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OF ZONE 'C' & 'D' UNDER AGE B/R-I AT GE JHANSI**

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(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

Headquarters
Commander Works Engineer
Military Engineer Services
Jhansi Cantt - 284001

81900/03/E8

29 Oct 2024

M/s _____

**REPAIR/MAINT TO CERTAIN ROAD AND CONNECTED ITEMS AT CERTAIN AREA
OF ZONE 'C' & 'D' UNDER AGE B/R-I AT GE JHANSI**

Dear Sir (s),

1. Tender documents in respect of above works are uploaded on the website www.defproc.gov.in. The tender is on single stage to cover e-tendering system. The contents of Cover-I and Cover-II are specified in Notice of Tender.
2. Bids will be received online by ACCEPTING OFFICER upto date and time mentioned on 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 tenderers/bidders or their authorized representatives, 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 last date of submission of clarification. You are requested not to write piece meal points and forward your points duly consolidated before due date fixed for this purpose.
5. Enlisted contractors of MES shall upload the scanned copies (pdf form) of enlistment letter, tender fee, documents in support of bid capacity & PQC (as applicable) on e-procurement portal and submit physical documents in the office of tender issuing authority by the date & time stipulated . Inadequacy/deficiency of documents shall make the bid liable for rejection and in such event the financial bid shall not be opened.
6. Unenlisted contractors are required to submit the scanned copies (in pdf form) of documents required as per eligibility criteria mentioned in instructions for filling the tender documents alongwith EMD, tender fee, documents in support of bid capacity & PQC (as applicable) on e-procurement portal and submit the physical documents in the office of HQ CWE Jhansi within time limit specified in NOTICE INVITING TENDER (NIT). Inadequacy/deficiency of documents shall make the bid liable for rejection and in such event the financial bid shall not be opened.
7. 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 opening of BOQ(financial bid). In case of failure to abide by any of these two requirements, the bid will be treated as non-bonafide and shall be liable for their financial bid being rejected.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

The GE JHANSI will return the Earnest Money, wherever applicable, to all unsuccessful tenderers by endorsing an authority on the deposit receipt of its refund on production by tenderer a certificate of the Accepting Officer that a bonafide tender (vide condition here-in-after) was received and all documents were returned. The GE JHANSI will return the Earnest Money to the successful tenderer by endorsing the authority on the deposit receipt for its refund on receipt of an appropriate amount of mandatory Performance Security amount.

8. The contractor must ensure that the tender 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 etc. from tenderer 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 bids be uploaded, sufficiently in advance of the last due date and time fixed.

10. General Conditions of Contracts (IAFW-2249) (1989 Print) and errata and amendments thereto, Schedule of minimum fair wages and MES SSR (Part-I and Part-II) are not enclosed with these documents. These are available for perusal in the Office of GE JHANSI concerned and this office.

11. The rates quoted shall be deemed to include for Goods and Services Tax (GST) as applicable for the subject work. Bidders are advised to ascertain the same from tax authorities before submission of bid.

12. 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.

13. Tenderer is advised to cross check his quotation in the BOQ after uploading and before the Bid closing time & date. Items and their quantities for which no rates or prices have been quoted shall be deemed to have been covered by the rates and prices quoted for the other items of Schedule 'A' or bill of quantities. No representation on this account shall be entertained.

14. Any grievance 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 circumstance communicate with any authority other than NHEA, unless he has exhausted the case options to represent to all Engineer authorities upto NHEA. While representing his case to authorities above NHEA, copies of correspondence exchanged with all authorities shall be enclosed clearly bringing out his grievance 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 Registering Authority.

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

Thanking you

Yours faithfully

Encls : Tender document
(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

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 (**NOT**) in one of the following forms, alongwith their bid :-

(a) Deposit at Call Receipt from a Scheduled Bank in favour of Garrison Engineer Jhansi.

(b) Receipted Treasury Challan, the amount being credited to the Revenue Deposit of Garrison Engineer Jhansi.

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 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 well in advance of the date and time of receipt of the tender. Earnest Money Deposit shall be submitted in the name of concerned GE Jhansi.

NOTES : Earnest Money Deposit (EMD) in the form of cheque/Bank Guarantee 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 AS NON-BONAFIDE AND CONSEQUENTLY LIABLE TO BE IGNORED.

2. PERFORMANCE SECURITY

2.1 In case the tender / bid is accepted the amount of Performance Security calculated with reference to contract amount to be lodged **within 28 days** from the date of intimation letter of Acceptance, the successful contractor shall deliver to the Acceptance Officer, a Performance Security in any of the forms given below for **an amount equivalent to 5% of the contract sum** :-

(a) A Bank Guarantee in the prescribed form.

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

2.2 If the performance security is provided by the successful contractor in the form of a Bank Guarantee, it shall be issued by Nationalized / Scheduled Indian Bank only.

2.3 After acceptance of the tender, the contractor will be required to lodge with the accepting officer **PERFORMANCE SECURITY DEPOSIT** within 28 (twenty eight) days of the receipt by the contractor of notification of acceptance of tender/bid, failing which action as stipulated in Condition 19 of GCC(IAFW-2249) shall be taken.

3 GENERAL INSTRUCTIONS FOR COMPLIANCE

3.1 The tender will only be accepted in the electronic form. All bids shall be submitted on www.defproc.gov.in portal. Documents should be scanned and forwarded in 'pdf' form and 'xls' form as indicated.

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

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER (CONTD..)

3.3. Tender should be DIGITALLY signed using valid DSC at the time of uploading in the portal by the tenderer.

3.4 After acceptance, the tender shall be signed, dated and witnessed at all places provided for in the documents. All corrections shall be initialed. The Contractor shall initial every page of tender. Contractor shall sign all drawings forming part of the tender.

3.5 Any tender which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

3.6 In the technical bid, a scanned copy of Power of Attorney in favour of the signatory to the tender documents shall be uploaded. In case the signatory himself is 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, 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 signing the tender on behalf of another partner(s) or on behalf of a firm or company shall attach 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 by the Partner(s) or in accordance with constitution of the company in case of 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.

3.7 Even in case of Firms or Companies which have already given Power of Attorney to an individual authorizing him to sign tender in pursuance of which tenders are being signed 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 submitted in 'pdf' form with the tender/bid; 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.

3.8 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.

3.9 Bid (covers 1 & 2) shall be submitted online well in time.

3.10 The contractor shall employ Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to special condition 3 referred hereinafter and also conditions 24 & 25 of IAFW 2249 (General conditions of contract).

3.11 Bids will be opened in the presence of tenderers on the due date and time fixed for opening. Tenderers who upload their bids and are desirous of being present at the time of opening of the bids, may do so at the appointed time.

3.12 The tenderer shall quote his rate on the BOQ file only. No alteration to the format will be accepted else the bid will be disqualified.

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

3.14 Tenderer is advised to cross check his quotation in the BOQ after uploading and before the Bid closing time & date. If, he fails to quote his rate for any item, his bid shall be considered non-bonafide. No representation on this account shall be entertained.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER (CONTD..)

3.15. Any tender/bid which proposes any alteration to any of the conditions laid down or which proposes any other condition or prescription whatsoever in the tender will be treated as Conditional tender and the tender thus uploaded by the firm shall be treated as invalid and stands rejected

3.16. In case the BOQ is revised by the Department and the bidder has failed to quote in revised BOQ ie bidder has quoted in previous (un revised) BOQ such bid shall be treated as willful negligence by the bidder and such bid shall be considered as non-bonafide. In such cases, the lowest tender shall be determined by the lowest amount amongst the valid/ bonafide bids only.

4 CPM (Critical Path Method)

4.1 The tenderer is expected to be fully conversant with the CPM technique and employ technical staff who can use the technique in sufficient details. Sufficient books and other literature on the subject are widely available in the market which the tenderer may make use of.

4.2 The tenderer's attention is drawn to special condition of the tender regarding preparation of the detailed network analysis and time schedule for the work and his liability for employing sufficient resources to adhere to this schedule. Any inability on the part of the tenderer in using the technique will be taken as his technical inefficiency and will affect his class of enlistment and future prospect/invitation to tenders for future works.

4.3 The General conditions of contract IAFW-2249 in the printed form including amendments/errata thereto form part of the tender documents but have not been sent alongwith the tender. These documents can be gone through by the tenderer at any MES office during office hours. The tenderer will be deemed to have full knowledge thereof and no claim will be admitted on account of any misunderstanding in complying with this contractual requirement.

4.4 Department may issue amendments/errata in form of **CORRIGENDUM** to Tender Documents / BOQ before due date & time of submission of tender. The tenderer is requested to read the tender documents in conjunction with the errata/ amendments/corrigendum, if any, issued by the department.

5. In the event of lowest tenderer revoking his offer or revising his rates upward/ offering voluntary reduction, after opening of financial bid, his offer will be treated as revoked and the Earnest Money deposited by him shall be forfeited. In case of MES enlisted Contractors, the amount equal to the Earnest Money stipulated in the Notice of Tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such Contractors shall remain suspended till the aforesaid amount equal to the earnest money is deposited in Govt Treasury. In addition, such tenderer and his related firm shall not be issued the tender in second call or subsequent calls. Reduction offered by the tenderer on the freak high rates referred for review shall not be treated as voluntary reduction.

6. If Contractor does not quote his rate against any item or 'NQ' appears in rate/amount column, then it shall be deemed that rate quoted is Rupees Zero i.e. the contractor intends to execute the particular item at no cost basis (free of cost) to the Govt. Items and their quantities for which no rates or prices have been quoted shall be deemed to have been covered by the rates and prices quoted for the other items of bills of quantities. Hence contractors are requested to thoroughly check their quoted rates before submitting bid online. No representation by the contractor on this matter shall be entertained by the department.

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

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MILITARY ENGINEER SERVICES
NOTICE OF TENDER (NOT)

1. A tender is invited for the work as mentioned in Appendix 'A'.
2. The work is estimated to cost as indicated in 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 as mentioned in Appendix 'A'.
3. The work is to be completed within the period as indicated in Appendix 'A' in accordance with the phasing, if any, indicated in the tender from the date of handing over of site, which will be on or after two weeks after (see Appx. 'A')
4. Normally contractor 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 submit to the accepting officer the amount of Performance Security for an amount equivalent to 5% of the contract sum in any of the forms prescribed in condition 19.1 of IAFW 2249 within 28 days of receipt of the letter of Acceptance. Work order No.1 will be issued by GE after receipt of performance security. Failure of the successful contractor to comply with the requirements of condition 19.1 of IAFW-2249 shall constitute sufficient grounds for cancellation of the award of work and forfeiture of the Earnest Money. In case of MES enlisted contractor, amount equal to the Earnest Money stipulated in the Notice Inviting Tender, shall be notified to the tenderer for depositing the amount through MRO. Issue of tender to such tenderers shall remain suspended till the aforesaid amount equal to the Earnest Money is deposited in Government Treasury.
5. 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 circumstances with a father and his son(s) or other close relation 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 tenders/bids of both the parties liable for rejection.
6. The Office of HQ Commander Works Engineer Jhansi will be the Accepting Officer here in after referred to as such for purpose of the contract.
7. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded on the '<https://defproc.gov.in>' site in two packets i.e. the technical bid & financial bid upto the last date of submission of bid indicated. Bid shall be opened at the time & date mentioned on '<https://defproc.gov.in>'.
8. A scanned copy of DD with enlistment details / documents as mentioned in Appx 'A' shall be uploaded as Packet 1 (T bid) of the tender on '<https://defproc.gov.in>' 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 en-cashing the DD and shall not have any claim from Government whatsoever on this account. The applicant / contractor if he so desire may appeal to the next higher engineering authority through e mail with copy to the Accepting Officer. The decision of the next higher engineer authority shall be final. No applicant / contractor shall be entitled for any compensation whatsoever for rejection of his application.
9. Tender form and conditions of contract and other necessary documents shall be available on '<https://defproc.gov.in>' site for download and shall form part of contract agreement in case the tender/bid is accepted.
- 9.1 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 GE (see Appendix 'A') by a scheduled Bank or in receipted treasury Challan the amount being credited to the revenue deposit of the concerned GE (see Appendix 'A')

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

NOTICE INVITING TENDER (NIT) (CONTD/-)

9.2 The GE will return the Earnest Money wherever applicable to all unsuccessful tenderers/bidders by endorsing an authority on the deposit receipt for its refund, on production by the tenderer/bidder a certificate of the Accepting Officer that a bonafide tender/bid was received and the lowest bid for the tender has been accepted.

9.3 The GE will either return the Earnest Money to the successful tenderer/ bidder by endorsing an authority on the deposit receipt for its refund on receipt of an appropriate amount of Performance security or utilize the same for recovery of penalty for non-submission of Performance security.

10. 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 Tenderer/bidder at the office of concerned GE during working hours.

11. 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 tenderers/bidders are deemed to have full knowledge of all relevant documents, samples, site etc., whether they have inspected them or not.

12. 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.

13. The uploading of bid implies that bidder has read this notice and all 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.

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

15. 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 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, remarks in WLR, capability of the firm as per criteria given in Appx 'A' to this NIT. For un-enlisted contractor the final selection shall be based on these factors, as well as the documents mentioned in Notes of Appx 'A'. The applicant contractor/bidder will be informed regarding non-validation of his 'T' bid assigning reasons thereof through the <https://defproc.gov.in> website. The applicant contractor/bidder if he so desires may appeal to the next higher Engineer authority viz. Chief Engineer Bhopal Zone on email id cezbhp2-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. No appeal / representation shall be entertained in respect of applications received offline. The decision of the NHEA shall be final & binding. The contractor/bidder shall not be entitled for any compensation whatsoever for rejection of his application.

