 Brand:"JAYPEE"	(xvi) Ambuja Cement Ltd. Kodinar, PO- Ambujanagar, Taluka-Kodinar, Dist- Junagadh, Gujarat-362715 Brand: "AMBUJA"
(xvii)M/s Sagar Cements Ltd, Hyderabad Plot No 111, Road No 10, Jubilee Hills, Hyderabad- 500033 Brand:"SAGAR"	(xviii) M/s Chettinad Cement Coprporation Pvt Ltd 4 th Floor, Rani Seethai Hall Building 603, Anna Salai Hall, Chennai-600006 Brand:"SAGAR"
(xix)M/s My Home	(xx) Star Cement Meghalaya

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Industries Pvt Ltd 9 th Floor, Block-3, My Home Hub, madhapur, Hyderabad-500081 Brand:"MAHA CEMENT"	Lomshnong, PO Khaliehriat, Dist Jaintia Hills, Meghalaya
(xxi) M/s Meghalaya Cements Ltd Lohia House, MG Road, Guwahati-781001 Brand:" TOP CEM"	(xxii) M/s Hill Cement Company Ltd. SHIVAM COMPLEX, Bharalumukh, A.T. Road Guwahati, Assam-781009 Brand:"TAJ"
(xxiii) M/s Green Valliey Industries Ltd 4 th Floor, LB Plaza, G S Road, Bhangagarh, Guwahati-781005 Brand:"MAX Cement"	

14.2.2 The particulars of the manufacturer /main producer of cement along with the date of manufacture shall be submitted by the contractor for every lot of cement separately. The documents in support of purchase of cement will be verified by the site staff and Engineer in Charge.

14.2.3 The following conditions shall have to be satisfied before PPC will be allowed to be used in the work:-

- a) PPC should meet the strength criteria of 43 Grade OPC as laid down in IS:8112 – 1989.
- b) The minimum period before striking off formwork while using PPC shall be as given in these particular specifications here –in- after.
- c) In cold climate regions where temperature is lower than 15° C and important structures like overhead reservoirs, underground sumps, prestigious buildings and buildings with spans 10 metres or more, only OPC shall be used.
- d) Mixing of OPC and PPC shall not be allowed in a work.
- e) While procuring PPC and PPC shall, following requirements are to be ensured and certificate to the effect is to be obtained by the contractor for each batch from the manufacturer and the same shall be submitted to the GE for approval to procure PPC :-
 - i) The quantity of fly ash is strictly as per IS -1489 (Part-I) – 2002.
 - ii) Fly ash is inter ground with clinker not mixed with clinker.
 - iii) Dry fly ash is transported in closed containers and stored in silos. Only pneumatic pumping should be used.
 - iv) The fly ash received from thermal power plants using high temperature combustion above 1000 degree C should be used.
 - v) The fly ash content in PPC shall not exceed 25% to ensure consistency.

14.2.4 The particulars of the manufacturer /main producer of cement along with the date of manufacture shall be submitted by the contractor for every lot of cement separately. The documents in support of purchase of cement will be verified by the site staff and GE.

14.3.0 STORAGE OF CEMENT:

14.3.1 There will be two separate godowns provided by contractor at site of works

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exclusively for storage of cement:-

- (a) "First Godown" shall have the cement lot(s) for which independent testing is to got done and/or under process.
- (b) "Second Godown" shall have the cement lot(s) whose independent testing had been got done and after successful testing stands approved by GE for incorporation in the work.

14.3.2 Cement shall be stored over dry platform with gap of 20 cm room walls all-round and at least 20 cm high from floor level. The stacking of cement shall not be more than 10 Bags high. Compliance of provisions in clause 4.3.1, 4.3.2, and 4.3.3 of MES Schedule Part I shall be ensured. Godowns shall have easy access for proper inspection and cement shall be protected from dampness / moisture to minimize storage deterioration or intrusion of foreign matter. Cement older than Six months shall not be used in RCC works.

14.3.3 Both the Godowns shall be provided with two locks on each door. The key of one lock at each door shall remain with the Engineer in Charge or representative and that of the other lock with the contractors authorized agent at the site of works so that cement is removed form the godown only according to the requirements for independent testing purposes or for daily consumption purposes with the knowledge of both the parties.

14.4.0 TESTING OF CEMENT:

14.4.1 Contractor shall submit particulars of manufacturer of cement along with the date of manufacture for every lot of cement separately. The manufacturer is to carry out inspections and testing of cement in accordance with the relevant BIS provisions. Contractor shall also submit manufacture's test certificates in original along with the test sheet or an authenticated copy thereof giving results of each physical test as applicable and the chemical composition of cement. The documents giving above particulars shall be verified by site staff and Engineer in Charge in support of the purchases of cement and these details shall be recorded in the cement Acceptance Register as per Performa given in Appendix 'A' to the tender documents here in after.

14.4.2 The Engineer in Charge shall organize independent testing of random samples of cement drawn from the various lots which shall be got tested by the contractor under his own arrangements and the cost of both materials and labour required for sampling, testing, packing, transportation of samples to the testing places and testing charges thereof, and for subsequent identification of cement sampled, shall be borne by the contractor and is deemed to be included in the rates quoted by the contractor. The independent testing shall be got done from any of the following where facilities exist for all the tests required, viz, National Test House, Calcutta, National Test House, SEMT Wing - CME, Pune, Regional Research Laboratories, Zonal Laboratories and Govt. approved laboratories.

14.4.3 The independent testing shall be got done as per: -

- (a) IS-5335 of 1986 :Method of sampling hydraulic cement.
- (b) IS-4031 :Methods of physical test for hydraulic cement.
- (c) IS-4032 of 1985 :Method of Chemical analysis of hydraulic cement.

14.4.4 The other relevant IS shall also be followed. However the tests shall be restricted to those indicated here in below: -

Serial No	Materials	Test	Method of Testing	Frequency of tests	Remarks

PARTICULAR SPECIFICATION(Contd...)

o					
1 (a)	Cement	Setting time	IS-4031- Part-5 1988 REAFFIRM ED – 2000	Once for each consignme nt or as and where required	
1(b)		Soundness	-do- Part-3	-do-	
1(c)		Compressive Strength	-do- Part-6	-do-	
1(d)		Fineness	IS-4031 Part-2 1999	-do-	

14.4.5 The above tests shall be independent tests. The samples shall be taken immediately within 3 Weeks of delivery at the site of works and all the tests got carried out by contractor within one week of sampling. In case it is not possible to test the samples within one week, the samples shall be packed and stores in airtight containers as decided by Engineer in Charge till such time that they are tested.

14.4.6 The entire lot(s) of cement shall stand rejected, if it does not comply with any of the requirement of IS specifications and the test results on samples are not within the acceptable limits. The rejected lot(s) shall be removed from the site of works by the contractor under their own arrangement and cost. The cost of tests shall be borne by the contractor irrespective of the results.

14.4.7 The contractor shall use only one type brand of cement for entire structural /reinforced concrete work. In the event of contractor desiring use of any different brand of cement, fresh design mix shall be carried out and submitted for approval without any extra cost to the Govt.

14.5. DOCUMENTATION:

14.5.1 The contractor shall submit original paid vouchers from the manufactures for the total quantity of cement supplied under each consignment brought to the site of work.

14.5.2 All consignments so received at the work site shall be inspected by Engineer in Charge along with the relevant documents for permitting storage in the 'first godown' defined here-in-before.

14.5.3 The original vouchers and the test certificates shall be kept In record in the office of Engineer in Charge duly authenticated and with cross reference to the Control Number recorded in the Cement Register as per format given in Appendix-A here-in after, maintained for "first godown" duly signed by JE(Civil), Engineer in Charge and the Contractor.

14.5.4 After independent testing has been got done by Engineer in Charge and satisfactory results obtained and kept on record the consignment so tested shall be removed from the 'first godown' and transferred to the 'second godown' as defined here-in before. Original vouchers and the test certificates submitted by the contractor along with the consignment and test certificates of independent testing shall be defaced by Engineer in Charge and kept on record duly authenticated and with cross reference to the control Number rendered in the cement register maintained for the "Godwon" This register shall be termed as "Cement Acceptance Register" which shall be signed by JE (Civil), Engineer in Charge and the Contractor. Besides this the quantity of cement shall be also suitably

PARTICULAR SPECIFICATION(Contd...)

recorded in the Measurement Book for record purposes before incorporation in the work and shall be signed by Engineer in Charge and the Contractor. The Accepting Officer may order a Board of Officers in which contractor shall also be a member for random check of cement and verification of connected documents.

14.5.5 Daily inspection shall be carried out by Engineer in Charge or his representative and contractor's authorized agent and separate register shall be maintained duly indicating on daily basis the inspection carried out and indicating holding in godown at beginning of the day, inward supplies in the day, removal in the day and balance at the close of the day duly signed by above persons. In the removal column particulars of lot removed and purpose for which removed shall be indicated.

14.5.6 The purchase voucher and test certificate of manufacturer shall be linked.

14.6.0 WEIGHING AND PAYMENT FOR CEMENT.

14.6.1 Random sample of 5 bags per 100 bags shall be got weighed by Engineer in Charge in presence of Representative of contractor from each consignment to arrive at average weight per bag for calculating total quantity of cement bought for incorporation in the work. All arrangement for weighing of cement bags including labour etc. shall be provided by the contractor at their own cost.

14.6.2 The quantity of cement arrived at as aforesaid shall be considered for payment as applicable in accordance with IAFW-2249, General Conditions of Contracts.

14.6.3 Only when the test results of independent testes carried out on the cement are found satisfactory and it is permitted to be stored in the 'Second Godown' and quantity entered in MB, then only this lot shall be considered for payment in RARs.

14.6.4 Payments shall be restricted as per provisions in clause No 64 "Advance on Account: of General Conditions of Contracts (IAFW-2249).

14.7.0 CEMENT CONCRETE

14.7.1 Cement - Refer Para 4.3, 4.3.1, 4.3.2 and 4.3.3 of MES Schedule Part I. Cement shall be supplied by contractor as specified here-in-before.

14.7.2 Coarse and fine aggregate for cement concrete (PCC and RCC): Refer Para 4.4.1 to 4.4.6 of MES Schedule Part-I. The coarse aggregate shall be crushed stone or boulder aggregate and fine aggregate shall be sand. However aggregate used for lime concrete shall be broken brick aggregate. Use of sand conforming to grading Zone IV of IS-383 shall not be allowed to use for RCC/PCC works.

14.7.3 Grading of coarse aggregate unless otherwise specified shall be as follows :-

(i) For reinforced /plain cement concrete of thickness 25 mm or under	: 12.5 mm graded
(ii) For all reinforced concrete over 25mm thickness	: 20 mm graded
(iii) For plain cement concrete over 25 mm and upto 50mm thickness	: 20 mm graded
(iv) For plain cement concrete over 50 mm thickness	: 40 mm graded
(v) Lean concrete	: 40 mm graded

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14.7.4 Grading of coarse aggregate for plain and reinforced concrete i.e. stone aggregate shall be as per Para 4.4.7(1) of MES Schedule Part-I.

14.7.5 Grading of fine aggregate (sand) shall be as per para 4.4.7(2) of MES Schedule Part-I for grading Zone II/Zone III

14.7.6 Water proofing compound - Refer Para 4.8 of MES Schedule Part I.

14.7.7 Water - Refer Para 4.9 and 4.9.2 of MES Schedule Part-I.

14.7.8 Mix and grade of cement concrete: Refer Para 4.11.1, 4.11.2 and 4.11.2.1 to 4.11.2.4 of MES Schedule Part I.

14.7.9 Workability of concrete: Refer to Para 4.11.4 of MES Schedule Part I and Para 7 of IS-456- 2000.

14.7.10 Mixing of concrete: Refer to para 4.11.5 and 4.11.5.1 of MES Schedule Part I.

14.7.11 Transportation of concrete: Refer to para 4.11.9 of MES Schedule Part I.

14.7.12 Placing of concrete: Refer para 4.11.10. to 4.11.10.3 of MES Schedule Part I.

14.7.13 Compaction of concrete: Refer Para 4.11.11 of MES Schedule Part I. Compaction of concrete in RCC slab, beam walls and columns shall be done with approved mechanical vibrator. In other locations hand compaction may be permitted by tapping or Roding as approved by the Engineer in Charge.

14.7.14 Curing of concrete: Refer to Para 4.11.13 of MES Schedule Part I.

14.7.15 Protection and Inspection of Concrete: Refer para 4.11.14 and 4.11.15 of MES Schedule Part I.

14.7.16 Concrete covers to reinforcement: Refer to para 4.11.8.1 to 4.11.8.4 of MES Schedule Part-I

14.8.0 DESIGN MIX OF CONCRETE

14.8.1 Refer 4.11.2.1 of MES Schedule Part I. Mix design shall be carried out as per provision of IS- 456: 2000 and guidelines given in IS-10262 and SP-23 with following conditions: -

Exposure condition for mix design: -

- (i) M-25: Moderate.
- (ii) M-30: Severe

14.8.2 Degree of quality control for mix design: Good

14.8.3 MIX PROPORTION AND STRENGTH

(i)	Type of cement	Ordinary Portland cement, Grade 43 or higher grade as per IS : 8112-1989
(ii)	Aggregate/cement ratio by weight	As per mix design based on IS-10262 & IS-456
(iii)	Workability	As per clause 7 of IS-456, 2000
(iv)	Water cement ratio	As per mix design based on IS-10262 & IS-456
(v)	Degree of quality control	Good (Refer IS-10262)
(vi)	Minimum cement content	As per table 5 of IS-456, 2000 and as specified here in after.
(vii)	Maximum size of aggregate	20 mm graded

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(viii)	Maximum water cement ratio	As per table 5 of IS-456, 2000
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14.8.4 In case of design mix concrete M-25 and M-30, the minimum cement content shall be 300 Kg/Cum (For other than pile work) and 320 Kg/Cum respectively. However in case of pile foundation works of design mix concrete M-25 the minimum cement content shall be 400 Kg/Cum as specified here in after. The maximum water cement ratio for concrete M-25 & M-30 shall be 0.50 & 0.45 respectively. (The minimum cement content is based on 20 mm grade aggregate. For 40 mm grade aggregate it should be reduced by 10 % and for 12.5 mm graded aggregate it should be increased by 10%) the contractor is required to design each grade of concrete as per IS-456-2000 and IS 10262 to work out the cement content of the above grade of design mix. Design mix shall be got designed from any Zonal Lab/Govt. Lab/Regional Engineering Colleges. However the concrete mix design shall be finally approved by Accepting Officer.

14.8.5 In case cement content as per design mix is higher than the minimum cement specified above, the work shall be executed with quantity of cement required as per design mix by way of using plasticiser as explained here in after.

14.8.6 The contractor shall provide M-25 (Design mix) concrete/M-30 (Design mix) concrete irrespective of the quantity of cement specified above and later as per the approved Design Mix which shall be adopted for the execution of the work. No plus DO (Deviation order) shall be admissible even if the required/approved quantity of cement is more than specified above, as the contractor shall be responsible /guarantor to provide M-25/ M-30 Design Mix concrete. This shall not be considered as misrepresentation of fact and no claim what so ever on this provision shall be admissible.

14.8.7 Batching: Refer para 4.11.3 of MES Schedule Part I. All Design Mix and Reinforced Cement Concrete work covered under the Sch'A'/BOQ shall be with Ready Mix Concrete (RMC) from approved manufacturers having fully automatic batching plants installed of capacity over 30 cum/hr or from fully automatic batching plant installed at site of capacity not less than 12 Cum per hour with tested and calibrated water meter, control panel and provision for computer generated batch report all as per IS-4925 (amended up to date). However, for smaller quantity i.e. for concreting to lintels, chajjas, shelves, etc. (Less than 5 Cum in a day) mechanical mixer may be used with prior approval of the Engineer in Charge and mixing of concrete shall be as per clause 10.3 of IS:456-2000.

14.8.8 Workability of concrete: Refer to para 4.11.4 of MES Schedule Part I and para 7 of IS-456- 2000. Mixing of concrete: refer to para 4.11.5 and 4.11.5.1 of MES Schedule Part I.