16. The Accepting Officer reserves the right to accept a tender submitted by a 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 tenderer/bidder whose tender/bid is rejected.

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

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

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

APPENDIX 'A' TO NOTICE OF E TENDER INVITING APPLICATION (NIT)

1	Name of Work	REPAIR/MAINT TO CERTAIN ROAD AND CONNECTED ITEMS AT CERTAIN AREA OF ZONE 'C' & 'D' UNDER AGE B/R-I AT GE JHANSI
2	Estimated cost	Rs 80.00 Lakh
3	Period of Completion	180 days
4	Cost of tender documents	Rs 1000/- in the form of DD/Banker's cheque from any scheduled /nationalized bank in favour of GE JHANSI payable at JHANSI .
5	Website/ portal address	www.defproc.gov.in
6.	Type of Contract	The contract shall be item rate contract based on IAFW-1779A to be quoted by the tenderer and GCC (IAFW-2249) BOQ format attached. The tender shall be based on BOQ and specification (IAFW-1779A) and General Conditions of Contracts (IAFW-2249) with BOQ (list of items of work) to be priced by the tenderer. The tenderers are required to quote their item wise rates of BOQ items.
7.	Information & Details :	Refer critical dates
	(a) Bid submission start date	
	(b) Last date of bid submission	
	(c) Date of bid opening	
8.	Eligibility Criteria	
	(a) For MES enlisted Contractor	Contractor shall be enlisted with MES in Class 'C' and above and Category 'a (i)' (bldg & roads) or a (v) (Road Works) subject to satisfactory remarks w.r.t. performance in respect of works hand as reflected in Work Load return (WLR) or any other report circulated by competent engineer authority.
	(b) For Contractors not enlisted with MES	<p>(i) Contractor not enlisted with MES should meet the enlistment criteria of 'C' class and Category 'a (i)' (bldg & roads) or a (v) (Road Works) contractor with regards to satisfactorily completion of 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 Para 1.4 & 1.5 of Section 1 of MES Manual on Contracts - 2020 in E-in-C's Branch letter No 66546/Manual/29/E8 dated 19 May 2021 (Seven Pages) as available in all MES formations as well as MES website (www.mes.gov.in).</p> <p>(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.</p> <p>(iii) Not suspended/debarred/black listed (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.</p> <p>(iv) Details of works completed and under progress in MES be submitted in the following format:-</p>

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MILITARY ENGINEER SERVICES: NOTICE OF TENDER
APPENDIX 'A' TO NOTICE OF E TENDER INVITING APPLICATION (CONTD...)

		<table><tr><th>Srl No.</th><th>CA No. & Name of Work</th><th>Value of CA</th><th>Date of Commencement</th><th>Date of Completion</th><th>Extended date of Completion</th></tr></table> <p>(v) 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 the tender unless until the firm is enlisted with the MES.</p>	Srl No.	CA No. & Name of Work	Value of CA	Date of Commencement	Date of Completion	Extended date of Completion
Srl No.	CA No. & Name of Work	Value of CA	Date of Commencement	Date of Completion	Extended date of Completion			
9	Tender issuing and Accepting officer	Commander Works Engineer Jhansi, Contact Person: Lt Col Rakesh Ghare, DCWE (Contracts), Tele- 0510-2470723, Fax No.0510-2471020,						
10.	Executing agency	GE Jhansi						
11.	Earnest Money	Rs 1,45,000/- in favour of GE JHANSI in the form of deposit at call receipt, FDR not acceptable.						

NOTES:

- After opening of Cover 1, if the number of MES enlisted contractors of eligible class as well as un-enlisted Contractors, if any, fulfilling the other eligibility criteria given in NIT are less than 07 (Seven), applications in respect of contractors one class or two classes (in case of remote and difficult areas to be decided as per list circulated by CE command /ADG) below the eligible class shall also be considered subject to fulfillment of other eligibility criteria given in the NIT. Therefore, MES contractors one class below (two classes below in case of remote and difficult areas) may also bid for this tender. However, contractors one/two classes below the eligible class shall not be Considered in case their present residual work in hand is more than five time their present tendering limit. Such bidders shall upload in their Cover-I bid details of works in hand showing names of work, names of Accepting Officers, contract amounts, dates of commencement and completion (stipulated) and progress as on bid submission date. These details shall be verified by the tender issuing authority from concerned formations in case bids of such contractors are considered for evaluation.
- In case after opening of Cover 1, the number of MES enlisted contractors of eligible class as well as un-enlisted contractors, if any, fulfilling the other eligibility criteria given in NIT, are 07 (Seven) or more, applications of only those one class below the eligible class bidders shall be considered, who have previously completed similar works satisfactorily and are meeting the criteria of up gradation in respect of past experience of completed works (individual work experience and/or average annual turnover as applicable) and financial soundness (solvency/financial soundness and working capital) as per details given in Manual on Contracts. Therefore such contractors shall upload the requisite information/documents in the Cover-1.
- Un-enlisted 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.
- Contractors enlisted with MES will upload following documents in Cover 1 for checking eligibility: -
 - Application for tender on Firm's letterhead.
 - Enlistment letter issued by the Registering Authority duly renewed for the cycle period in vogue.
 - Scanned copy of ITD /Bankers Cheque toward cost of" tender and EMS instrument in case SSD bond is not signed at the time of registration.
 - Any other document required as described in this Appendix.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MILITARY ENGINEER SERVICES: NOTICE OF TENDER
APPENDIX 'A' TO NOTICE OF E TENDER INVITING APPLICATION (CONTD...)

5. 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 letterhead.
- (b) Scanned copy of DD/ Bankers cheque toward 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 the 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 document required as described in this Appendix.

6. Tenders not accompanied by scanned copies of requisite DD/Bankers 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.

7. Contractors should ensure that their original physical DDs and Earnest Money Deposit (EMD) instruments (as applicable) reach the office of Accepting Officer within 05 days of bid submission end date failing which following action shall be taken:-

(a) In case of tenders from an enlisted contractor of MES, 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 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 tenders from un-enlisted 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 contractors, where scanned copies of instruments for Earnest Money Deposit (as applicable) have been uploaded in Cover 1 but the same are not received in physical form within stipulated period, such tenders shall not qualify for opening of financial bid (Cover 2).

8. Contractor will not be allowed to execute the work by subletting or through power of attorney 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.

9. After opening of Cover 1 and during its technical evaluation, in case 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 date of communication failing which their financial bid (Cover 2) shall not be opened and contractor shall not have any claim on the work.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MILITARY ENGINEER SERVICES: NOTICE OF TENDER
APPENDIX 'A' TO NOTICE OF E TENDER INVITING APPLICATION (CONTD...)

10. 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 to 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 criteria given in this Appendix. Tenderer/bidder will be informed regarding non-validation of his Technical bid assigning reasons therefore through tender evaluation report which shall be uploaded on the website. Such tenderer, if desires, may appeal to **next higher Engineer Authority (NHEA) viz. Chief Engineer Bhopal Zone on email id cezbhp2-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.

11. In case un-enlisted contractor is already executing works in MES, he shall not be considered eligible for the subject tender if the total value of such works is more than five times the rendering limit of the MES Class of contractor for which it is eligible. For this purpose details of the works being executed by such a contractor shall be uploaded in the Cover -1 of the bid and shall be checked/verified by the Accepting Officer.

12. In case the BOQ is revised through the corrigendum and the bidder has failed to quote on revised BOQ (i.e. he has quoted on pre-revised BOQ) such bid shall be treated as willful negligence by the bidder and his quotation shall be considered non-bonafide. In such cases 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.

13. Revoking the offer or revising the rates upward 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 un-enlisted tenderer, earnest money deposited by him shall be forfeited. In case of MES enlisted tenderer having deposited the Standing 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 works 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.

14. 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.

15. **Important Instructions:**

15.1 Applications/bids not accompanied by scanned copies of requisite DD/Bankers Cheque towards cost of tender and earnest money deposit (as applicable) shall not be considered for validation of 'T' bid and their finance bids will not be opened.

15.2 Tenderers/bidders to note that they should ensure that their original DDs and earnest money deposit (as applicable) are received within 07 (Seven) days of bid submission end date. Non-submission of physical copies of cost of tender and earnest money deposit (as applicable) shall be considered as willful negligence of the bidder with ulterior motives and such bids are liable to be rejected and bidder shall be banned from bidding in MES for a period of six months commencing from the date of opening of finance bid.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MILITARY ENGINEER SERVICES: NOTICE OF TENDER
APPENDIX 'A' TO NOTICE OF E TENDER INVITING APPLICATION (CONTD...)

16. SITE VISIT AND VERIFICATION OF INFORMATION

16.1 Bidders are encouraged to submit their respective bids after visiting the Project site and ascertaining for themselves the site conditions, soil condition, location, surroundings, climate, availability of power, water & other utilities for construction, access to site, handling and storage of materials, weather data, applicable laws and regulations, and any other matter considered relevant by them by carrying out necessary survey/investigation. Bidders are advised to visit the site and familiarise themselves with the Project within the stipulated time of submission of the Bid. No extension of time shall be considered for submission of Bids on this account.

17. The tenderer attention is invited to ensure compliance of the "EPF & MP Act 1952" before commencement of work, the contractor should produce the provident fund code number to the GE, if applicable.

18. Any change/ modification in the tender enquiry will be intimated through above mentioned website only. Bidders are therefore requested to visit our website regularly to keep themselves updated.

19. **Jurisdiction of court** : - Bhopal 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 of IAFW-2249 shall be applicable.

(Signature of Contractor)

File No: 81900/03/E8

Headquarter
Commander Works Engineer
Military Engineer Services
Rani Laxmi Bai Marg
Jhansi Cantt- 284001

(Rakesh Ghare)
Lt Col
DCWE (Contracts)
For Accepting Officer

Dated: 29 Oct 2024

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

IN LIEU OF IAFW-1779 A (REVISED1955)

TENDER AND ITEM RATE CONTRACT FOR WORKS BY MEASUREMENT CONTRACT
TO BE USED IN CONJUNCTION WITH GENERAL CONDITION OF
CONTRACTS IAFW-2249 (1989 PRINT)

MILITARY ENGINEER SERVICES

Tele Mily : 6044

Headquarters
Commander Works Engineer
Military Engineer Services
Jhansi cantt-284001

81900/03/E8

29 Oct 2024

REPAIR/MAINT TO CERTAIN ROAD AND CONNECTED ITEMS AT CERTAIN AREA
OF ZONE 'C' & 'D' UNDER AGE B/R-I AT GE JHANSI

Dear Sir,

1. M/s _____ of _____
hereby authorized to tender for the above work.

2. The tender is to be uploaded on MES website www.defproc.gov.in by **25 Nov 2024 at 1800 hrs.**

3. All correspondence concerning this tender shall be addressed as indicated at the top of this sheet quoting the reference as given.

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

(Signature of Contractor)

SIGNATURE OF OFFICER
ISSUEING DOCUMENTS
APPOINTMENTS: DCWE (Contracts)

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

SCHEDULE 'A'
LIST OF WORK AND PRICES

NAME OF WORK : REPAIR/MAINT TO CERTAIN ROAD AND CONNECTED ITEMS AT CERTAIN AREA OF ZONE 'C' & 'D' UNDER AGE B/R-I AT GE JHANSI

NOTES

1. **SCOPE OF WORK** : This work comprises the under mentioned Job :-
 - (a) Maint Pgme : 2024-25
2. The quantity shown in column 03 (three) are approximate and are inserted as a guide only. These shall however not to be varied beyond the limit laid down in conditions 7 of IAFW-2249 General conditions of contracts.
3. Rates in column 5 of BOQ is to be filled in by the tenderer.
4. Total amount in column 6 of BOQ is not firm but will be treated as the contract sum referred to in IAFW-2249, General Conditions of contracts.
5. Unless otherwise specified rates quoted in column 13 shall be included cost of supply of all materials, labour tools and plants required for fixing, installing, commissioning and testing of the item of work and all other taxes including GST as applicable as per notification issued by Govt of India, which is non refundable as per express condition of Govt of India, insurance freight packing unpacking and transportation are unless mentioned otherwise in description of any particular items (s)
6. **Period of completion** : The entire work under the contract as per schedule 'A' shall be completed within a period of 180 days as per work order No.1
7. Description of items of work given in Schedule 'A' are in brief. These are deemed to be amplified and read in conjunction with the special conditions particulars specification for material and workmanship and condition in relevant trade sections of MES standard Schedule of Rate (Part I) 2020 and SSR (Part II) 2020 in drawings, including notes thereon.
8. Any drawing reference of where has been made in drawings listed in the tender documents, but inadvertently not included in list of drawings, shall be deemed to form part of the contract agreement.
9. Layout/alignment shown on drawings are only tentative. No claim whatsoever shall be entertained on account of change in alignment layout finally approved.
10.
 - (a) The rate quoted by the tenderer against each item of BOQ sheet (Excel format) shall be deemed to allow for all minor extra and constructional details which are not specifically shown on drawings and specification in particulars specifications and which required for completion of work as like manner and sound Engineering practice.
 - (b) In case of difference of opinion as to whether or not certain items of work constitutes minor extras/constructional details the decision of the Accepting Officer in this regard shall be final inclusive and binding.
11. Any damage caused to the buildings under which work is carrying out by the contractors and or and custody of the contractor shall be made good by the contractor to match with the existing as directed by the GE JHANSI without any extra cost to the Govt.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

SCHEDULE 'A' (CONTD)

12. Old materials obtained from taking down /demolition and dismantling such old materials (other than serviceable material which are to be re-used in the work or listed in Schedule of credit) become Govt property shall be removed to MES stores yard and all rubbish/waste/un-serviceable items obtained from demolition and dismantling shall be removed disposed off to a distance not exceeding 50 M as directed by Engineer-in-Charge and cost thereof shall deemed to be included in the unit rate quoted by the contractor.

13. Unless specifically mentioned otherwise the unit rate of each item of shall be deemed inclusive of provisions given in correspondence item of MES SSR Part-II (2020). If any provision in description of items of Schedule 'A' and/or in particulars specification is at variance with the provision in MES Schedule, The provision given in Schedule 'A' and particulars specification shall take precedent there over.

14. The contract amount shall be arrived at after deduction of amount of schedule of credit from the total quoted amount in BOQ. The same net contract amount shall be inserted by this office on General Summary page based on quoted amount by the tenderer in BOQ after deduction of sch of credit. The pages of General Summary and sch of credit are enclosed with tender documents

15. As per the latest clarification issued by the MoD and Ministry of Finance, Goods and Services Tax (GST) is liable on the subject tender as applicable. The liability of paying Goods and Service Tax (GST) is on Contractor only. Accordingly rate/amount quoted in the tender by the contractor shall deemed to include Goods and Service Tax (GST) as per Govt instructions on GST and no reimbursement shall be made on this account. The rate of Goods and Service Tax (GST) shall be as per notification issued by the Govt from time to time. The contractor shall take note of this point and any condition to this effect inserted by him in the tender will be treated as CONDITIONAL TENDER and the tender thus uploaded by the firm shall be treated as invalid and stands rejected. The rate quoted by the contractor shall be deemed to include all taxes and also include for applicability of GST on works Contracts as per Govt instructions and no reimbursement shall be made on this account at later stage.

16. **Payment of RAR:** The payment to labour employed by the contractor shall preferably be made through AADHAAR linked bank account. Being Principal Employer, the GE Jhansi shall ensure that the contractor fully comply with above provisions. The documents held by the contractor shall be subject to scrutiny by law enforcement agencies. Proof of crediting wages in the bank account / made to employee by the contractor shall be pre-requisite to enable the GE Jhansi to release the RAR. The contractor shall also provide payment details under EPF & ESI with account numbers alongwith RAR which shall be verified by GE Jhansi. In case the RARs are not claimed on monthly basis, the contractor shall bound to submit monthly accounts of payments to employees under above regulations.

17. In absence of any specification either in these tender documents or in the drawings, the minimum specifications as given in SSR for relevant items and as per Standard Engineering practice shall be considered by the tenderer while quoting the tender.

18. Wherever the word schedule 'A' appears in the tender documents same shall be read as Schedule 'A' / BOQ.

19. **Performance Security (Refer Amendment 47 of Condition 19 of IAFW-2249)** The performance security for an amount equivalent to 5% (five percent) of the Accepted contract sum shall be delivered by the successful bidder within 28 days from the date of intimation letter of acceptance and all other conditions shall be applicable as per condition 19 and other conditions of IAFW 2249. However, Work Order No 01 should be issued by GE JHANSI after submitting FDR/ Bank Guarantee Bond by contractor against performance security. However, in case bidder fails to submit the affidavit as per instruction No 2 herein before, the bidder shall deposit 5% performance deposit.

20. The **DEFECT LIABILITY PERIOD** for executed work under the work shall be **TWELVE CALENDAR MONTHS** from the actual date of completion of work and in case of execution of work considered in Phases in tender, in that case the defect liability period shall be considered **TWELVE CALENDAR MONTHS** from the actual date of completion of work each phase wise separately.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

**SCHEDULE OF CREDIT FOR ALL MATERIALS OBTAINED
FROM DEMOLITION/TAKING DOWN**

Note : -

1. The materials obtained from demolition / taking down listed in this schedule shall become the contractor's property
2. Tenderers are advised to physically verify the materials listed in this schedule with regard to their quality and serviceability etc before quoting the tender. Contractor shall be deemed to have inspected the material whether or not they actually inspect. No claim what so ever shall be entertained on account of condition, quality and serviceability of materials. However the quantities and amount mentioned under Column-4 & 6 respectively of this schedule is tentative and as a guide only and will vary as per actual work. The quantities actually obtained at site shall be recorded in MB duly signed by the Contractor and Engineer-in-Charge
3. The materials shall be removed from site only after written permission of the Engineer-in-Charge
4. Demolished material which are not covered under this Sch of Credit shall be returned to the department or thrown in the site as directed by Engineer-in-Charge.
5. It shall be the responsibility of the contractor to remove the articles from site at his own expense after obtaining written permission of Engineer-in-Charge and after deducting the credit amount from the 1st RAR / Final Bill whichever is earlier. The site shall be clean and tidy after removal of all materials obtained from demolition
6. Demolished/ dismantled materials shall not be reused in the work, unless otherwise specified in the Sch 'A'
7. Credit on account of old retrieved materials listed in this schedule shall be recovered from advance payments to the contractor as and when dismantling/demolition/taking down is carried out irrespective of whether or not the contractor has actually removed those from site of work.

Ser No	Description of Item	A/U	Qty	Rate (Rs)	Amount (Rs)
1	Old U/S Cat eye of any size and type	Each	1200.00	10.00	12000.00
2	Old U/S solar cat eye of any size and type	Each	398.00	15.00	5970.00
3	Old U/S Delineater of any size	Each	250.00	20.00	5000.00
4	Old U/S stone slab of any size and type	Sqm	980.00	10.00	9800.00
Total amount of Credit C/O to Summary					Rs 32,770.00

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

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

S N	Particulars	Rate at which material will be issued to the contractor		Place of issue by name	Remarks
		Unit	Rate (Rs.)		
1	2	3	4	5	6
Nil					

SCHEDULE 'C'**LIST OF TOOLS AND PLANTS OTHER THAN TRANSPORT**
WHICH WILL BE ISSUED TO THE CONTRACTOR
(SEE CONDITION 15, 34 AND 35 OF IAFW-2249)

SN	Qty	Particular of T&P	Details of MES crew supplied	Hire charges per unit per working days	Stand by charges per unit per off day	Place of issue by name
1	2	3	4	5	6	7
Nil						

SCHEDULE 'D'**TRANSPORT TO BE HIRED TO THE CONTRACTOR**
(SEE CONDITION OF 16 AND 35 OF IAFW-2249)

SN	Qty	Particular	Rate per unit per working day	Place of issue by name	Remarks
1	2	3	4	5	6
Nil					

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

SUMMARY OF SCH "A"

1. Total amount B/F from BOQ against Sch "A" : Rs _____

2. Deduct Sch of Credit : (-) **Rs 32,770.00**

3. NET CONTRACT SUM

Rs _____

(In words.....)

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

TENDER

To ,

The President of India

Having examined and perused the following documents :-

1. Specifications signed by DCWE (Contracts)
2. Drawings detailed in the specification list of drawings.
3. Schedule 'A', 'B', 'C' & 'D' attached hereto.
4. MES standard schedule of Rates Part-I (Specifications) (2020) including amendment No 1 to 3 and Part-II (Rates) (2020) including amendments 1 to 122 (hereinafter and in IAFW-2249 referred to as MES Schedule).
5. General Condition of Contract IAFW-2249 (1989 print) with amendments **1 to 49** and Errata 1 to 20.
6. **Water (Refer Condition 31 of IAFW-2249) General Condition Of Contracts** Water will be supplied by MES to the contractor and shall paid for by contractor @ 3.75 per Rs 1000/- worth of work done priced at the contract rates.
7. Should this tender be accepted I/We agree :-

(a) The sum of Rs. _____ (Rupees _____)

_____) forwarded as earnest money shall either be retained as part of security deposit or be refunded by Government on receipt of the appropriate amount of security deposit within the item specified in condition 22 of IAFW-2249.

(b) To execute all works referred to in the said documents upon the terms and conditions contained or referred to therein at the item rates contained with aforesaid schedule 'A' or at such other rates as may be fixed under the provisions of condition 62 of IAFW-2249 and to carry out such deviations as may be ordered, vide Condition 7 of IAFW-2249 up to a maximum of **10 % (TEN PERCENT)** and further agree to refer all disputes, as required by Condition 70 to the sole arbitration of an serving Officer having degree in Engineering or equivalent or having passed final/direct final examination of sub division II of Institution of Surveyors (INDIA) recognized by the Government of India to be **appointed from the list of Panel of Arbitrators of HQ CE Southern Command Pune (Available at MES Website) by Chief Engineer Southern Command Pune or in his absence the officer officiating as Chief Engineer Southern Command Pune**, whose decision shall be final, conclusive and binding.

Note :- To be deleted where not applicable.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

TENDER (CONTD)

Signature _____ in the capacity of _____

duly authorized to sign the tender for and on behalf of _____
(IN BLOCK LETTERS)

DATED _____ POSTAL ADDRESS _____

Witness _____ Telegraphic address _____

Address _____ Telephone No _____ (Office)
_____ (Residence)**ACCEPTANCE**

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

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 behalf of the President of India, at the item rates contained in the Schedule 'A' on _____ 2024.

Signature _____ dated this _____ day of _____ 2024.

APPOINTMENT : COMMANDER WORKS ENGINEER
FOR AND ON BEHALF OF THE PRESIDENT OF INDIA
(ACCEPTING OFFICER)

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

GENERAL CONDITIONS OF CONTRACTS**(IAFW-2249-1989 PRINT)**

A copy of the GENERAL CONDITIONS OF CONTRACTS (IAFW-2249) 1989 PRINT with errata's 1 to 20 and amendments Nos 1 to 49 has been supplied to me/us our possession, I/we have read and understood the provisions contained on the aforesaid GENERAL CONDITIONS OF CONTRACTS before submission of this tender and 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 the GENERAL CONDITIONS OF CONTRACTS (IAFW-2249-1989 PRINT) including condition 70 thereof pertaining to settlement of disputes by Arbitration, containing 33 pages and Errata 1 to 20 and amendment Nos 1 to 49 form part of these tender documents.

DCWE (Contracts)
for Accepting Officer

(Signature of Contractor)

*Delete whichever is not applicable.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

SCHEDULE OF MINIMUM FAIR WAGES

It is hereby agreed that "Schedule of minimum Fair Wages" (SMFW) as published vide Government of India Notification dated 10.3.92 comprising 10 pages or the latest notification of Central or State Government whichever is higher) upto the date of submission of tender forms part of these tender documents.

My/our signature hereunder amounts to my/our having signed the aforesaid documents forming part of this tender.

DCWE (Contracts)
for Accepting Officer

(Signature of Contractor)

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

PARTICULAR SPECIFICATIONS : PART-I (SPECIAL CONDITIONS)**1. GENERAL**

The following special conditions shall be read in conjunction with the general conditions of contract IAFW-2249 and IAFW-1779-A including errata and amendments thereto, if any provision(s) in those special conditions is/are at variance with that of the aforesaid documents, the former shall be deemed to take precedence there over.

2. CONDITIONS FOR WORKING IN UNRESTRICTED AREA

(a) The work lies in UNRESTRICTED AREA (with working hours 0800 to 1700 hours) However, the contractor, his agents, servants, work people and vehicles may pass through the unit lines in which case the Engineer-in-Charge shall at his discretion has the right to issue passes, control their admission to the site of work or any part thereof. The contractor shall on demand by the Engineer-in-Charge submit a list of personnel, etc concerned and shall satisfy the Engineer-in-Charge as to bonafide of such people. Passes shall be returned at any time on demand by the Engineer-in-Charge and in any case on completion of work.

(b) 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 carried out e.g. prohibition of smoking, lighting and fire precautions, restricted hour of working etc. Any person found violating the security rules laid down by the authority shall be immediately expelled from the area without assigning any reasons whatsoever and the contractor shall have no claim on this account. Nothing shall be admissible for any man hours lost on this account.

3. SECURITY OF CLASSIFIED DOCUMENTS:

- 3.1 Contractor's special attention is drawn to condition 2-A and 3 of General Conditions of Contracts IAFW-2249. The contractor shall not communicate any classified information regarding the works either to subcontractor or others without prior approval of the Engineering-in-Charge. The contractor shall not make copies of the design/drawings and other documents furnished to him in respect of works and he shall return all documents on the completion of work or earlier on termination of the contract. The contractor shall alongwith final bill attach a receipt from the Engineer-in-Charge-in-respect of his having returned the classified documents as per condition 3 of General Conditions of Contracts IAFW-2249.

4. APPROVAL OF SAMPLE OF WORKMANSHIP IN BUILDING

- 4.1 To determine the acceptable standard of workmanship, one quarter/block preferably with sanitary annexe (to be decided by the GE) shall be completed by the contractor well in advance as directed by GE under close supervision of the Engineer-in-Charge and shall be approved by the GE. The workmanship of various trades and finishes of this quarter/block shall serve as guiding samples for work in the remaining quarters/blocks/buildings.
- 4.2 The sample quarter/block/building shall be completed in all respects as per time of completion specified for the same in Schedule 'A'.

5. MATERIALS AND SAMPLES :

- 5.1 All the materials required to be incorporated in this work shall conform to relevant IS No/Bureau of IS and ISI marked. Materials which are not being manufactured with ISI marking shall conform to IS provisions. Material for which makes/brands have been specifically given in the tender document shall be provided.
- 5.2 The contractor shall produce samples of all materials, articles, fittings, accessories etc that he proposes to use and get them approved in writing by the Engineer-in-Charge. The materials, articles, etc as approved shall be signed by the Engineer-in-Charge and the contractor's representative. These samples shall be kept in the custody of the Engineer-in-Charge.
- 5.3 The brands of all materials, articles, fittings, etc approved together with the names of the manufacturers and firms from which supplies have been arranged shall be recorded in the materials passing register.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

PARTICULAR SPECIFICATIONS : PART-I (SPECIAL CONDITIONS) (CONTD..)