(a)	PCC, Lean Concrete under Wall, Base/Column Footing, Foundation for Ramps, Steps, Lean Concrete under Plinth Beam/Toe Beam/ Steps and the like	M-7.5 (Nominal Mix)
(b)	RCC Work in all Situation except Water Retaining Structures and where specifically mentioned as M-30 (Design Mix)	M-25 (Design Mix)

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(c)	RCC Work in Water Retaining Structures and where specifically mentioned as M 30 (Design Mix)	M-30 (Design Mix)
(d)	PCC in Bed Block, Benching, Cill, Coping, Plinth Protection, Pre-cast Articles and Plain Cement Concrete in any Situation not specified elsewhere	M-15 (Nominal mix)
(e)	PCC Filling in back of Pressed Steel Door Frame, Drain, Solid PCC Block and Plugging of Holes left due to Scaffolding, etc. and the like (unless otherwise specifically indicated in Drawing/here-in-after)	M-10 (Nominal Mix)
(f)	Lime Concrete	Lime Concrete with Lime Surki Mortar 1:2 (40 Parts mixed with 100 Parts) of well burnt (1st Class) broken Brick Aggregate 40mm nominal size

14.8.9 Plasticiser: Plasticiser shall be used in mix design concrete without any extra cost with the following conditions: -

- (a) For M-25 grade of concrete if it is not feasible to achieve the desired strength and workability with cement content up to 400 Kg per cum, suitable plasticiser shall be used as per manufacture to achieve the desired results. However there is no bar on use of plasticiser for concrete mix design with cement content less than 400 Kg per cum.
- (b) For M-30 grade of concrete plasticiser shall be used as per manufacturers instructions to achieve desired strength and workability.
- (c) Plasticiser should conform to IS-9103.

14.8.10 Sampling and testing of concrete of grade M-15 and M-20: Refer to Para 4.11.17.1 to 4.11.17.6 of MES Schedule Part I and as per IS-456. Testing of concrete shall be carried out by the contractor as directed by the Engineer in Charge without incurring any extra cost to the Govt. and the following test equipment shall be made available at site by the contractor.

- (a) A set of IS sieves for fine aggregate sieve analysis (Ref IS-2386)
- (b) A set of IS sieve for coarse aggregate sieve analysis (Ref IS-2386)
- (c) Two graduated jars of 500 ml capacity for silt test (Ref IS)
- (d) A set of six Nos. cube moulds of 50 mm size for testing strength of cement.
- (e) Vicat needle apparatus for testing initial and final setting time of cement.
- (f) A physical balance.
- (g) A set of 06 (Six) Standard IS 15 cm cube moulds for testing, compressive strength of concrete.
- (h) Slump test apparatus
- (i) Compressive strength testing machine (Hydraulic Operated)
- (j) Electric Oven
- (k) Flakiness index test apparatus

PARTICULAR SPECIFICATION(Contd...)**14.9.0 MIX & GRADE OF CEMENT CONCRETE**

14.9.1 Refer Para No. 4.11 of MES Schedule Part-I. The type and grade of concrete shall be as shown on drawings. In case of any discrepancy between structural and architectural drawings the provisions in structural drawings in respect of type and grade of concrete shall supersede. If the details are missing on drawings concrete shall be of following mix/grade at the situation mentioned below: -

14.10. WEIGH BATCHING (Other Than Design Mix Concrete):

Other than design mix concrete, the quantity of cement and aggregate shall be determined by weight. In no case volume batching of aggregates based on weight- volume conversion in the mix design shall be allowed. Water shall be either measured by volume in calibrated tanks or weight. Due care shall be given to adhere to maximum free water cement ratio indicated here in before. All measuring equipment shall be maintained in clean serviceable condition and their accuracy periodically checked. In this connection also refer para 4.11.3.1 to 4.11.3.5 of SSR Part-I.

- (a) Quantity of concrete mixed in any one batch shall not exceed the rated capacity of the mixer. The whole of the mixed batch shall be removed before adding new batch. Concrete mixed above shall not be modified by addition of water or otherwise in order to facilitate handling or for any other purpose.
- (b) On cessation of work and other stoppages exceeding 20 minutes, the mixer and other plant used for the wet mix shall be thoroughly washed with clean water. Pick up and throw over blades in the drums of the mixer, which are worn down 20mm or more in depths shall be replaced with new blades.

14.11. SAMPLING AND ACCEPTANCE CRITERIA FOR CONCRETE: The criteria for sampling and acceptance of the concrete shall be as per Para 15.1 to 16.1 of IS-456:2000, (Code of practice for plain and reinforced concrete). The minimum frequency for the work tests shall be as specified therein and as specified here in after.

14.12. PACKING AND TRANSPORTATION OF SAMPLES The Contractor must, at his own expenses, properly pack the samples. The Contractor shall bear the cost of transportation of the samples required to be tested from site of work to the laboratory as approved by Accepting Officer.

14.13. TESTS: The following tests shall be carried out during the execution of work. Tests shall be carried out in accordance with IS-516 and IS-1199. The contractor shall provide all facilities and equipment for casting and curing of test cubes.

- (a) **SLUMP TEST.** The frequency of the test shall be decided by the Engineer in Charge. The slump for the vibrated concrete shall be as specified in IS-456. The Engineer in Charge, however, reserves the right to vary the limit which will be ascertained at the time of deciding the mix design for each grade. Any batch from which a slump test is being made shall not be transferred to the places of laying until the slump in excess of the required for the particular batch is not removed from the site.
- (b) **COMPRESSIVE STRENGTH TEST.** Three cubes shall be tested at 7 days and three at 28 days for crushing and the remaining three cubes shall be kept as reserved exclusively for Govt use for subsequent testing (if so desired by Govt.) and preserved for one year from certified date of completion of work under the contract. The contractor cannot object testing of other cubes for the purpose as a matter of right.
- (c) For the purpose of subsequent identification of the work test cubes, the concrete to which these pertains shall be cross referred and record of this maintained and signed by the Engineer in Charge and contractor or his authorized representative.

14.14. TRANSPORTING, PLACING, COMPACTION AND CURING:

PARTICULAR SPECIFICATION(Contd...)

- (a) It should be as per clause 13 of IS 456:2000. Concrete shall be transported without delay and incorporated in works at the position of laying within 20 minutes from the time of discharge from the mixer.
- (b) Mixed concrete shall be deposited in final position and solidly packed around reinforcement, carefully poured and consolidated by means of portable vibrators or mechanically operated and of the kind as suitable for a particular situation as directed by the Engineer in Charge. Care shall be exercised that no voids or honey comb pockets are formed. The concrete shall not be laid in position for more than 1 metre in height in one concrete operation. The compaction of concrete in RCC roof and floor slabs shall be done with plate vibrators.
- (c) Exposed surfaces of concrete shall be kept continuously in a damp or wet Condition by pounding or by covering with a layer of sack, canvas, Lenin and kept constantly wet for at least 14 days. The concrete shall be protected from premature drying for at least 8 days after pouring and shall be cured as directed by the Engineer in Charge for a period of not less than 14 days.

14.15. SITE LABORATORY. The contractor shall establish a laboratory at site of work consisting of the following equipments:-

- a. Sieves
- b. Core Cutter
- c. Cone for slump test
- d. Compression Testing Machine
- e. Vicats apparatus
- f. Weighing Machine
- g. Spirit Level
- h. Smoke Test Equipment
- i. Jars for silt content of sand.
- j. Cube moulds in sufficient numbers.
- k. Efflorescence test tray
- l. Multimeter
- m. Earth resistance test kit
- n. Vernier callipers
- o. Screw Gauge
- p. Oven of required capacity
- q. Timber moisture tester
- r. Electronic dimension / verticality tester
- s. And any other equipments as directed by Engineer in Charge.

Inspection & testing of structure shall be as per clause 17 of IS 456:2000. The Contractor & Engineer in Charge shall implement quality assurance plan for its participation in the project. A quality assurance plan shall define the tests and responsibilities of all persons involved, adequate control and checking procedure and the organisation and maintaining adequate documentation of the building process & its results. The following documents shall be maintained by the Contractor & Engineer in Charge at site jointly:-

- (a) Test reports and manufacturers certificate for materials, concrete mix design details.
- (b) Pour cards for site organization & clearance for concrete placement.
- (c) Record of site inspection of workmanship, field tests.
- (d) Non-conformance reports, change orders.
- (e) Quality control charts.

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(f) Statistical analysis.

14.16 FORM WORK & SCAFFOLDING

14.16.1 Formwork: Refer to para' 4.11.6.1 to 4.11.6.5 of MES Schedule Part I. Refer para 4.11.6 and subsequent sub paras thereof and 7.15 of MES Schedule Part I. Formwork shall be for fair finished surface for concrete.