- 5.4 The materials for which ISS do not exist or which are specified in these particular specifications to conform to the samples kept in the GE's office, shall comply with the requirement of these samples. The contractors are advised to inspect the samples, which shall remain open for inspection with GE during working hours. The contractor shall be deemed to have full knowledge of the samples whether he inspects them or not.
- 5.5 (i) Material shall be tested as per frequency given in IS and number of test shall be done as per frequency given in IS. Rate of recovery required to be charged from the contractor for various testing of building materials shall be as per Appendix 'A' enclosed.
- (ii) If facility for testing of building materials for any particular test is not available in the site/zonal laboratory, the same will be got tested in National Test House/SEMT WING/Engineering College at discretion of Garrison Engineer. All expenses for testing shall be borne by the contractor.
- (iii) All equipments and T&P, for 'A' level tests i.e. tests carried over at site lab, shall be arranged by GE and tests shall be carried out by executive staff. Recovery of these tests shall be affected as per rates given in Appendix 'A'. The contractor shall not be permitted to establish his own site lab.
6. **ADMISSION TO SITE :**
- 6.1 Delete the following words from lines 5 to 9 of sub para(1) of condition 24 of IAFW-2249.
- "In the event of area of land land allotted to him" and insert as under :-
"The contractor shall be allotted free of charge the area as approved by the GE for the purpose of execution of temporary workshops, stores etc".
- 6.2 The areas occupied shall be vacated by the certified date of completion and site of work shall be cleared as stipulated in condition 49 of IAFW-2249.
- 6.3 The persons who are directly employed by the contractor for the purpose of execution of work shall only be allowed to stay and work in this area. The contractor shall ensure that outsiders who are not directly connected with the work do not stay in this area. The GE shall exercise proper check for the same.
- 6.4 The contractor shall ensure proper sanitation of the area to the satisfaction of the Engineer-in-Charge.
7. **WORKING HOURS :**
- 7.1 Normal hours of work for departmental staff are from 0800 hours to 1700 hours on all days except on Sundays and other Gazetted Holidays. However, the contractor may observe unrestricted hours of work for all the work to be executed in the contractor's workshop. No work at site other than the work to be executed in contractor's workshop shall be permitted to be executed out of the aforementioned normal working hours except with prior written permission of the GE. If such permission is given no liability in respect of any excess cost arising therefrom shall be accepted by the Department.
8. **MINIMUM WAGES PAYABLE TO LABOUR :**
- 8.1 Refer Condition 58 of IAFW-2249. The contractor shall not pay wages lower than minimum wages for labour as fixed by the Government of India/State Govt/Union territory, whichever is higher.
- 8.2 Contractor's attention is also drawn, amongst other things, to the 'explanations' to the schedule of minimum wages referred to above.
- 8.3 The fair wages referred to in Condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages referred to above as updated from time to time.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

PARTICULAR SPECIFICATIONS : PART-I (SPECIAL CONDITIONS) (CONTD..)

- 8.4 Schedule of minimum wages are not enclosed along with tender documents. However, the contractor shall be deemed to have verified the minimum fair wages payable as on the bid submission end date.
- 8.5 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.

(Note) : "The minimum wage payable to labours as listed in the schedule of minimum wage shall be deemed to have been amended to conform with the latest applicable minimum wages notified by the Govt of India under the Minimum Wages Act, 1948 or the minimum wages as applicable (if any) fixed by the local State Govt (whichever is higher), which may have come into force on or before the date of receipt of the tender).

9. **EMPLOYMENT OF PERSONNEL:**

- 9.1 The contractor shall employ only Indian Nationals as his representative, servants and workmen and verify their antecedents and loyalty before employing them for the work. He shall ensure that no person of doubtful antecedents and nationality is in any way associated with the works. If for reasons of technical collaboration or other consideration the employment of foreign national is unavoidable, the contractor shall furnish the particulars to this effect to the Accepting Officer at the time of submission of the tender. As proof that the contractor has employed only Indian Nationals he shall render a certificate to the GE within one month from the date of acceptance of the tender to this effect. In case the GE desires, contractor will have the police verification done of the personnel employed by him. Contractor's attention is also drawn to condition 25 of IAFW-2249 in this connection.
- 9.2 The GE shall have full powers and without giving any reason, to require the contractor immediately to cease to employ in connection with this contract, any Agent, Servant or Employee whose continued employment is, in his opinion, undesirable. The contractor shall not be allowed any compensation on this account.

10. **VALIDITY OF BID :**

- 10.1 Validity of period of the bid shall commence from the next day subsequent to bid submission end date. Validity period shall be 60 days for single stage two cover system. Validity period of bid, in case of two stage three cover system shall be 90 days from the next day subsequent to bid submission end date of stage 2 containing financial bid.

11. **SIGNING ON CONTRACT DOCUMENTS :**

- 11.1 The person signing the tender on behalf of another or on behalf of a firm shall attach with the tender a proper power of attorney duly executed in his favour by such other persons or by all the parties stating that he has authority to bind such other persons or the firm as the case may be in all matters pertaining to the contract including the arbitration clause.

12. **OUT OF POCKET EXPENSES :**

- 12.1 No out of pocket expenses incurred by the tenderer in submitting his tender shall be reimbursed whether his tender is accepted or not.

13. **TIME AND PROGRESS CHART (CRITICAL PATH METHOD/NETWORK ANALYSIS AND TIME SCHEDULE) :**

- 13.1 The time and progress chart to be prepared as per Condition 11 of IAFW-2249 (General Conditions of Contracts) shall consist of detailed net work analysis and a time schedule. The critical path net work will be drawn jointly by the GE and the Contractor soon after acceptance of the tender. The time scheduling of the activities will be done by the GE and the contractor so as to finish the work within the stipulated time. On completion of the time schedule a firm calendar date schedule will be submitted in four copies within two weeks from the date of handing over the site to the GE, who will approve it after due scrutiny.

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- 13.2 During the currency of the work contractor is expected to adhere to the time schedule and this adherence will be part of the contractor's performance under the contract. During execution of the work, contractor is expected to participate in the reviews and updating of the network undertaken by the GE. These reviews may be under taken at the discretion of the GE either as a periodical appraisal measure or when the quantum of work on the contract is substantially changed through deviation orders or amendments. Any revision of the schedule as a result of the reviews will be submitted by the contractor to the GE within a week, who will approve it after due scrutiny. The contractor will adhere to the revised schedule there after. In case of contractor not agreeing to revised schedule, the same will be referred to the Accepting Officer whose decision will be final, conclusive and binding. GE'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.
- 13.3 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.
- 13.4 No additional payment shall be made to the contractor for any multiple shift work or other incentive methods contemplated by him in his work schedule even through the time schedule is approved by the Department.
14. **CO-OPERATION WITH OTHER AGENCIES :**
- 14.1 The contractor is required to work, in close co-operation and he shall permit free access and generally afford reasonable facilities to other agencies or departmental workmen, etc working in the same area which may operate hereinafter and during currency of the contract.
15. **CLEANING DOWN :**
- 15.1 Refer condition 39 of IAFW-2249. The contractor shall clean all floors, remove cement/lime/paint drops, clean joinery, glass panes etc, touch up all painter's work and carryout all other necessary items of work to make the premises clean and tidy before handing over the buildings.
16. **WATER SUPPLY :**
- 16.1 **Condition 31 of IAFW-2249** Water will be supplied by MES to the contractor at points shown on site plan from piped system and shall be paid by the contractor @ Rs. 3.75 per Rs 1000/- worth of work done priced at contract rates in case of unmetered supply (where it is not possible to meter the supply of water viz works of repairs, addition/alteration etc involving number of locations) and at All-in-Cost rate of preceding year (to be decided by CE Zone/CCE) in case of metered supply. The contractor shall arrange at his own expense for storage of water and lifting, pumping, carrying or conveying water to the site of work as required. In case water points are not marked on the site plan, the water shall be supplied at one point as decided by GE.
- 16.2 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 continuity of water supply and no compensation shall be allowed for intermittent or inadequate water supply and break down in the system. If the supply is not sufficient the contractor shall make his own arrangement to supplement the water supply at his own cost. For this purpose the contractor shall be allowed to install hand pumps, tubewells at the site of work at places as directed by the Engineer-in-Charge without any charges from the contractor on this account. The contractor shall remove the hand pumps, tubewells as and when asked to do so by Engineer-in-Charge or GE and in any case on completion of work unless GE desires that these hand pumps, tube wells be left in position and the contractor agrees to do so without claiming cost thereof from the Department. No compensation whatsoever shall be admissible to the contractor if the GE requires him to remove the pumps before completion of work. Use of water from such sources shall be permitted only if found potable after testing, and fit for use in the work. The water from such sources shall be got tested by the contractor from a laboratory approved by the GE, who shall, after satisfying himself, permit the contractor to use the water from such sources. Testing charges shall be borne by the contractor.

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OR

- 16.3 **Condition 31 of IAFW-2249.** Water will not be supplied by the MES. The tenderers are advised to visit the site of works to ascertain availability of water from civil sources or from nearby natural sources outside MoD land. The contractor shall be allowed, if he so desires, to install hand pumps, tube wells at site of work at places as approved by Engineer-in-Charge and nothing shall be charged from the contractor. The contractor shall remove the hand pumps, tube wells as and when asked to do so by Engineer-in-Charge/GE and in any case on completion of the work and before issue of completion certificate, unless GE desires that these hand pumps, tube wells be left in position and the contractor agrees to do so without claiming cost thereof from department. No compensation whatsoever shall be admissible to the contractor, if he is required to remove the pumps(s), tubewells before completion of work. Use of water from such sources shall be permitted only if found potable after testing and fit for use in the work. The water from such sources shall be got tested by the contractor from a laboratory approved by the GE, who shall, after satisfying himself, permit the contractor to use the water from such sources. Testing charges shall be borne by the contractor. GE shall also carry out the independent testing of water.

17. **ELECTRIC SUPPLY :**

- 17.1 In case the contractor desires to buy electricity from MES it will be supplied at point(s) shown on site plan.
- 17.2 Electric supply shall be 415/230 volts, 50 cycles, three phase, AC supply.
- 17.3 The contractor shall be charged for the electric energy consumed at the following rates :-
(a) At rupees ten and paise ten only (10.10) per unit (KWH) for lighting and power.
- 17.4 The above rates are all India flat rates. Duties and/or taxes if any, levied by State Government and/or Electricity undertaking and the like on the electricity charges will be borne by the Department.
- 17.5 Electricity shall be supplied from main switches. Main switches and KWH meter to register the power supplied shall be provided and installed by MES. All other fittings, cable, switch, connections etc for distribution and supply of electricity from main switch to work site shall be arranged by the contractor at his own according to Indian Electricity Rules and along with routes approved by the GE. The GE shall have free access to inspect all installations, connections devices for consuming the electricity and if these are not found satisfactory, the GE shall have the power to get these disconnected.
- 17.6 Supply of electricity shall be during the hours as decided by GE. However, MES do not guarantee the continuity of supply, and no compensation shall accrue to the contractor for the supply becoming intermittent or if there is any breakdown for any reason.

18. **ROYALTIES :**

- 18.1 Delete existing description of condition 14 of IAFW-2249 and insert the following :-
"No quarries on defence land are available"

19. **DAMAGE TO EXISTING STRUCTURES.**

- 19.1 Any damage to the existing structures, any existing road etc., during the execution of work shall be made good by the contractor at his own expense. Rectification, replacement ,making good and touching up etc shall be carried out, conforming to the materials and workmanship originally provided and to the satisfaction of the Engineer-in-Charge. In case of any dispute on this account the decision of the GE shall be final, binding and conclusive.

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PARTICULAR SPECIFICATIONS : PART-I (SPECIAL CONDITIONS) (CONTD..)**20. UNIT RATES IN SCHEDULE 'A' :**

20.1 Quoted Item rates shall be deemed to include for any minor details of construction which are obviously and fairly intended and which may not have been referred to in these documents but are essential to the work/items.

20.2 In case of difference of opinion as to whether or not a certain item of work constitutes minor details of construction included in the contractor's price the decision of the Accepting Officer shall be final and binding.

21. PROPRIETARY MATERIALS/ARTICLES

Proprietary materials or articles such as bitumen, paint and cement etc, quantity of which can not be checked after incorporation in the work, shall when collected at site be recorded in measurement book with reference to Vr No, make, brand and rate charged by manufacturer/supplier, and signed both by the MES representative and the contractor. However, the contractor will be required to submit purchase vouchers only in respect of items for which payment is claimed in RAR as "Material lying at site". Purchase vouchers for bitumen shall not be insisted when contractor is purchasing the macadam from hot mix plant approved by the GE.

22. MATERIALS IN METRIC SIZES :

22.1 If the materials (other than those issued under schedule 'B') are not available in metric sizes, the contractor shall provide materials in equivalent inch sizes which should not be less than the metric size dimensions under any circumstances, at no extra cost to the Govt.

23. STANDARD OF WORKMANSHIP :

23.1 To determine the acceptable standard of workmanship, the GE shall order the contractor to construct some portions of work in advance with in the time specified here in below. The portions so constructed shall be treated as "Sample Work".

24. STORAGE OF MATERIALS :

24.1 The contractor shall not be provided with storage accommodation at the site. The tenderer shall make his own arrangement as per condition 10 of IAFW-2249 and as directed by the Engineer-in-Charge.

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

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

26. ROAD ROLLER

26.1 Applicable only where road work and the like is included in scope of work.

26.2 Where road rollers are hired by the Department to the contractor, a log book for each road roller shall be maintained by the Department for recording hours of working of the road roller. In case, however when the contractor procures road roller from source other than Department a log book for each road roller shall be maintained by him for recording hours of working of the road roller. Entries in the log book shall be signed by the contractor or his authorised representative and by the Engineer in Charge.

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- 26.3 To ensure proper consolidation, roller must work for at least the number of days assessed on the basis of output given here under. If the roller has not worked for the number of days so assessed, recovery shall be affected from the contractor for the number of days failing short of the days assessed, on the basis of output stipulated. The recovery shall be affected as under :-
- (a) Where road roller hired out only by the Department to contractor, at rates given in Schedule 'C'.
- (b) Where road roller is hired by the contractor only from sources other than Deptt at Rs 960/- per working day of 8 hours.
- (c) Where road roller is hired by the contractor from Department and also from sources other than the Department at higher of two rates given in Schedule 'C' of contract and para 25.3(b) above.
- 26.4 The above provision shall not however absolve the contractor of his responsibility of properly consolidating surfaces as required under the provisions of the contract :-

Ser No	Item	Output per day of 8 hrs work in Sqm
(a)	Consolidation of formation surfaces/sub grade	1850 Sqm
(b)	Consolidation of stone soling 20 cm thick (spread thickness) with 8 to 10 tonne roller	590 Sqm
(c)	-do- but 15 cm thick -do-	800 Sqm
(d)	Consolidation of water bound macadam (stone metal) 10 cm compacted thickness including spreading and consolidation with blinding material.	186 Sqm
(e)	-do- but 7.5 cm compacted thickness -do-	248 Sqm
(f)	Consolidation of single coat surface dressing	774 Sqm
(g)	-do- two coat surfaces dressing	558 Sqm
(h)	Consolidation of 2.5 cm thick semi dense asphaltic concrete	600 Sqm
(i)	Consolidation of 2 cm thick premixed carpet incl seal coat.	744 Sqm
(k)	Consolidation of bituminous mixture 2 part of broken stone metal and one part of sand and bitumen (consolidated thickness 4 Cms).	372 Sqm

27. **RE-IMBURSEMENT/ REFUND ON VARIATION IN TAXES DIRECTLY RELATED TO CONTRACT VALUE:-**

(a) The rates quoted by the Contractor shall be deemed to be inclusive of all taxes/ cesses viz GST, 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/ cesses, duties, Royalties, Octroi & other levies shall be made except as provided in sub para (b) here-in-below:-

(b) (i) The taxes/ cesses which are levied by Govt at certain percentage rates of contract sum/ amount shall be termed as **"taxes directly related to Contract value"** such as GST, 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 receipt of tenders. Any increase 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 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 Govt 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 Govt from the payments due to the contractor.

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(ii) The contractor shall, within a reasonable time of his becoming aware of variation in percentage rates and / or imposition of any further “**taxes directly related to Contract value**” give written notice thereof to the GE 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 submit the other documentary proof/ information as the GE may require.

(iii) 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 authorised representative of Govt, and shall further, at the request of the GE furnish, verified in such a manner as the GE may require, any documents so kept and such other information as the GE may require.

(iv) Reimbursement for increase in percentage rates/ imposition of “**taxes directly related to contract value**” shall be made only if the contractor necessarily & properly pays additional “taxes directly related to Contract value” to the Govt, without getting the same adjusted against any other tax liability or without getting the same refunded from the concerned Govt Authority and submits documentary proof for the same as the GE may require.

28 **MINIMUM WAGES PAYABLE TO LABOUR & CONTRACT LABOUR REGULATIONS** In terms of Minimum Fair Wages Act 1948 & Fair Wages Act, the contractor shall not pay wages lower than minimum wages for labour as fixed by the Govt. of India / State Govt. whichever is higher. The fair wage referred to in condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages as referred to above. Condition 26 of IAFW 2249 shall be binding on contractor to the full extent the regulations mentioned therein and Appendix C to IAFW 2249. Statutory Labour Laws contained under, Contract Labour (Regulation & Abolition) Act 1970, EPF & MP Act 1952, Payment of Wages Act 1936 shall be in force and binding as per law. The payment to labour engaged by the contractor shall preferably be made through AADHAAR linked bank account. Being Principal Employer, the GE JHANSI shall ensure that the contractor fully comply with above provisions. The documents held by the contractor shall be subject to scrutiny by law enforcement agencies. Proof of crediting wages in the bank account / made to employee by the contractor shall be pre-requisite to enable the GE JHANSI to release the RAR. The contractor shall also provide payment details under EPF & ESI with account numbers alongwith RAR which shall be verified by GE JHANSI. In case the RARs are not claimed on monthly basis, the contractor shall bound to submit monthly accounts of payments to employees under above regulations.

29. **TESTING OF MATERIALS.**

29.1 **'A' LEVEL TESTS FOR WORKS COSTING 100 LAKHS AND ABOVE** . The contractor shall set up a site laboratory for testing of materials (except Schedule 'B' materials) for 'A' level tests as listed in Annexure-I hereto. The contractor shall arrange all equipment/machines for the tests specified in Annexure-I as 'A' level tests at his own cost with prior approval of GE. This cost shall be included in the lump-sum cost quoted by the contractor. The contractor shall employ a competent technical representative as approved by the GE for the purpose of testing and all such tests shall be carried out in the presence of Engineer-in-Charge. The successful tests results thereof shall be recorded and signed jointly by the contractor and the Engineer-in-Charge. The charges for these tests ie 'A' level tests carried out in the site laboratory of the contractor shall not be recovered. In case, the contractor has not set up the site laboratory and the tests are carried out in Zonal lab or any other laboratory setup/approved by GE, the recovery shall be made at rates applicable ie as given in Annexure I.

29.2 **'A' LEVEL TESTS FOR WORKS COSTING UPTO 100 LAKHS.** The contractor may set up a site laboratory at his option for works costing upto 100 lakhs. Other stipulations will be the same as specified in preceding para (a). However in case the contractor has not set up the site laboratory and tests are carried out in Zonal or any other laboratory approved/setup by GE, the recovery shall be made at rates applicable ie as given in Annexure –I.

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29.3 **'B' & 'C' LEVEL TESTS**. For tests of 'B' and 'C' level as indicated in Annexure-I, the contractor shall provide all facilities for testing of materials at Zonal laboratory/NABL Accredited laboratories /IITs at his own cost. The lump sum/rates quoted by the contractor shall be deemed to be inclusive of these tests. The rates of various tests conducted in the laboratory of MES are indicated in Annexure –I. The contractor shall bear the actual charges of 'C' level tests (to be done in labs other than MES labs) irrespective of rates indicated in Annexure-I. Wherever it is convenient to get 'B' level tests done at NABL Accredited laboratory, the same can be done at the cost of the contractor and no separate recoveries will be made by the Department for the same.

29.4 The recoveries on account of testing charges wherever applicable shall be effected from the Running Account payments due to the contractor payable after completion of the respective tests or whenever the test is due whichever is earlier.

30. **INSPECTION OF SITE BY THE TENDERER.**

30.1 The tenderer is advised to contact the Garrison Engineer for the purpose of inspection of site(s) and relevant documents other than those sent herewith, who will give reasonable facilities for the purpose. The tenderer shall also make himself familiar with the working conditions, accessibility of site(s), availability of materials and other cogent conditions which may affect the entire completion of work under this contract.

30.2 The tenderers shall be deemed to have inspected the site(s) and made themselves familiar with the working conditions, whether they have actually inspected the site(s) or not.

31. **APPROACHES**. The contractor shall make arrangements for and provide at his own cost all temporary approaches, if required to the site (s), after obtaining approval in writing of the GE to the layout of such approaches.

32. **LOCATION OF BUILDINGS AND WORKS**. There may be some changes in location/siting of buildings shown in the site (layout) plan(s) to suit local conditions and/or departmental requirements. The contractor shall have no claim what-so-ever consequent to such changes in the location/siting of works.

33. **COORDINATION WITH OTHER AGENCIES**. The contractor shall permit free access and afford normal facilities and usual convenience to other agencies or Departmental workmen to carry out connected works or services under separate arrangements. The contractor will not be allowed any extra payment on this account and no compensation shall be admissible to the contractor on this account..

34. **RECORD OF MATERIALS AND PURCHASE VOUCHERS.**

34.1 The quantity of materials such as cement, steel, paints, water proofing compound, chemicals for anti-termite treatment and the like, as directed by the Engineer-in-Charge (the quantity of which cannot be checked after incorporation in 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.

34.2 Materials brought to site shall be stored as directed by the Engineer-in-Charge and those already recorded in Measurement Book shall be suitably marked for identification.

34.3 **MATERIALS TO BE PROCURED BY CONTRACTORS:-**

(i) Vouchers in respect of cement, steel, major E/M equipment like transformers, DG Sets, pumps, motors, AC and lift equipment will be submitted invariably. For all original works, keeping in view specific provisions and circumstances for each contract, it may be necessary that certain additional items require verification of vouchers. GE shall list out all such items after issue of tender and submit the same in his comments on the tender documents. The list of such items shall be put up by E8 section (through E4 if required) to the Accepting Officer for his approval. The list should be work specific and not general in nature.

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(ii) Original purchase vouchers shall be defaced by the Engineer-in-Charge and photocopies shall be kept in record. Genuineness of purchase voucher shall be verified by the Engineer in Charge before considering the same for making payment. Initially JE may verify the vouchers after taking confirmation on phone or through e mail. The contractor shall ensure that the materials are brought to site in original sealed containers/ packing, bearing manufacturer's marking except in the cases of the requirement of materials being less than smallest packing.

(iii) These instructions shall also be applicable in case of contracts based on IAFW - 1815Z.

34.4 Bitumen shall be purchased directly from main manufacturers only. In case of small quantity, the Accepting Officer may allow procurement of Bitumen from authorised dealers of main manufacturers. Purchase vouchers for the same shall be defaced by the Engineer-in-Charge, indicating reference to the Contract number under his dated signature and photocopies thereof shall be kept on record so as to avoid their being used again.

34.5 The vouchers will clearly indicate the Contract number and the IS No and specific alternative to which the material conforms in case of various alternatives in IS. In case the contractor procures the Bitumen mix from Hot Mix Plant, the copy of voucher of Bitumen provided by the main manufacturer to the Hot Mix Plant shall be submitted by the contractor.

35. **WATCH/LIGHTING**. The contractor shall, at his own cost, take all possible precautions to ensure safety of life and property by providing necessary fencing, barrier, light, watchmen etc during the progress of work and as directed by the Engineer-in-Charge.

36. **CLEANING DOWN**. Refer Condition 49 of IAFW-2249. The contractor shall clean all floors, remove cement, lime or paint drops, clean joinery, glass panels etc, touch up all paint work and carry out all necessary items of work in connection therewith and have the whole premises clean and tidy to the entire satisfaction of Engineer-in-Charge before handing over the items/works. No extra payment shall be admissible to the contractor for his operation.

37. **MATERIALS AND SAMPLES:-**

37.1 Refer to Condition of 10 of IAFW-2249.

37.2 The materials and articles, which have been specified from certain makers/manufacturers, shall be of makes/manufactures as specified. If the manufacturers specified in tender documents make both ISI marked and conforming to ISI, the materials/articles shall be ISI marked.

37.3 The materials and articles, which have not been specified in tender documents by makes/manufacturers, shall be as under : -

(i) If ISI marked materials are being manufactured, the same shall be ISI marked. For a list of ISI marked manufacturers refer to the website of BIS ie www.bis.org.in.

(ii) If ISI marked materials are not being manufactured, the same shall be conforming to IS Specifications.

37.4 Materials of local origin shall be as specified and conforming to samples kept in GE's office. The tenderer is advised to inspect samples of materials which are displayed in the office of GE before submitting his tender. The tenderer shall be deemed to have inspected the samples and satisfy himself as to the nature and quality of materials he is required to incorporate in the work irrespective of whether he has actually inspected them or not.

37.5 The contractor shall not procure materials and articles unless the samples are first got approved by the GE.

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38. **HANDING OVER OF SITE.** Site for execution of work will be available as soon as the work is awarded. In case it is not possible to make the entire site available on the award of work, the contractor will have to arrange his working programme accordingly. No claim whatsoever, for not giving the entire site on award of work and for giving site gradually, will be tenable. However Work Order No 1 shall specifically indicate phased handing over of site as proposed in consultation with users.

39. **PERFORMANCE SECURITY AMOUNT.** On acceptance of tender, the Govt may accept a **Bank Guarantee Bond, Government Securities, FDR (or any other Government Instruments stipulated by Accepting Officer)** from State Bank of India or any Nationalized Bank / Or Scheduled Banks against Performance Security Deposit Money. The Bank Guarantee is to be in prescribed form which is available and may be seen by the tenderers in the office of GE JHANSI.

40. **REFUND FUND OF PERFORMANCE SECURITY**

40.1 The Performance Security Deposit in any form submitted by the contractor equivalent to 5% of contract sum may be refunded to contractor after the expiration of the defects liability period of **01 (One Year)** after the date of issue of completion certificate by the GE JHANSI provided always that the contractor shall first have been paid the final bill and have rendered a No Demand Certificate (IAFW-451).

40.2 The period of defect liability period shall be **TWELVE CALENDAR MONTH** from the works have been handed over to the Government.

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PARTICULAR SPECIFICATIONS: SECTION-II**1.0 GENERAL**

1.1 The work under this contract shall be carried out in accordance with schedule 'A' particular specifications, drawings, general specifications and other provisions in the MES standard schedule of rates 2020 Pt I & 2020 Part-II.

1.2 The terms general specifications referred to in Para 1.1 herein before as well as referred in IAFW 2249 (General condition of contracts) shall mean the specifications contained in MES standard schedule of rates, ISS and any other standard Engineering books.

1.3 Particular specifications given in hereinafter are brief and only particularize, amend and emphasizes the specifications given in MES Schedule of rates, which are not repeated hereinafter.