14.16.2 Formwork shall comply with the requirement of para No 4.11.6 & 7.15.1 to 7.15.12 of MES Schedule Part I. The shuttering shall be of steel only except at places where it is not feasible to use steel shuttering on technical grounds plywood shuttering can be used with written approval of Engineer in Charge, used deformed and dented steel sheets shall not be permitted for use as form work. The formwork shall conform to the shapes, lines and dimensions as shown on the drawings or as indicated to ensure proper slopes as per design for slabs, roof slab/beams etc. and unit rates quoted shall include for this provision.

14.16.3 All formwork including plates and props shall be of Steel of adequate strength. Props shall be adjustable type, to avoid slant props. However, the formwork to be used for surfaces specified in these specifications to be plastered shall be such that after application of the specified thickness, fair finished surface is achieved as specified herein. Wall thickness shall not be made use of as formwork. Wall shall be built after the columns are cast. In case of bad weather stripping time for form work as specified may be increased as directed by Engineer in Charge without additional payment to Contractor

14.16.4 The Contractor shall excavate for the RCC footing, walls to their exact size after accounting for formwork to sides. If the excavation is more than required size extra excavation shall be made good as mentioned in para 3.13.4 and 3.15.5 of SSR Part I. However, formwork shall be provided to vertical sides of column pedestals as necessary and as directed by Engineer in Charge.

14.17. CLEANING & TREATMENT OF FORMS.

Refer Para No. 4.11.6.2 of MES Schedule Part-I (as applicable) and as directed by the Engineer in Charge.

14.18. REMOVAL OF FORMWORK

Refer Para No. 4.11.6.4 and 4.11.6.5 of MES Schedule Part-I and as directed by the Engineer in Charge.

In case of Bad Weather, Periods mentioned here-in-above may be revised at the discretion of the Engineer in Charge. The Contractor shall be deemed to have considered the above provision before tendering and Quote unit rate against the respective items of Sch'A'/BOQ accordingly. No Claim will be entertained if Longer Periods required for Striking Off Formwork and Curing and all such effected matters is looked into upon the use of Pozzolana Cement as a Result being issued to the Contractor in Full or Part of for Bad Weather.

14.19. ASSEMBLY OF REINFORCEMENT Refer Para No. 4.11.7 of MES Schedule Part-I (as applicable) and as directed by the Engineer in Charge.

14.20. COVER TO REINFORCEMENT. Refer Para No. 4.11.8 of MES Schedule Part-I /as per IS-456 (as applicable) and as directed by the Engineer in Charge.

14.21. TRANSPORTING. Refer Para No. 4.11.9 of MES Schedule Part-I (as applicable) and as directed by the Engineer in Charge.

14.22 PLACING. Refer Para No. 4.11.10 and 4.11.10.3 of MES Schedule Part-I (as applicable) and as directed by the Engineer in Charge.

14.23. COMPACTION. Refer Para No. 4.11.11 of MES Schedule Part-I. Compaction of Concrete in RCC Slab, Beam Walls and Columns shall be done with Approved Mechanical

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Vibrator. In other Locations Hand Compaction may be permitted by Tamping or Rodding as approved by the Engineer in Charge.

14.24. CURING. Refer Para No. 4.11.13 of MES Schedule Part-I (as applicable) and as directed by the PM.

Curing shall be carried out using Pump of suitable capacity at no Extra Cost to the Govt. all as directed by Engineer in Charge.

14.25. PROTECTION. Refer Para No. 4.11.14 of MES Schedule Part-I and as directed by Engineer in Charge.

14.26. INSPECTION. Refer Para No. 4.11.15 of MES Schedule Part-I and as directed by Engineer in Charge.

14.27. SEISMIC STRENGTHENING MEASURE. Seismic strengthening measure shall be adopted in construction of all buildings/structures.

15.

EARTH WORK**EXCAVATION IN TRENCHES AND OVER AREAS**

Excavation in trenches and over areas in soft/loose soil shall be carried out as described in para 3.13.1 to 3.13.4 of MES Schedule Part-I. Bailing and pumping out of water, if required, will be done as described in Para 3.17 of MES Schedule Part-I. No extra payment shall be admissible for the above mentioned operation. In the event of deviation no adjustment shall be made for cost of bailing, pumping and de-watering as specified here-in-before.

FILLING IN TRENCHES PLINTH AND UNDER FLOORS

Filling excavated earth in foundation trench, in plinth and under floor etc. shall be carried out as per para 3.19.1, 3.19.2 and 3.19.3 of MES Schedule Part-I. Earth obtained from excavation and not approved for filling or surplus to the requirement shall be removed to a distance not exceeding 50 metre, spread and levelled. If any additional earth is required for filling, it shall be obtained from sources approved by GE within 5 KM of Defence land without any extra cost to the Govt. on any account. No royalty shall be charged for earth obtained from MOD land for using in the work.

EMBANKMENTS AND TRAVERSES.

Earth filling in embankments and traverses shall be carried out all as specified in para 3.22, 3.22.1 to 3.22.12 of SSR Part-I. The compaction of earth filling in embankments shall be carried out under optimum moisture contents so as to obtain 95% of standard proctor density for each layer. Testing of each layer shall be arranged by the contractor to the entire satisfaction of GE.

Hard Core - Refer Para 3.27 of MES Schedule Part-I as applicable & specified.

The material for hard core shall be of hard broken stone or boulders, broken to gauge not exceeding 63 mm well graded.

The hard core shall be spread, watered and rammed. The thickness of hard core shown in Schedule-A/BOQ is the consolidated thickness.

Unless otherwise specified excavation and earthwork shall be deemed to be in soft/loose soil. However during excavation if hard/treacherous strata is met with which can neither be termed as soft rock nor hard rock within the definition given in SSR, the same shall be treated as any type of soil and the excavation in such earth shall be deemed to have been included in the rates in Schedule `A/BOQ.

Rates quoted by the contractor shall not include use of timbering to uphold sides of excavation. If timbering is ordered by the GE in writing, it will be paid extra as a deviation to the extent required/ordered in writing.

The area around building shall be surface dressed to a width of 3.00 metres beyond the edge of the external wall.

The ground levels shown in the drawings are ground levels before surface dressing is carried out. There after excavation in trenches or over area will be carried out as required.

EXCAVATION IN POST HOLES:

Excavation in independent post holes (or similar holes) each not exceeding 0.5 cum shall be described as 'excavation as post holes' and shall include return, fill in, ram and removal of surplus spoil.

PARTICULAR SPECIFICATION(Contd...)**16.0 STEEL****16.1. Types of Steel: -**

- (a) **Reinforcement Steel:** -High strength deformed steel bars produced by Thermo Mechanical Treatment Process (TMT steel bars of grade Fe 500/Fe 500D and Fe 550/Fe 550D) meeting all other requirements of IS-1786 shall be used.
- (b) **Structural Steel:**
 - (i) Standard Quality – Conforming to IS-2062.
 - (ii) Ordinary Quality- Conforming to IS: 1977.
- (c) **Galvanised Steel Sheets**(Plain& Corrugated):Conforming to IS:277
- (d) **Fabric Reinforcement for Concrete:** Conforming to IS:1566

16.2. All steel to be incorporated in the work shall be contractors supply.

16.3 MATERIALS:

- (a) **Reinforcement Steel:** TMT Steel Bars manufactured by M/s Rashtriya Ispat Nigam Limited(RINL)/ M/s Tata Iron and Steel Company (TISCO or TATA STEEL) / M/s Steel Authority of India Limited(SAIL)/ M/s Gallant ispat Ltd , Gujrat (GALLANT TMX)/M/s Rashmi Metaliks Ltd (RASHMI TMT)/ M/s Bajrang Power & Ispat Ltd. , Raipur(GOEL TMT)/M/s Real Ispat & Power Ltd (G K TMT)/ M/s Steel Exchange India Ltd(SIMHADRI TMT)/M/s Super Smelters Ltd (SUPER SHAKTI)/M/S Shyam Steel IndustriesLtd(SHYAM)/ M/s Jai Balaji Industries Ltd.(BALAJI SHAKTI)/ M/s MSP Steel & Power Ltd (MSP TMT 500D)/ M/s SPS Steel Rolling Mills Ltd. (ELEGANT TMT)/M/s Sugna Metals Ltd(SUGNA TMT)/M/s Shyam Steel Industries Ltd.(SEL TIGER)/ M/s. Jindal Steel and Power Ltd.(JINDAL PANTHAR)
- (b) **Structural Steel:** Structural steel shall also be procured from primary producers viz. M/s Rashtriya Ispat Nigam Limited (RINL)/ M/s Tata Iron and Steel Company (TATA) / M/s Steel Authority of India Limited(SAIL)/ Jindal Steel and Power Ltd.(JINDAL)
- (c) **Galvanised Steel Sheets & Fabric Reinforcement for Concrete:** These shall be procured directly from main producers and shall be ISI Marked.
- (d) Steel Sections for railings, gates, fencing, guard bars, grills, steel chowkhat, holdfasts etc. which do not constitute structural members, can be procured from main producers/secondary producers/BIS marked manufacturers or their authorised dealers at the option of Contractor without any minus price adjustment. Test will not be insisted upon for such steel sections.