1.4 Specification of materials and workmanship shall be all as described in MES schedule except where specifically mentioned otherwise in this documents. General rules preambles to various section/rates special conditions, method of measurement etc given in the MES Schedule shall also apply to this contract unless otherwise mentioned in the tender documents.

1.5 All the material required to be incorporated in this work shall confirm to relevant IS No and shall be ISI marked. Material which are being manufactured without IS certification and ISI Embossing shall confirm to IS provisions.

2 MATERIAL WHICH LOOSE IDENTITY AFTER INCORPORATION

2.1 Contractor will be required to submit purchase vouchers only in respect of items for which payment is claimed in RAR as "Material lying at site". The contractor shall procure the materials from manufacturer authorized dealer/Stockiest where such authorized stockiest have been appointed.

2.2 Purchase vouchers for bitumen VG -10 & Vg-30 and CRMB shall not be insisted when contractor is purchasing the macadam from hot mix plant approved by the GE.

3. PRODUCTION OF RECEIPTED BILLS/CASH MEMO FOR MATERIALS PROCURED:

3.1 The tenderer shall produce receipted bills cash memo from the manufacturer and/or their authorized agents for the full quantity of the all materials as applicable as per pre-requisite before submitting the claims for payment of advance on account of materials collected (material lying at site) in accordance with condition 64 of General conditions of Contracts IAFW-2249.

4. ROAD WORKS MATERIALS (COARSE AGGREGATES)

4.1 Stone metal for Soling, WBM, Premix carpeting shall be from sources as approved by the GE.

4.2 Coarse Aggregate for Semi dense Asphaltic concrete/ Bituminous carpet & premixed bituminous macadam shall be crushed stone conforming to provisions given in para of 20.B.2.5 MES SSR part-I (2020).

4.3 Fine aggregate i.e sand shall be fine sand from Sindh River and shall be all as specified in para-20.A.5.2 of MES SSR part-I (2020).

4.4 Grading of Aggregate : The grading of the aggregate shall be as per relevant clause of MES SSR part-I (2020).

4.5 **Paving Bitumen** Paving bitumen shall be of Viscosity Grade-10 (VG-10) for primer/ tack coat and Viscosity Grade-30 (VG-30) for binder conforming to IS-73-2006. The contractor shall produce original purchase voucher of the manufacturer for the bitumen conforming to the IS for the entire quantity. The contractor shall submit the manufacturer's test certificates for each consignment brought. In addition the GE may also get it tested independently from approved laboratories / IIT /SEMT, Pune. The contractor shall provide all facilities like material, transportation of material to laboratory etc for testing by the department. The test charges shall not be borne by the department.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

PARTICULAR SPECIFICATIONS: SECTION II (Contd...)

- 4.5.1. Tenderers rates shall be deemed to include for provisions of all materials processes operations, plants and specified required detailed in particular specification irrespective of whether these appear in specific items or in the description of schedule 'A' item or not and the contractor will not claim extra for the same. The Govt will not entertain any claim what so ever on account of inaccuracies / misunderstanding if any in the rates.
- 4.5.2. It is an express conditions of the contract that the contractor is requested to visit the site of works viz roads where bituminous carpet is to be laid and ascertain himself the site conditions viz up and down undulation in the roads, nature and extent of pot holes etc before quoting his rates. The thickness of Semi dense Asphaltic concrete as mentioned in Sch 'A' is the minimum thickness above the proudest part of the road. No claim what so ever for excess quantity of material if any required to be provided during execution than initially assessed by him will not be entertained at a later date after submission of tender.
- 4.5.3 Paving Bitumen used shall be of Viscosity Grade-10 (VG-10) for primer/tack coat and Viscosity Grade-30 (VG-30) for binder conforming to IS- 73-2006 for the work and the same shall be procured by the contractor under his own arrangements from the producers listed below:-
- (i) Indian Oil Corporation.
 - (ii) Bharat Petroleum Corporation Ltd
 - (iii) Hindustan Petroleum Corporation Ltd
- 4.5.4. The bitumen shall be tested at the site of the Mechanical mixer plant as well as at works site as directed by GE.
- 4.5.5. The contractor shall prepare the Road surface for old and new surface for 30 M each as a sample and shall be approved by the GE. Balance work shall be executed as per the sample approved by the GE.
- 4.5.6. The following machines/plants are to be used for applying priming /Tack coat, laying of bituminous macadam/Semi dense asphaltic concrete and seal coat:-
- (a) Use of Plants / Machineries: The plants and machineries shall be used in carrying out priming/Tack coat, laying of bituminous macadam/Semi dense asphaltic concrete work as per clauses mentioned below.
 - (i) 20.A.27.4 of MES SSR Part- I (2020) for laying purpose.
 - (ii) 20.B.4.11.1, 20.B.4.11.3 to 20.B.4.11.6 of MES SSR Part-I (2020) for other purpose.
 - (b) The contractor at their own cost shall provide the following T&P and equipments at site in addition to above for quality control and execution of work, which shall be returned to contractor on completion of work.
 - (i) Air compressor for cleaning of road
 - (ii) Digital thermometer
 - (iii) Field density testing equipment.
 - (iv) Testing equipments for binder content.
 - (v) Truck mounted bituminous sprayer.
 - (vi) Compactor (manual type).
- 4.5.7. The roadside manual mixing shall not be permitted.
- 4.6 Rolling in inaccessible portions : In the locations where power rolling is not practicable, rolling by hand roller/ramming by hand may be permitted by GE for proper consolidation without any price adjustment.
- 4.7 Opening and Traffic : Traffic shall be allowed only after complete of the final rolling when mix has cooled down to the surrounding temperature.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

PARTICULAR SPECIFICATIONS: SECTION II (CONTD...)**5. MEASUREMENT OF MATERIALS**

- 5.1 All materials required for road work shall be stacked for measurements before incorporation in work except when contractor is purchasing the macadam from hot mix plant approved by the GE.
- 5.2 The quantities collected shall be sufficient for work as specified. In addition where extra quantities are required these shall be provided by the contractor at no extra cost of Govt to fill hollows appearing during the execution of work.
- 5.3 The measurements of stack shall be jointly recorded by the Engineer-in-Charge and contractors representative in the MB as check of the quantities brought for the work.

6. BITUMINIOUS PREMIXED CARPET

- 6.1 Application of tack coat : The binder shall be heated to its appropriate temperature and applied uniformly over the prepared surface by mechanical sprayer. The tack coat shall be applied immediately before spreading the mix. The rate of tack coat shall be as specified in Schedule 'A'.
- 6.2 Use of Plants / Machineries : The plants and machineries shall be used in carrying out priming / Tack coat, laying of bituminous macadam/Seme dense asphaltic concrete work as per clauses mentioned below and specified under sch 'A' notes here in before.

(i) 20.A.27.4 of MES SSR Part-I (2020) for laying purpose.

(ii) 20.B.4.11.1, 20.B.4.11.3 to 20.B.4.11.6 of MES SSR Part-I (2020) for all other purpose.

- 6.3 Spreading : The mix shall be spread as specified in relevant clause of MES SSR Part-I (2020) as mentioned above. In that case mix shall be raked in a sufficient thickness so as to get compacted thickness as specified. The edges (longitudinal and transverse) of previously laid carpet shall be cut back to its full depth and exposed surface painted with hot coat of bitumen and new mix shall placed in contact with it. The temperature of mix at the time of laying shall be in the range of 120°C to 160°C. Proper record shall be prepared by the contractor for temperature control duly signed by Engineer in Charge.
- 6.4 The contractor shall take all necessary measures for the safety of traffic during repairs and shall erect and maintain such barricades including sign marking flags, lights and flagman as may be required by the EIC for the information and protection of traffic approaching and passing through the section of the road under repairs.

7. **PREMIXED SAND SEAL COAT** : The premixed sand seal coat shall be all as specified in para-20.A.28 of MES SSR part-I (2020).

8. **Pot holes**: The pot hole work shall be carried out as specified in Sch 'A'.

9. **Bituminous macadam** :- Bituminous macadam shall be provided all as specified in Para 20.B.3.1 to 20.B.3.13 of MES Schedule Part I (2020) The combined grading of course/fine aggregate shall be as specified in para 20.B.2.5.4(b) for bituminous macadam of MES Schedule Part I (2020). After the spreading of bituminous macadam mix by mechanical spreaders the compaction shall be done by 8 to 10 tonnes power roller to the required thickness, gradient & camber.

10 SEMI DENSE ASPHALTIC CONCERETE (DAC)**10.1 MATERIALS**

- 10.1.1 The asphaltic concrete shall consist of coarse aggregate, fine aggregate and filler in suitable proportions and mixed with sufficient binder. Every mix should be an economical blend of with proper gradation of aggregate and adequate proportion of bitumen to fulfill the desired properties.

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DCWE (Contracts)
For Accepting Officer

PARTICULAR SPECIFICATIONS: SECTION II (CONTD...)

- 10.2 **Semi dense asphaltic concrete.** Semi dense asphaltic concrete shall be provided all as specified in Para 20.B.4.1 to 20.B.4.7 of MES schedule Part-I (2020). Compaction shall be done with 8 to 10 tonne power roller immediately followed by paver. The combined grading of aggregate shall be as per clause 20.B.2.5.4 (d) and are as under:-

Sieve Description	Percentage Passing
22.4 mm	100
13.2 mm	79-100
11.2 mm	68-90
5.6 mm	33-55
2.8 mm	22-38
710 micron	6-22
355 micron	4-14
180 micron	2-9
90 micron	0-5

11. **Job mix formula for bituminous macadam and semi dense concrete.**
- 11.1 The blending of various types and sized of aggregate shall be done on the basis of the requirements as indicated and optimum bitumen content within the specified limits.
- 11.2 The tenderer shall submit their job-mix formula to the Garrison Engineer before start of work duly tested from CRRI, New Delhi/ SEMT wing, CME Pune/IITs/Approved zonal laboratories.
- 11.3. The approved Job-mix formula shall remain effective unless and until the same is modified and re-approved by the Garrison Engineer. More than one Job-mix formula is permissible based upon the properties of actual materials available during construction of the project and also due to change in sources of material, if any.
- 11.4. For any change in source of supply of aggregate, fresh mix design shall be got done and testing charges shall be borne by the contractor and also nothing extra shall be paid for the extra quantity of binder to be used as per design mix. In case the binder content is less than the specified in sch 'A' recovery @ Rs 45/kg shall be made from the contractor, in case the binder content is more than the specified in sch 'A' then no extra shall be admissible on this ground.
- 11.4.1 **MIXING AND TRANSPIRATION OF MIX**
- 11.4.2 The temperature of binder at the time of mixing shall be in the range of 150 degree Celsius to 165 degrees Celsius and of the aggregates in the range of 150 degrees Celsius to 170 degrees Celsius, provided that at no time, the difference in temperature between the aggregated and binder shall exceed 14 degrees Celsius. The mixing shall be through to ensure that a homogeneous mixture is obtained in which all particles of the mineral aggregates are coated uniformly and temperature of mix shall not exceed 165 degrees Celsius.
- 11.4.3 Hot Mix Plant shall be used for mixing of aggregate and the binder. The binder shall be heated to the specified temperature. The aggregate shall be suitably warmed or heated before loading into hot mix plant. The correct quantity of each size of aggregate shall be fed into mixer with specified quantity of binder.
- 11.4.4 The mix shall be transported from the mixing plant to the point of use in suitable tipper vehicles specified here-in-after. The vehicles employed for transport shall be clean and be covered using suitable covers in transit to ensure that the temperature of mix does not fall below 125 degrees Celsius at the time of laying.

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For Accepting Officer

PARTICULAR SPECIFICATIONS: SECTION II (CONTD...)**11.4.5 SPEREADING OF THE MIX**

- 11.4.5.1 Spreading of SDAC shall be done by means paver specified here in before. SDAC shall not be laid during rainy weather or when the surface is damp or wet. The transverse joints or construction joints shall be placed in the vertical plane after cutting back to the original thickness of previously laid mix. The vertical cut faces shall be painted with bitumen (VG-10 Grade) prior laying of fresh mix.

11.4.6 ROLLING AND COMPACTION

- 11.4.6.1 The rolling and compaction process for semi dense asphaltic concrete (SDAC) shall be in four stages . The rolling shall be done with 8 to 10 tonne Roller and tandem roller used on static mode.
- 11.4.6.2 Rolling operation shall be conducted when the mix is neither too hot not too cold. So that shoving or hair cracks may be eliminated. Rolling shall be continued till the density is achieved at least 98% of that of the Laboratory. Marshall Specimen and all roller marks are eliminated.
- 11.4.6.3 Rolling operations shall be completed in all respects before the temperature of the mix falls below 100 degrees Celsius.
- 11.4.6.4 The wearing surface shall be cold rolled with pneumatic tyred roller for a minimum of 100 passes in a period of 3 months or opening to traffic whichever is earlier and as directed.

11.4.7 PAVEMENTS EDGES

- 11.4.7.1 Pavement shall be laid to corrected width and alignment. To achieve straight and vertical edges, the contractor shall cut back the edges to correct width and alignment by removing extra mix spread. Nothing extra shall be paid on this account.

11.4.8 TEST FOR BINDER CONTENT

- 11.4.8.1 The binder content of the mix shall be tested periodically and as directed by the GE using centrifugal extraction method or such method approved by the GE. The test shall generally be carried out in accordance with established practices and as directed by the GE. Whenever, there is a deviation in the result binder content from approved Job-mix-formula values, it shall be reported to the GE immediately and necessary correction made at the job-mix plant as directed.

11.4.9 RATE

- 11.4.9.1 Unit rate quoted for semi dense asphaltic concrete shall include cost of all material, plant/ tools/ machineries and labour required in all operation, testing including testing of core cutting sample etc. Testing charges including all cartages and lifts involved. All the expense to be required for testing shall born by the contractor without any extra cost to the Govt.