16.4 Procurement.

- (a) The Engineer in Charge for every lot of steel shall obtain the particulars of the manufacturer/supplier of steel from the contractor separately. The form given in Appendix-B will be used for this purpose.
- (b) The site staff and Engineer in Charge shall verify the original documents in support of the purchase of steel and will retain certified true copy of the results in the GE's office.
- (c) The Engineer in Charge will ensure that contractors place their demand/requisition of steel with adequate lead time. The steel shall be procured from the storage depots of the main producers/approved secondary producers (as applicable) and not from their authorised agents/dealers.

16.5 Testing of Steel: -

- 16.5.1 The manufacturer shall carry out inspection and testing of steel in accordance with the relevant BIS provisions. The contractor shall submit the manufacturer's Test certificate in original along with the test sheet giving the result of each mechanical test as applicable and the chemical composition of the steel or authenticated copy thereof duly signed by the manufacturer with each consignment. The Engineer-in-charge shall record these details in Steel Acceptance Register, after due verification and send a certified true copy of test sheet to Engineer in Charge for his records. The Engineer in Charge shall also organize independent test of random samples of steel drawn from various lots from National Test House, SEMT Wing CME, Regional Research Labs, NABL approved labs etc. as per the recommended minimum frequency shown here in after. Sample from each lot shall be tested for quality and elongation. The elongation shall not be less than 18%.

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16.5.2 Cost of samples, transportation and testing shall be borne by the contractor. The records of such checks shall be maintained in steel test register.

16.5.3 Any particular size of bar/steel section of any consignment, not meeting the requirement shall be rejected and the same shall be removed from the site by the contractor at his own cost and the contractor shall have no claim on this account.

16.5.4 Frequency for normal mass, tensile, bend and re-bent test of steel.

Sl No	Normal Size	Quantity
Steel for Concrete		
1	Bars size less than 10 mm	1 Sample (3 specimens) for each test for every 25 tonnes or part thereof
2	Bars size 10 mm to 16 mm	1 Sample (3 specimens) for each test for every 35 tonnes or part thereof
3	Bars size over 16 mm	1 Sample (3 specimens) for each test for every 45 tonnes or part thereof
Structural Steel		
4	Tensile Test	1 test for every 25 tonnes of steel or part thereof
5	Bend Test	1 test for every 25 tonnes of steel or part thereof

Note:-For various tests, acceptance criteria, tolerance etc. refer to Appendix-'B' and relevant BIS Codes.

16.5.5 Documentation: - The contractor shall submit original purchase voucher from the manufacturer for the total quantity of steel supplied under each consignment to be incorporated in the work. All consignments received at the work site will be inspected by the Engineer in Charge along with the relevant documents before acceptance. The original purchase vouchers and the test certificate shall be defaced by the Engineer-in-charge and kept on record in the office of the Engineer in Charge duly authenticated and with cross reference to the control number recorded in the Steel Acceptance Register. The Steel Acceptance Register shall be signed by the JE, Engineer-in-Charge and the Contractor.

16.5.6 Schedule of Supply: The contractor shall place their demand/requisition of steel with adequate lead time. The Contractor shall maintain schedule of supply of steel for each consignment.

16.5.7 Testing charge: - The unit rate/amount quoted by the contractor in the tender shall be inclusive of cost of all sorts of testing/retesting as specified hereinbefore and/or in relevant Indian Standards.

16.5.8 Storage, Accounting, preservation and maintenance of Steel: - The storage, accounting, preservation and maintenance of steel supplied by the contractor shall be done as per standard engineering practice till the same is consumed in the work and the cost of the same shall be deemed to be included in the unit amount quoted by the tenderer. The Engineer in Charge shall inspect at regular interval to verify that steels laying at site are stored, accounted, preserved and maintained as per norms. The steel shall be stored so as to differentiate each consignment separately.

16.5.9 If the Engineer in Charge is not satisfied with the storage/preservation of any size of

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bar/section of steel, he may order for any test(s) of steel as applicable for that size of bar/section of steel and as specified in tender documents and relevant Indian Standard to recheck the acceptability criteria for the same. The contractor shall bear the cost of necessary testing(s) in this regard and no claim whatsoever shall be entertained by the Govt.

16.5.10 Measurement and payment of steel: - The entire quantity of steel items shall also be suitably recorded in the Measurement Book for record purpose as "Not to be abstracted" before incorporation in the work and shall be signed by the Engineer-in-charge and the contractor.

16.5.11 The nominal mass conversion factors for various steel sections/size of finished bars as given in relevant IS codes shall be considered standard for measurement.

16.5.12 The contractor shall plan to procure steel considering the time required for approval, testing of steel in advance. No extension of time shall be admissible on the ground of delay in procurement or testing/retesting of steel whatsoever.

16.5.13 The payment steel shall only be allowed after production of original purchase vouchers, test certificates by the contractor for each consignment of steel and results of testing carried out by the department are found satisfactory after testing as specified here in before.

16.5.14 Steel Works.

(i) Standard Quality — The steel shall conform to IS-2062, Grade E 250 (Fe 410 W quality A). This steel shall be provided in the location mentioned in para 10.4.1 of MES Schedule Part I.

(ii) Ordinary Quality- The steel shall conform to IS: 1977. Unless otherwise specified elsewhere mild steel members in grills/guard bars, hold fasts, door and window frames, railing, gates and steel doors shall be ordinary quality of steel, Grade E (Fe-290) as per para 10.4.2 and 10.4.3 of MES Schedule Part I.

17.1 MILD STEEL GALVANISED TUBES (PIPES) AND FITTINGS:

17.1.1 Refer para 18.4 of MES Schedule Part – I.

17.1.2 Mild Steel Tubes shall be ISI Marked [IS 1239 (Part I):2004]

17.1.3 Fittings for pipe shall be ISI Marked (IS 1879: 2010) and shall be galvanised.

17.1.4 Cutting of pipe shall be done all as specified in para 18.50.2 of SSR Part I.

17.1.5 Jointing of GI pipes shall be carried out all as specified in para 18.50.3 of SSR Part I

17.1.6 Tapping GI Mains - Refer para 18.59.3 of SSR Part I

17.1.7 Testing - Refer para 18.50.4 of S.S.R Part-I

17.2 MINIATURE CIRCUIT BREAKER

Miniature Air Circuit Breakers shall conform to (IS -8828 -1996) Specification for miniature

air circuit breakers for AC circuits for Voltages not exceeding 1000 volts.

Note:- These are used in place of mains switches distribution boards of single pole, double pole and triple pole having the standard rating of 5, 10, 15, 20, 30, 40, 50 and 60 amp and 250/440 volts.

18 MCB DISTRIBUTION BOARDS

18.1 Distribution boards shall be factory made and conforming to IS : 8623 suitable for universal mounting copper busbar, Neutral bar, Earth bar, Standard DIN bar Rail and cable ties for cable management. Top and bottom shall have removable gland plates with knock outs.

18.2 SPN Distribution boards shall be suitable for provision for DP/SPN MCBs/ isolators as in comer and SP outgoing all as specified and shall be flush mounting type. The degree of protection shall be IP -42 protection with acrylic door .

18.3 TPN Distribution boards shall be suitable for FP/TPN MCBs/Isolator as in comer and TPN/SP outgoing all as specified and shall comply with IP-42 protection with metal door.