12. Moorum filling

- 12.1 Moorum for berms shall be clean and of good binding quality and shall be obtained from approved sources out side the MD land. Moorum shall be spread, leveled in layers, watered and approved sources out side the MD land. Moorum shall be spread, leveled in layers, water and consolidated with 8 to 10 tonnes power roller. In locations where it is not feasible or practicable rolling shall be done with manual/hand roller as approved by the GE .No price adjustment to rates in schedule 'A' on this account shall be made.

13. **Scarifying and Renewing of water bound macadam**. Refer Clause 20.A.34.1of MES Schedule Part-I (2020).

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For Accepting Officer

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14. **Water bound macadam.** Water bound macadam in layers shall be provided all as specified in clause 20.A.3 and 20.A.21 of MES Schedule Part-I(2020). Moorum as binding material as per clause 20.A.3.3 of MES Schedule Part-I(2020) in addition to screening as per clause 20.A.3.2 of MES Schedule Part-I (2020) shall be used for binding purpose. The consolidated/compaction of each layer shall be done with 8 to 10 tonnes power roller. Stone used for WBM shall of granite/trap/basalt stone and shall be broken or crushed of 63mm to 45mm graded grading size, grading 2.
15. The contractor shall intimate the date and time to the GE well in advance of arrival of the bitumen from the manufacturer. The GE or his authorized rep shall visit the plant and shall certify that the loading tank of bitumen is empty before loading the bitumen. This certificate shall be signed by both the contractor and GE.
16. MES Technical representative shall be present at the hot mix plant as also at work site to ensure quality controls as per relevant MES SSR Pt-I (2020) clauses during manufacture/laying of bituminous acadam. However, this shall not absolve the contractor from the responsibility of ensuring proper quality control for the work & necessary rectification thereafter if required.

17.0 EXCAVATION AND EARTHWORK**18.1 GENERAL**

- 18.1.1 Item rate quoted in Schedule 'A' shall include for excavation and earthwork in soil as described in relevant items of Schedule 'A'.
- 18.1.2 If rock (soft/disintegrated and hard) is met at site, contractor shall immediately notify the fact to the GE in writing. The rock so obtained shall be neatly stacked as directed by the Engineer-in-charge, without any extra cost to Govt. The hard rock obtained from excavation shall become the property of the contractor. Necessary credit for the same shall be deducted from contractor's advance on account payment at the rate of Rs.646.24 per Cubic Metre (Solid contents). The recovery rate for hard rock specified above is firm and the contractor shall have no claim whatsoever on this account. The contractor shall remove the hard rock only after the credit amount is recovered from the interim payments (RARs). The hard rock boulders may be used in the work after breaking them into specified size as approved by Engineer-in-charge or alternatively disposed off from the site for further disposal as deemed appropriate by the contractor. The soft rock obtained from excavation shall be disposed off as directed by the Engineer-in-Charge.

18.2 FILLING IN TRENCHES

- 18.2.1 The approved earth from excavation in foundations shall be used for filling in trenches, and any other situation after removing big stones, grass, roots and vegetable and other organic matter. Earth mixed with small stones/pebbles (if approved by Engineer –in- Charge) is permitted for use in filling under foundation.
- 18.3.1 Filling under sides of trenches shall be in layers not exceeding 250mm and each layer shall be watered, compacted and rammed as approved by Engineer-in-Charge.
- 18.3.2 Surplus spoil shall be removed and spread at places as directed by the Engineer-in-Charge, to a distance n. exc. 50M as mentioned in Schedule 'A' Part I.

18.4 TRENCHES FOR FOUNDATION

- 18.4.1 The excavation shall be restricted to dimensions as directed by Engineer in-Charge at site and specified in MES Schedule. Excavation made, if any, in excess of required depth/width shall be made good by the contractor with cement concrete 1:7:12, type F2 without extra cost to the Govt.

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For Accepting Officer

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- 18.4.2 The beds of the trenches shall be watered and well rammed and any depressions thus formed shall be filled with approved earth as required to the level and slope as directed by Engineer-in-Charge.
- 18.4.3 Measurement of Excavation shall be as per authorised width as given in section III, clause 3.2.3 para (a),(b) & (c) on Serial page No. 21 of MES Schedule (Part II).

CEMENT**TYPE OF CEMENT**

- 19.1.1 Cement shall be Ordinary Portland Cement (OPC) Grade 43 confirming to IS-8112-1989 (Latest revision) or Portland Pozzolana Cement (PPC) confirming to IS-1489-1991. The following checks and procedures shall be followed before the cement supplied by the contractor is accepted and approved for incorporation in the works.

PROCUREMENT: Cement shall be procured from the following manufacturers/main producers:-

- | | |
|----------------------------------------|------------------------------|
| i) The Associated Cement Companies Ltd | Xi) Saurashtra Cement |
| ii) Shree Cement | Xii) Binani Cement |
| iii) Orient Cement | xiii) Madras Cement |
| iv) Century Cement | xiv) Mangalam Cement |
| v) Dahlia Cement | xv) Lafarge Cement |
| vi) Lakshmi Cement | xvi) Bangur Cement, Jaipur |
| vii) Grasim Industries Ltd | xvii) JK Cement |
| viii) Ultra Tech Cement | xviii) Gujarat Ambuja Cement |
| ix) The India Cement | xix) Jaypee Rewa Cement |
| x) Andhra Cement Ltd | xx) Birla Corporation Ltd |

The contractor shall furnish particulars of the manufacturer of cement along with date of manufacture to GE for every lot of cement separately. The documents in support of the purchase of cement shall be verified by the site staff and GE. The cement so brought shall be fresh and in no case older than 60 days from the date of manufacture. Before placing order for cement by the contractor, he shall obtain written approval from the GE regarding name of manufacture, quantity of cement etc. Cement shall be procured for requirement of not more than at a time. The cement shall be consumed in the work within three months after receipt. Cement shall confirm to the requirements of IS specification and each bag of each cement shall bear relevant ISI mark. The weight of each consignment shall be verified by the GE and recorded. The content of cement shall be checked at random to verify the actual weight of cement per bag.

- 19.1.2 **USE OF PPC** For using PPC, the following requirements should be met:-

- (a) PPC should meet the strength criteria of 43 Grade OPC as laid down in IS-8112-1989
- (b) The minimum period for curing and striking off form work shall be as under in lieu of that specified in clause 4.11.6.3 of MES Schedule Pt-I:-
- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| (i) Curing:- Structural RCC work, PCC work, plastering etc | : 14 days |
| (ii) striking off form work from walls, columns and vertical sides of beams | : 3 to 4 days |
| (iii) Slabs (props left under) | : 8 days |
| (iv) Beams soffits (Props left under) | : 9 days |
| (v) Removal of props to slab/beam | |
| (aa) Spanning up to 6 M span | : 16 days |
| (ab) Spanning beyond 6 M span | : 22 days |
| (vi) For cantilever portion of slab form work with support shall be retained until the completion of the casting of the entire frame work of the building. | |

- 19.1.3 In cold climate regions, where temperature is lower than 15 °C, only OPC shall be used.

- 19.1.4 Mixing of OPC & PPC shall not be allowed in a work, However with strict control of the ground executives, different buildings can have different types of cement.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

PARTICULAR SPECIFICATIONS: SECTION II (CONTD...)

- 19.1.5 While procuring PPC, the 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 quality 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 has been received from thermal power plants using high temperature combustion above 1000 C.
- 19.1.6 For using PPC non availability of OPC shall not be insisted upon. Also no price adjustment shall be made for use of PPC.
- 19.1.7 Testing of Cement:
- (a) The manufacturer is required to carry out inspections and testing of cement 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 physical test as applicable and the chemical composition of the cement or authenticated copy thereof, duly signed by the manufacturer with each consignment. The Engineer -in-Charge shall record these details in the Cement Acceptance / Rejection Register, as appended herein below after due verification.

CEMENT SUPPLY/ACCEPTANCE FORM

Contract No. :
 Name of Work :
 Control No : Dated:
Details of Purchase :
 i) Particulars of Manufacturer :
 ii) Details of the supplier (if any) :
Details of Test Certificate:
 i) No and date:
 ii) Particulars of the Issuing authority:

SL No	Nomenclature of Cement	IS Ref	Qty	Specific Surface by Blaine	Soundness by Le Chateliers Method	Setting Time		Average Compressive Strength of three cubes as defined in relevant IS Code				Remarks
						Initial	Final	24h + 30 min	72h + 1h	168h + 2h	672h + 4h	
1	2	3	4	5	6	7	8	9	10	11	12	13

Remarks with Signature :

JE (Civil) :
 Engr-in- Charge :
 Contractor :

Accepted /Rejected :
 Garrison Engineer :

Remarks of BOO/Inspecting Officer/CWE :

(Signature of Contractor)

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 For Accepting Officer

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(b) The GE will organise independent testing of random samples of cement drawn from various lots from the National Test House, SEMT Wing, CME, Regional Research Laboratories, IIT Kanpur, Govt Engineering Colleges or IS approved labs as per following codes

(i) IS-3535-1986 : Method of sampling hydraulic cement.

(ii) IS-4031- : Method of physical test for hydraulic cement.

(iii) IS-4032-1985 : Method of chemical analysis of hydraulic cement.

(c) The contractor shall make available required cement and other facilities for testing of cement by GE as specified herein before and shall bear the cost of testing of irrespective of whether sample passes or fails. The GE shall make payment to the testing house / lab and direct the contractor to deposit the amount in Govt treasury in favour of GE within 10 days of the letter issued by the GE for payment of cost of testing of cement. If contractor fails to do so, the testing charges shall be recovered from the dues of the contractor.

(d) The required quantity of samples of the cement shall be taken in two polythene bags and sealed by the Engineer-in-Charge in the presence of representative of the contractor. The seal shall be authenticated both by the Engineer-in-Charge and representative of the contractor. Out of two samples, one sample shall be sent for testing and other retained by GE in his office. Record of these samples shall be kept by Engineer-in-Charge in the register and copy of the same shall be sent to GE /CWE by him for record in concerned contract files.

(e) Cement brought by the contractor shall be allowed to be incorporated in the work after satisfactory test results of sample sent for testing. GE shall inform the contractor, about the test result and permission to incorporate in the work, in writing. GE shall ensure that word "Pass" is embossed on both sides of the cement bags of lot which has been found as per specifications as per test results.

(f) In case the sample got tested by the GE from the Institutions / Labs mentioned hereinbefore, fails, the concerned lot of cement shall stand rejected. A mark "X" shall be embossed by the GE on both sides of each bag of the rejected lot. The GE shall inform the contractor in writing about the test result and direct him to remove the rejected cement. Contractor shall remove the rejected cement from the site of works within two days of the order by the GE . Contractor shall have no claim whatsoever on account of rejection and removal of cement.

(g) It shall be the responsibility of the contractor to arrange cement well in advance to facilitate the testing, before use in the work. The contractor shall submit the program of procurement of cement to the GE before the date of commencement of the works indicating the dates of procurement and quantity.

(h) If the requirement of cement under this contract is less than 1200 bags, contractor may procure cement from the authorised distributors/dealer of approved manufacturer as mentioned herein above. Contractor shall submit test certificate for each lot issued by the manufacturer. However the independent testing shall be carried out as specified in tender document. It will be ensure that cement used for incorporation in the work will not be more than two month old. The week/date of manufacture of cement (which is normally printed at the bottom end of the cement bag) will be verified by the Engineer-in-Charge from the purchase voucher and the cement bags brought by the contractor at site before incorporation in the work.

19.1.8 STORAGE

(a) The contractor shall store the cement at site in a covered leak proof godown with locking arrangement over a tonnage at least 20cm high, in such a manner as to prevent deterioration due to moisture or intrusion of foreign matter. The stock of cement stored shall be at least 60 cm away from walls. The cement so stored shall be inspected by the J E civil and the rep of the contractor once in a day to ensure the cement is not affected by moisture or by any other means. Engineer in Charge shall make such inspection once in a month. In addition to the inspection Engineer-in-Charge shall attach a certificate with every RAR that cement is stored as per the above provisions and is safe. The tested and untested cement shall be segregated and stored separately with distinct identification. The cement godown shall be provided with two locks on each door. One lock shall be provided by the GE and other by the contractor. The keys of the lock provided by the GE at each door shall remain with the Engineer-in-Charge or his representative and that of the other lock with the contractor's authorized agent at site of works so that cement is removed from the godown only according to the daily requirement with the knowledge of both the parties.

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For Accepting Officer

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- (b) Procurement of cement shall be made in phased manner to avoid storage for long duration.

DOCUMENTATION: The contractor shall submit original vouchers, test certificates and test sheets from the manufacturer / producers for the total quantity of cement supplied under each consignment to be incorporated in the work. All consignments received at the work site shall be inspected by the GE alongwith the relevant documents before sample is taken for the testing. The original vouchers and the test Certificates (original/ authenticated) shall be defaced by the Engineer-in- Charge and kept on record in the Office of GE duly authenticated and with cross reference to the Control Number recorded in the Cement Acceptance / Rejection Register. The Cement Acceptance Register will be signed by JE B/R, Engineer-in-Charge, GE and the Contractor. The Accepting Officer may order a Board of Officers for random check of cement and verification of connected documents. The entire quantity of all cement shall also be suitably recorded in the Measurement Book (not to be abstracted) for record purposes before incorporation in the work and shall be signed by the Engineer-in-Charge and the Contractor.