18.4 MCBs - All MCBs shall be conforming to IS-8828 of 1996 and shall be ISI marked. These shall be suitable for 'C curve and 10 KA Breaking capacity and shall be provided with box terminal on top and bottom both suitable for adopting cable size upto 35 Sqmm. The enclosure of MCBs shall be of Moulded Self Extinguishing thermo set plastic and these shall be suitable for snap fixing on standard Din Rail.

18.5 MCBs Isolators - All MCB type isolators shall conform to IS : 13947- Part3, 1993 and

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shall be suitable for impulse voltage of 6 KV and short time with stand capacity of 1000 amps for 0.3 seconds.

- 18.6 Plug and Socket DBs - Plug and socket Distribution Boards including SP/DP MCBs for protection of appliances like window type/Split type Air conditioners and Geysers shall only be provided. All these plug and socket DBs shall be of Universal mounting type.

19 LT CABLES

The XLPE insulated PVC Sheathed cable shall comply with IS 7098 (Part-I) and as specified in Para 19.19 of MES Schedule Part-I. Laying of cables shall be carried out as specified in relevant para of MES Schedule para of MES Schedule Part-I.

LAYING OF LT CABLES

- (i) The XLPE insulated PVC sheathed (Heavy Duty) underground cables shall be of 1100 volts, grade armoured, heavy-duty underground cable, conforming to IS-7098 (Part-I).
- (ii) The cable should be laid at a depth of not less than 450 mm plus radius of complete cable.
- (iii) LT Cable shall bear ISI certification mark.
- (iv) Both ends of pipe protecting the cable shall be sealed with wooden bushes cut into two halves of appropriate size.
- (v) The cable shall be protected by means of 15 cm of sand cushion on top and under the cable as described in SSR Part I.
- (vi) Earth work, sand cushioning & cable protection shall be measured and paid separately.

TESTING OF CABLE

This shall be carried out all as specified in Para 19.93 to 19.93.1 and 19.93.67 of MES Schedule Part-I.

All HT/LT cables shall be testing by Meggar before laying and after carrying out the joints. The cable shall be tested for :-

- (a) Continuity
- (b) Absence of cross phasing
- (c) Insulation resistance to earth
- (d) Insulation resistance between conductors

TESTING AFTER LAYING AND JOINTING

The following tests shall also be carried after the initial laying and jointing work:-

- (a) Insulation resistance test : Sectional and overall
- (b) Continuity test : Sectional and overall

TEST CERTIFICATE

The Contractor shall submit Manufacturers test certificate and literature for Cable.

CABLE TERMINATIONS

Refer Para 19.86 of MES Schedule Part-I

CABLE ENDS

Refer Para 19.86.1 of MES Schedule Part-I

20. VOLTAGE STABILISER:

Voltage stabilizer shall be as specified in Schedule'A'/BOQ.

21. Blank**22. STRIP OR CONDUCTOR ELECTRODE**

Such rocky strata where excavating earthing pits is difficult without blasting and blasting is prohibited or for minimising the earth resistance of a lightning protective network in rocky area.

- 22.1 Strip electrodes shall not be less than 25x4 mm in case of galvanised iron or steel and 25x1.6 mm in case of copper. If round conductor are used as electrodes, the cross sectional area of such conductor shall not be less than 3.0 sq.mm in case of copper and 6.00 sq.mm in case of galvanised iron or steel wire.
- 22.2 The length of buried strip or round conductor shall not be less than 15 metres. This length of the electrode shall be increased if necessary on the basis of soil resistivity so that the required earth resistance is obtained.
- 22.3 The electrode shall be buried in trench not less than 500 mm deep. If conditions

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necessitate use of more than one strip or conductor electrode, they shall be laid as widely distributed as possible, preferably in a single straight or circular trench or in a number of trenches radiating from one point.

23. Blank**24. INTERNAL ELECTRIFICATION.****24.1 GENERAL**

- 24.1.1 All works of internal electrification shall be executed by fully qualified licensed electricians all as per the latest Engineering practice and latest IS codes/IE Rules. Certificate of qualification shall be produced on demand by Engineer in Charge.
- 24.1.2 The position of electrical fittings and fixtures shown on drawing are tentative. The exact position of these fittings and fixtures shall be as directed by Engineer in Charge at the time of execution. No price adjustment shall be admissible on this account.
- 24.1.3 The runs of wires and location of fittings shall be marked on walls and soffits of roof/floor slabs for the wiring in a sample building for the approval of GE. The Contractor may have to realign the wiring and or relocate the fittings required for final approval without any extra cost to the Government. The entire work shall be completed on the basis of the sample Building. Layout wiring diagram in duplicate shall be submitted by the Contractor and got approved from Engineer in Charge before execution of work.
- 24.1.4 Looping – in – system of wiring shall invariably be used through the installation.
- 24.1.5 All equipment, fittings and accessories, materials etc. selected for the wiring installation shall conform to the relevant IS wherever these exist.
- 24.1.6 Contractor shall produce samples of all the fittings accessories materials etc. for approval by the GE before incorporation in work.
- 24.1.7 Notwithstanding the fact that equipment has passed the inspection carried out during the stage of manufacture, the Contractor is not relieved from his obligations to conform to the quality, workmanship, guarantee of performance etc.
- 24.1.8 Any defective material, equipment or workmanship which may come to the notice of the Engineer in Charge or his representative after installation shall be liable for rejection and the contractor shall have to replace such materials, equipments etc. or rectify the defects at his own cost.
- 24.1.9 Specification in details for the items of works involved in the scope of work of this Schedule 'A' Partare mentioned here-in-below in tabulated form:-

Sr No	Description of Schedule 'A' Items	Ref to para(s) of SSR Part-I to materials for workmanship	Ref to para(s) of SSR Pt-I for workmanship	Ref to Relevant IS	Remarks
1	2	3	4	5	6
(a)	Wiring with copper conductor PVC cable type with casing capping / conduit / batten	19.24,19.24.119.2.4 2, 19.25, 19.27 & 19.28.1 to 19.28.3	19.102 & 19.116.1 to 19.13 2.6	IS – 694 IS – 347 IS – 4648 IS – 732	
(b)	Switch Piano, flush type	19.37	19.114.1	IS - 3854	
(c)	Three pin 5 Amps and Three pin 15 Amps multiple socket outlet	19.40	19.114.5	IS – 1293	
(d)	Ceiling Rose	19.32	19.114.4	IS – 371	
(e)	Lamp Holder	19.41	19.114.2	IS – 1258	
(f)	Shades	19.33	-	-	
(e)	Sunk type box	19.38	-	IS – 5133	
(g)	Switch Fuses	19.45	-	IS – 13947 Part – III	

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(h)	MCBs, DBs & ISOLATOTRS	19.44, 19.46, 19.15	-	IS – 2675 & IS – 8828
(j)	Casing & Capping	-	-	IS: 14927 (Part-I&II)-2001
(k)	Rigid non-metallic conduit (Medium)	19.125 to 19.130	19.29	IS-9537
(l)	Power Cable	19.19	19.68.3 to 19.68.5, 19.72.3 to 19.75	-

24.2 PVC INSULATED 1100 VOLTS GRADE CABLE (PVC SHEATHED/UN- SHEATHED)

24.2.1 The conductor shall be of stranded copper wires. The insulation shall consist of flame retardant low smoke (FRLS) compounded polyvinyl chloride and shall have standard identification of orange colour stripes on two sides placed longitudinally on base colour. The thickness of insulation shall not be less than nominal value mentioned in appropriate Table of IS 694:2010. The composition of the compound of sheath shall be polyvinyl chloride. The compound shall be designed to offer adequate mechanical protection. The value of thickness of sheathing shall be in accordance with those specified in appropriate Tables. The insulation on and sheath shall be applied by the extrusion process and each shall form a compact homogeneous body.

24.3 SUNK TYPE BOXES

24.3.1 Boxes for housing electrical accessories recessed into wall shall be of sheet steel 1.6 mm thick. The boxes shall be painted black with two coats of black bituminous paint. All the boxes shall be fixed properly before plastering/rendering work is done.

24.4 PVC CASING CAPPING

24.4.1 PVC casing and capping wiring shall be ISI Marked [IS 14927 (Part-I):2001], of approved make and fire retarded quality. Wall thickness shall be 1.20 mm (Minimum). The channel space shall be adequate to accommodate the cable laid in it. The screws shall be cadmium-coated iron-screws rigidly fixed to gutties or with Detofix at least 15 cm apart. The corner bridges shall be made neatly angle shaped.

24.5 RIGID NON METALLIC PVC CONDUIT

24.5.1 Conduit and Conduit fittings, workmanship: Refer para 19.125 to 19.130 of MES Schedule Part-I.

24.5.2 Rigid, non-metallic PVC conduit, shall be ISI Marked, [IS 9537 (Part 3) – 1983 (Reaffirmed 2007)], ClassMedium. These shall be provided with boxes (junction/terminal) and inclusive of all, Tees, bends, elbows, reducer, bell mouth, tube ends, and fixing accessories such as, couplers, lock nuts, saddle, pipe hooks etc.

24.6 STEEL CONDUIT FITTINGS AND ACCESSORIES

24.6.1 Refer Para 19.29 of MES Schedule Part-I

24.6.2 Rigid Steel conduits shall be ISI Marked, [IS: 9537 (Part II) – 1981 (Reaffirmed 2007)], with stove enamelled black finish.

24.7 LIGHT FITTINGS

24.7.1 All light fittings and fixtures shall be provided with lamps, and shall be as specified in the Schedule 'A'/BOQ and as approved by GE.

24.8 EARTHING

24.8.1 Earthing shall be done in accordance with IS: 3043 - 1987 (Reaffirmed 2006), Code of practice for earthing and MES Schedule Part-I and IE rules. The contractor shall obtain approval of GE before commencement of earthing work and it shall be executed in the presence of an authorized representative of GE.

24.8.2 Normal earthing unless otherwise specified in Schedule 'A' shall be done with galvanized iron or steel plate 600 x 600 x 6mm as per Electrical Plate No 3 of MES Schedule Part – I. Depth of earth plate given in Schedule 'A'/BOQ is the minimum which may be increased by the GE depending the soil conditions. GI tubing used for earth lead protection & watering shall be of medium grade & light grade respectively.

24.8.3 LT switch gears/equipments, wherever to be earthed with normal earthing, shall be earthed with 32 x 6mm GI strip connection to the earth electrode. Two separate earth

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points shall be made in such cases for two independent paths to earth. In other cases each connection to electrode shall be of 8 gauge (4mm) GI wire as specified in Schedule 'A'/BOQ.

- 24.8.4 MILD STEEL GALVANISED TUBES (PIPES) AND FITTINGS:- Refer para 18.4 of MES Schedule Part – I.
- 24.8.5 Mild Steel Tubes shall be ISI Marked [IS 1239 (Part I):2004]
- 24.8.6 Fittings for pipe shall be ISI Marked (IS 1879: 2010) and shall be galvanised.
- 24.8.7 The pipe and fittings incorporated in the work shall be got duly approved by GE.
- 24.8.8 The earth electrode shall be located at least 2 metres from the footing of nearest foundation, exact distance however being decided by GE at site considering the depth of excavation and structural safety. Distance between any two electrodes shall strictly be as per IS-3043. The continuity resistance of any electrode shall not exceed one ohm.

25. DEMOLITION AND DISMANTLING

- 25.1 Refer to relevant paras under Section 21 of MES Schedule Part-I.
- 25.2 The contractor shall take proper precaution for demolition/dismantling work. If any damage caused due to dismantling/demolition to the existing structure, the Contractor shall made good the same at his own cost without any extra cost to the Govt.
- 25.3 All demolished/dismantled materials shall be removed from the site of the contractor as directed by the Engineer in Charge without any extra cost to the Govt.

26. PROTECTION DURING EXECUTION

- 26.1 During execution of work adequate precaution and care shall be given so that the existing structures and other allied items are not damaged. If anything happens in this regards, the same has to be made good by the contractor at his own expense. The decision of the Accepting Officer in this regard shall be final and binding on the contractor.

27.0 PRODUCTION OF PURCHASE VOUCHERS

- 27.1 The contractor shall produce the original purchase vouchers on demand to the Engineer-in-Charge for the materials incorporated in the work and Xerox copy of the same after defacing in the original vouchers shall be handed over to the Engineer-in-Charge.

Signature of Contractor

**AGE (Contracts)
For Accepting Officer**

28. Approved names of manufacturers of various items/equipment to be incorporated in this work unless otherwise specified in Schedule 'A'/BOQ and in particular specifications shall be as

PARTICULAR SPECIFICATION(Contd...)

under and as specified here-in-before:-

SL No	Materials		Make / Name of Manufacturer
1	2		3
	<u>INTERNAL/EXTERNAL ELECTRIC SUPPLY</u>		
(i)	FRLS / FRLSH Copper Conductor	-	Havells, Polycab, RR Kabel, Finolex, Gloster, Mescab, KEI, M/s Bentec India Ltd. (Make-Benlo, Validity-14 Apr 2030), M/s Gold Medal Electricals Pvt. Ltd, S. S. Cable Industries, M/s Plaza Wires Ltd. (Make - Plaza Cables, Validity - 24 Jun 2027), Asian Galaxy, M/s Shalabh (India) Industries Ltd (Make-Shalabh, Validity-01 Jul 2030), Lumicon, Bonton, Valatto, V-Marc, GM, M/s HPL Electric & Power Ltd. (Make-HPL, Validity-14 Apr 2030)
(ii)	Conduit PVC Pipes	-	Presto Plast, Finolex, Indo American Electricals Ltd, Kalinga Gold, Richa Cables Pvt Ltd, Anchor, M/s Gold Medal Electricals Pvt. Ltd, M/s Plaza Wires Ltd. (Make - Plaza Cables, Validity - 24 Jun 2027), GM
(iii)	PVC Casing-Capping	-	Presto Plast, Finolex, Kalinga, Payal, Anchor, M/s Plaza Wires Ltd. (Make - Plaza Cables, Validity - 24 Jun 2027)
(iv)	PVC / XLPE insulated PVC sheathed heavy duty armoured / unarmoured LT cables upto 1100 Volts, Aluminium / Copper Conductors, Solid / Stranded	-	Polycab, Havells India Ltd, Gloster Cables Ltd, KEI Industries Ltd, Asian Galaxy, Finolex, Mescab, M/s Gold Medal Electricals Pvt. Ltd, S.S. Cable Industries, M/s Plaza Wires Ltd. (Make - Plaza Cables, Validity - 24 Jun 2027), Lumicon, Bonton, Fort Gloster, V-Marc, M/s Richa Cables Pvt. Ltd (Make -Richa, Validity-01 Sep 2026), Gemscab (Validity - 08 Jan 2030), M/s HPL Electric & Power Ltd. (Make-HPL, Validity-14 Apr 2030), M/s BCH Electric Limited (Make-BCH, Validity-14 Apr 2030), M/s Shalabh (India) Industries Ltd (Make-Shalabh, Validity-01 Jul 2030), M/s LKB Engineering Pvt. Ltd. (Make-Rallison, Validity-23 Feb 2026)
(v)	Piano Type Switches / Buzzer / Socket / Bell / Ceiling Rose / Regulator	-	Havells, Anchor, Legrand, Gold Medal Electricals Pvt. Ltd, GM
(vi)	Modular type Switches/ Sockets / Bell / Regulator	-	Havells (Crabtree), Anchor (Woods), Legrand (Myrus), RR Kabel Ltd, C & S Electric Ltd, M/s Bentec India Ltd. (Make-Benlo, Validity-14 Apr 2030), M/s Gold Medal Electricals Pvt. Ltd, Hager, Indoasian (Brand - Elvira), ABB, M/s Panasonic Life Solutions India Pvt. Ltd.

PARTICULAR SPECIFICATION(Contd...)