19.2 CONCRETE

19.2.1 **FINE AGGREGATE (SAND):** Fine aggregate for all concrete work shall be Sindh River sand conforming to samples, complying with the requirement as specified in para 4.4.7.2 for grading zone I of SSR (part I). Sand in the zone II grading may also be permitted provided mix design is done and the requisite strength of the concrete is achieved. All mixes of concrete and mortar mentioned in this tender document shall be by volume except design mix concrete conforming to IS-456 of 2000 for which all the ingredients are proportioned and mixed by weight.

19.2.2 **COURSE AGGREGATE:** Course aggregate shall be crushed stone aggregate and shall conform to specifications given in para 4.4 of SSR (Part I). However in case of controlled quality concrete the provisions made in IS-456-2000 shall be applicable. Where due to less thickness of concrete the use of 20mm graded is not possible, the aggregate shall be of 12.5 mm grading as specified in para 4.4.7.1 of MES Sch (Part-I) without any price adjustment.

19.3 **MIX OF CEMENT CONCRETE:** Cement concrete shall be of the mix as specified in Sch 'A'. Minimum cement content and max water cement ratio for PCC nominal mix of various grades shall be as per Table 5 and 6 of IS-456-2000.

20. **CAT EYES, CONVEX MIRROR , STAINLESS STEEL BOARD AND DELINEATOR** The cat eyes, delineator ,convex mirror, stainless steel board shall be all as described in Sch 'A' / BOQ and of make as approved and as directed by GE.

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For Accepting Officer

Appendix 'A'**LIST OF MAKES/BRANDS/MANUFACTURERS****NOTES:-**

- (a) The list of makes/brands/manufacturers have been grouped into two categories category-I and category-II.
- (b) (In case no make is specified under Category-II, contractor shall provide the make specified in Category-I without any financial implications). Contractor at his discretion may also provide the make of Category — I without any price adjustment.
- (c) In case no make specified in Category-I and II the contractor shall provide any ISI marked material as approved by GE.

S. No	DESCRIPTION OF ITEM	CATEGORY - I	CATEGORY - II
1	2	3	4
1.	Cat Eyes/Studs (Metal/Plastic) Rumble Strip/Speed Breakers, Delinator/Road Barriers & Road Signage	3M	Greenlite
			Dark Eye
			Dark Eye
			Shakti
2.	Solar Cat Eye	3M	
		Tata BP Solar	

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 For Accepting Officer

APPENDIX 'B'**MATERIAL TESTING AND TESTING CHARGES****NOTES TO APPENDIX 'A'**

1. The materials listed here-in-after shall be tested as per the frequency indicated therein, expenses of these shall be borne by the contractor.
2. Level of testing shown in legend as A , B and C are defined as under :-

LEVEL 'A'

- (a) "Site Lab" means own site lab established by contractor at the work site for such tests. This lab shall house all the facilities including T&P machinery, equipment, manpower etc required for conducting tests. This lab shall be operative for the entire duration of the contract till its completion. Tests shall be carried out in the presence of Engineer-in-Charge to be nominated by the GE. Random check of compliance of frequency of testing shall be done by GE.
- (b) Records shall be maintained at work site. These test results shall be signed by the contractor or his authorised representative and aforesaid departmental official.
- (c) Within 15 days of placement of work order No.1 site lab shall be established and action reported by the contractor to GE in writing who will verify the fact and satisfy himself the facilities provided. Thereafter GE will issued a certificate to this effect in writing listing out equipment particulars etc of each materials tests. Only after issue of this certificate by the GE the tests shall be carried out and materials so approved shall be incorporated in the work.
- (d) Manpower, materials, land infrastructure like electricity water etc requires for conducting these tests shall be provided by the contractor.
- (e) Tenderer is deemed to cater for above provisions in his quoted rate of item.
- (f) Remedial measures, if any, required to achieve/obtain desired results for each test shall be taken promptly by contractor.
- (g) In case during any point of time contractor fails to adhere to the laid down frequency of the tests for any reasons whatsoever, the contractor shall get the tests done from any other lab whose name shall be approved by GE in writing. The testing charges payable by contractor to such labs shall be paid by the contractor's quoted rates of item is deemed to include for this eventuality and nothing extra shall be payable to the contractor. No extension of time shall be admissible on this account.
- (h) However, in case GE in his opinion considers that the contractor is purposely not adhering to the laid down frequencies of the tests, he shall reserve the right to deduct penal recovery which shall be double the rates of tests indicated in appendix 'D'. However, besides affecting penal recovery for non-compliance of contractual testing frequency get tests done from zonal lab as per laid down frequency and necessary tests charges given against level 'A' shall be recovered from running bills. In case facilities are not available to conduct tests in zonal lab, then charges paid by GE shall be debited to their running payments. GE's decision shall be final and binding on recoveries.

LEVEL 'B'

- (a) "Zonal Lab" means lab of CE Bhopal Zone, Bhopal at Bhopal.
- (b) The tests shall be conducted as per frequencies laid down for these tests in these labs for which contractor shall provide all requisites facilities like samples, cubes, materials etc, transportation to these labs for testing purposes, it will be contractor's responsibility to adhere to the laid down frequency of testing. Test results shall be sent by lab to the GE whose copies can be made by contractor at his own expense. Testing charges for the tests so conducted shall be recovered at the rates indicated in appendix 'E' from the running payments. The contractor's quoted rates sum is deemed to include for above provision.
- (c) Provision of para (h) above of level 'A' shall be applicable to level 'B' also.

LEVEL 'C'

- (a) Level 'C' lab stands for National Test House/SEMT Wing Pune located in CME Pune 31/ Local Engineering College.
- (b) Rest provisions contained in Para (b) of Level 'B' above shall be applicable here except that contractor shall obtain test results from these labs and hand over to GE. The testing charges payable to these labs for conducting these tests shall be borne by the contractor and his quoted rate of items sum is deemed to include this provision.

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

Annexure-IMATERIALS AND TESTS

SI No	Material	Test	Method of testing	Frequency of tests			Level of test	Rate	Remark
1	2	3	4	5			6	7	8
1.	Brick	1) Compressive strength	IS-3495 (Part-II)	As per IS-5454 as given under:-			A	180/-	Checks for visual and Dimensional characteristics shall also be carried out as per IS:5454
		2) Water Absorption 3) Efflorescence	--Do-- ---Do--- (Part-II)	Lot Size. 1001 to 10000 10001 to 35000 35001 to 50000	sample Size 5 10 15	permissible Nos of defective bricks 0 0 1	A A	150/- 180/-	
2.	Coarse Aggregate	1) Sieve Analysis	IS:2386(Part-I)	One test for every 15 cum of aggregates or part there of brought to site.			A	120/-	
		2) Flakiness Index	---do--	---do--			A	90/-	
		3) Estimation of deleterious materials	---do--	One test for every 100 cum of aggregate or part thereof.			A	120/-	
		4) Organic impurities	---do--	One test per source of supply			C	120/-	
		5) Moisture content	IS:2386(Part-II)	Regularly as Req'd.			A	120/-	
		6) Specific gravity	--do--	One test for each source of supply.			B	120/-	

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MATERIALS AND TESTS (Contd)

SI No	Material	Test	Method of testing	Frequency of tests	Level of test	Rate	Remark
1	2	3	4	5	6	7	8
3.	Fine aggregate	1) Sieve Analysis	(IS:2386 Pt-I)	One test for every 15 cum of FA or part thereof when brought to site.	A	180/-	
		2) Test for clay, silt and impurities.	--do-- Pt-II	--do--	A	90/-	
		3) Specific gravity	--do--	One for each source of supply	B	180/-	
		4) Test for organic impurities	--do--	One test for each source of supply.	C	180/-	
		5) Moisture content	-do- but (Part-II)	Regularly as required subject to 2 tests/ per day when being used.	A	180/-	
4.	Cement	1) Setting time	IS-4031-63 Reaffirmed 1980	Once for each consignment or as and when Reqd.	B	180/-	
		2) Soundness	--do--	--do--	C	120/-	
		3) Compressive strength	--do--	--do--	B	360/-	
		4) Fineness	--do--	--do--	C	120/-	
5.	Structural concrete (M-15 grade and above)	1) Slump test or compacting factor test or VEE-BEE test	IS-119	The Min frequency of sampling of concrete of each grade shall be as under :-	A	180/-	(1) Random sample shall be carried out to cover all mix units.
		2) Compressive strength	IS-516	Qty of Conc. No of IN THE work(M ³) samples 1 – 5 1	A	120/-	(2) Refer IS-456-2000 clause 14 for frequency of sampling.
				6 – 15 2 16 – 30 3 31 – 50 4 51 and above 4+1 for each Addl 50 cum. or part thereof.			

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MATERIALS AND TESTS (Contd)

SI No	Material	Test	Method of testing	Frequency of tests	Level of test	Rate	Remark
1	2	3	4	5	6	7	8
6.	(a) PCC block for walling (Hollow Block)	1) Compressive strength.	IS:2156-1984 (Appx 'B')	8 Blocks out of 14	A	60/-	Samples :- 14 blocks from consignment of every 5000 blocks or part thereof.
		2) Water Absorption.	-do- (Appx 'E')	3 Blocks out of 14	B	120/-	
		3) Density.	-do- (Appx 'A')	5 Blocks out of 14	B	90/-	
	(b) PCC solid for walling.	1) Compressive strength	IS-2185	12 Blocks out of 18	A	60/-	Samples :- 18 Blocks from consignment of every 1000 or Part thereof.
		2) Water absorption.	-do- (Appx 'E')	3 Blocks out of 18	B	120/-	These Blocks shall be checked for dimensions and
		3) Density	-do- (Appx 'A')	3 Blocks out of 18	B	120/-	weight.
7.	Cement flooring Tiles/Terrazzo tiles	1) Water absorption	IS:1237-1980 (Appx 'D')	6 Tiles out of 18	B	180/-	Samples : 18 Tiles from each source of supply selected at Random.
		2) Wet Transverse strength	-do- (Appx 'E')	-do-	B	144/-	
		3) Resistance wear	-do- (Appx 'F')	-do-	C	540	
8.	Burnt clay roofing Tiles (Hand Made) IS:2690(Pt-II) LENGTH 150 MM to 250MM WIDTH 100 MM to 200MM THICKNESS 35 MM TO 50 MM	1) Water absorption	IS : 3495 (Part-II)	6 Tiles out of 12	B	216/-	Samples : 12 tiles from each source of supply selected at Random.
		2) Compressive strength	-do- (Part-I)	-do-	A	180/-	
9.	Manglore Pattern Roofing Tiles	1) Water absorption	IS : 654 (Appx 'A')	6 Tiles out of 32	B	180/-	SAMPLES : 32 tiles from each consignment of 3000 tiles or part thereof. These tiles shall be checked for dimensions and weight.
		2) Breaking load	-do- (Appx 'C')	-do-	B	120/-	
10.	Timber	1) Specific gravity and weight	IS:1708	Minimum 3 samples from a lot of 4 Cum or 250 pieces of seasoned timber.	B	120/-	
		2) Moisture content	-do-	-do-	A	120/-	

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer

MATERIALS AND TESTS (Contd)

Sl No	Material	Test	Method of testing	Frequency of tests	Level of test	Rate	Remark
1	2	3	4	5	6	7	8
11.	Water for constn purpose	1) Test for acidity 2) Test for alkalinity 3) Test for solid content	IS:456 & 3025 -do- -do-	Once at the stage of approval of source of water	B B C	240/- 240/- 300/-	Also refer clause 4.3 of IS:456 and its subsequent clauses regarding suitability of water.
12.	Welding of steel work	Visual inspection Test.	IS:822-1970 Clause-7.1	100% by visual inspection		360/-	Specialized tests, their method and frequency to be decided on consideration of their importance by the Accepting Officer.
13	Timber paneled and glazed door/window shutters(including factory made shutter) -do- -do-	a) Dimensions, sizes workmanship and finish b) STRENGTH TEST 1) Slamming 2) Impact Indentation 3) Shock Resistance 4) Edge Loading	IS:1003 (Pt-I) IS:1303 -do- -do- -do-	Frequency of sampling from each lot shall be as under :- Lot size Sample Size 26 to 50 5 51 to 100 8 101 to 150 13 151 to 300 20 301 to 500 32 501 to 1000 50 1001 and above 80 From each lot 5% of the factory made shutter shall be manufacturer tested for strength tests.	A Manuf- acture	180/-	
14.	Ply Wood (IS:303)	a) Moisture content b) Water Resistance	IS:1734(Pt-I) -do- (Part-6)	Six test pieces cut from each of the boards selected as per table-I shall be subjected to tests.	B C	240/- 240/-	SAMPLING shall be as per IS-7835 Tables II

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DCWE (Contracts)
For Accepting Officer

MATERIALS AND TESTS (Contd)

SI No	Material	Test	Method of testing	Frequency of tests	Level of test	Rate	Remark
1	2	3	4	5	6	7	8
15.	Wood Particle Board(Medium Density) IS:3087-1985	a) Density b) Moisture content c) Water absorption d) Swelling due to surface absorption e) Swelling in water f) Modules of rupture g) Screw withdrawal strength	IS:2380 (Part-3) --do-- --do-- (Part-16) --do--(Part-17) --do-- --do-- (Part-4) --do-- (Part-4) --do-- (Part-4)	Three test specimen from each sample(Size 150mm x 75mm) --do-- --do-- (Size 300mm x 300mm) --do-- (Size 125mm x 100mm) -do- (Size 200mm x 100mm) --do--Three test specimens as per IS : 2380-1977 --do-- as per IS:2385	A A&B A A B C	60/- 60/- 60/- 60/- 90/- 120/-	Sampling shall be done as per IS:3487 with moisture meter.

Legend**A-Site Lab****B-Zonal Lab****C-National test house/SEMT WING/Engg College**

(Signature of Contractor)

DCWE (Contracts)
For Accepting Officer