			(Make - Anchor / Panasonic, Validity - 05 Mar 2030), M/s HPL Electric & Power Ltd. (Make-HPL, Validity-14 Apr 2030)
(vii)	MCB, RCCB, MCCB, Distribution boards	-	M/s Novateur Electrical & Digital Systems Pvt. Ltd. (Make-Legrand, Validity-14 Apr 2030), M/s L&T Electrical & Automation, Siemens, ABB, GE, Schinder, C & S Electric Ltd, M/s Bentec India Ltd. (Make-Benlo, Validity-14 Apr 2030), M/s Gold Medal Electricals Pvt. Ltd, Hager, Indoasian, M/s HPL Electric & Power Ltd. (Make-HPL, Validity-14 Apr 2030), M/s Luker Electric Technologies Pvt. Ltd, M/s Shalabh (India) Industries Ltd (Make-Shalabh, Validity-01 Jul 2030), M/s Khokhar Electricals Pvt. Ltd. (Make-KEPL, Validity-18 Sep 2026), M/s Panasonic Life Solutions India Pvt. Ltd. (Make - Anchor / Panasonic, Validity - 05 Mar 2030), M/s BCH Electric Limited (Make-BCH, Validity-14 Apr 2030)
(viii)	Switch Fuse / Change over Switch	-	L&T, Legrand, ABB, Siemens, C & S Electric Ltd, GE, Schinder, Havells, Hager, Indoasian, M/s HPL Electric & Power Ltd. (Make-HPL, Validity-14 Apr 2030), M/s Shalabh (India) Industries Ltd (Make-Shalabh, Validity-01 Jul 2030)
(ix)	LED Light Fittings External / Internal	-	Philips, M/s Simoco Telecommunications (South Asia) Ltd, M/s Jaquar & Company Pvt Ltd (Validity-29 Jul 2025), M/s HPL Electric & Power Ltd. (Make-HPL, Validity-14 Apr 2030), M/s Eveready Industries India Ltd (subject to 05 years warranty on serviceability/ performance on LEDs), M/s Crompton Greaves Consumer Electricals Ltd, M/s Halonix Technologies Pvt Ltd (Make-Halonix, Validity-14 Apr 2030), M/s Century LED Ltd (Brand : MAGIK), M/s C&S Electric, M/s Dhanashree Electronics Ltd (Brand : RASHMI), M/s Syska LED Lights (subject to 05 years warranty on serviceability/ performance on LEDs), M/s Surya Roshni Limited (Validity-29 Jul 2025) (subject to 05 years warranty on serviceability/ performance on LEDs), M/s Orient Electric Limited (a CK Birla Group Company)(Validity-29 Jul 2025) (subject to 05 years warranty on serviceability/ performance on LEDs), M/s Bentec India Ltd. (Make-Benlo, Validity-14 Apr 2030), M/s Gold Medal Electricals Pvt. Ltd, Hager, M/s Luker Electric Technologies Pvt. Ltd, Havells, M/s K-LITE Industries Pvt. Ltd. (K-LITE), M/s Optiluxx Electricals LLP

PARTICULAR SPECIFICATION(Contd...)

			(Optiluxx), M/s GM Modular Pvt. Ltd. (GM), M/s Panasonic Life Solutions India Pvt. Ltd. (Make - Anchor / Panasonic, Validity - 05 Mar 2030), Roshni (Validity-29 Jul 2025)
(x)	Exhaust / Ceiling Fans / Air Circulators / Wall Mounting	-	Crompton, Havells, Almonard, Bajaj, Orient, Usha, M/s Gold Medal Electricals Pvt. Ltd, Halonix Technologies Pvt. Ltd, M/s Luker Electric Technologies Pvt. Ltd, Atomberg, M/s Panasonic Life Solutions India Pvt. Ltd. (Make - Anchor / Panasonic, Validity - 05 Mar 2030)
(xi)	Water Heater (Geyser)	-	Bajaj, Usha, Jaquar, Crompton, Racold, AO-Smith, M/s Luker Electric Technologies Pvt. Ltd, M/s Panasonic Life Solutions India Pvt. Ltd. (Make - Anchor / Panasonic, Validity - 05 Mar 2030)
(xii)	Cable / Busbar Trunking System	-	C & S Electric Ltd, M/s Novateur Electrical & Digital Systems Pvt. Ltd. (Make-Legrand, Validity-14 Apr 2030), Hager
(xiii)	Capacitor, Reactors, Power Factor Controllers, Motor Protection Circuit Breaker, Automatic Change Over with Current Limiter, Plexo Box	-	M/s Novateur Electrical & Digital Systems Pvt. Ltd. (Make-Legrand, Validity-14 Apr 2030)
(xiv)	ERW MS pipes / GI Pipes & Fittings	-	Surya Roshni Ltd, Tata, Jindal Steel, Prakash, M/s Bhushan Power & Steel Ltd
(xv)	Window Type/ Split Type Air Conditioner		Carrier, Voltas, Daikin, Hitachi, LG, Bluestar
(xvi)	Voltage Stabilizers		V. Guard/ Voltas/ Servo/ Vintek Electronics (Volina)/ Vinitec Electronics Laboratory

Note :

1. Wherever word "equivalent make" has been specified the option of equivalent make will only be considered after taking approval from Accepting Officer and only where products of brand/ manufacturer specified are not available in market.
2. In case make of any item/ material is not specified, then ISI marked product shall be incorporated in the work. In case ISI marked product is also not available, then product conforming to IS shall be incorporated in the work.
3. For product where single make/brand/manufacturer has been specified, equivalent make shall be approved by GE/ AGE (I), in case of non-availability of such single make/brand/manufacturer.

PARTICULAR SPECIFICATION(Contd...)

4. For the products whose make/brand/manufacturer 'Name has not been specified above' for which the make/brand as approved by any HQ Chief Engineer Command/ADG and HQ E-in- C Branch, New Delhi shall be applicable.

Signature of Contractor**AGE (Contracts)
For Accepting Officer**

PARTICULAR SPECIFICATION(Contd...)**APPENDIX 'A'****CEMENT SUPPLY & ACCEPTANCE REGISTER**

1. CA No and Name of Work :
2. Control No * :
3. Name of Manufacturer/Brand Name/Gde of Cement (a) Manufacturer (b) Brand (c) Grade ...
4. Quantity of Cement & Lot No/ Week No (in Bags) : (a) Qty..... (b) Lot No/ Week No
5. Manufacturer's test certificates No
6. Random Test Details (a) Physical test report from ... vide their letter No (Name of approved Lab/Engg. College)
7. Details of Physical & Chemical Properties:

	Physical Requirements (As per IS: 4031)							Chemical Requirements (As per IS: 4032)										
	Specific Surface Area	Soundness by Le Chatellar	Soundness by Auto Clave	Initial Setting Time (Minutes)	Final Setting Time (Minutes)	Compressive Strengths (Mpa)			Temp during testing °C	Standard Consistency (%)	Lime Saturation factor (Ratio)	Alumina Iron Ratio (Ratio)	Insoluble Residue (%)	Magnesium (%)	Sulphuric Anhydride (%)	Loss on ignition (%)	Alkaline (%)	Chlorides (%)
As per relevant IS						03 Days	07 Days	28 Days										
As per Manufacturer's Test certificate.																		
As per random test certificate																		

Remarks with Signature

Accepted/Rejected

Contractor

Junior Engineer

Engineer-in-Charge

GE

Remarks of BOO/Inspecting Officer/CCE

* To be allotted serially by Engineer in Charge consignment wise.

SIGNATURE OF CONTRACTOR**FOR ACCEPTING OFFICER****DATE:**

PARTICULAR SPECIFICATIONS (CONTD...)APPENDIX 'B'STEEL SUPPLY AND ACCEPTANCE REGISTER

1. CA No & Name of Work
2. Contract No
3. Name of Manufacturer's T.C No.
4. Manufacturer
5. Random Test Details (a) Physical test report from ----- vide their letter No.
(b) Chemical test report from ----- vide their letter No.
(Name of NABL approved Lab/Govt. Engineering College)
6. Type of Steel, Dia. & Qty. (a) Type: TMT/CRS (b) Dia. - mm (c) Actual Weight ----- MT
(d) Conversion Weight ----- MT.

	Chemical Test						Mechanical Test							
	Carbon%	Sulphur%	Phosphorus%	Sulphur+ Phosphorous%	Manganese%	Silicon%	Corrosion Resistant	Weight per Metre	Yield Stress (N/mm ²)	Tensile Strength (N/mm ²)	Percent elongation (Min.)	Bend test	Re-bend test	Remarks
As per IS 1786-2008														
As per Manufacturer's Test Certificates														
As per independent test														

Remarks with Signature

Acceptance/Rejected

ContractorJunior EngineerEngineer-in-ChargeGERemarks of BOO/Inspecting Officer/CCE

SIGNATURE OF CONTRACTOR
DATE:

FOR ACCEPTING OFFICER