

**RFP NO: OT/EC/3/57/2025-26/2151****NAME OF WORK : SUPPLY OF STORES FOR 02 X LIVING SHELTER (OJL MODULAR) IN  
THE AOR OF 57 MTN DIV****INDEX PAGE**

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**COMMANDING OFFICER, 110 ENGINEER REGIMENT C/O 99 APO REQUEST FOR PROPOSAL (RFP) INVITATION OF ONLINE BIDS FOR “SUPPLY OF STORES FOR 02 X LIVING SHELTER (OJL MODULAR) IN 57 MTN DIV AOR” NO OT/EC/3/57/2025-26/2151**

1. Tender documents for the above-mentioned work are uploaded herewith on [www.gem.gov.in](http://www.gem.gov.in). You are authorised to participate in this competitive tendering by uploading tender in two covers i.e. **one is technical bid/applications and the second is price /financial bid**. However the President of India does not bind himself to accept the lowest or any tender.
2. All critical dates i.e. publishing dates, downloading dates and bid submission dates shall be referred as per the NIT details mentioned and updated in the website.
3. Tender documents for the above work have been uploaded on website [www.gem.gov.in](http://www.gem.gov.in).
4. Instructions for completion of the tender documents are also given which should be complied with. Contractor's particular attention is invited to the same, which deal with e-tendering process and some new eligibility criteria which is now being introduced in the Deptt.
5. Tenderers to note that NO OFFLINE TENDER SHALL BE ENTERTAINED. The tender documents are available online on website “[www.defproc.gov.in](http://www.defproc.gov.in)”. The interested tenderers/firms must have Digital Signature Certificate (DSC) functional and duly registered on website <https://defproc.gov.in> as bidder.
6. Tenderer shall note that information technology Act, cyber Act along with other Act as relevant shall be applicable.
7. Instruction for participating & filling of tender and all documents referred along with this letter shall be forming part of tender documents and shall be complied with.
8. The address and contact numbers for seeking any clarifications regarding this RFP are given below :-

- |     |  |   |   |
|-----|--|---|---|
| (a) | Queries to be addressed to             | : | Commanding Officer, 110 Engineer Regiment.                                |
| (b) | Postal address for sending the Bids    | : | Commanding Officer,<br>110 Engineer Regiment,<br>C/o 99 APO<br>Pin 914110 |
| (c) | Name/Designation of the contact person | : | Col Gunavrat Bhivgade,<br>CO, 110 Engr Regt                               |
| (d) | Official Contact Number                | : | 03852911806   |
| (e) | E-mail Id of contact personnel         | : | <a href="mailto:gunade.353a@nic.in">gunade.353a@nic.in</a>                |

Sd-x-x-x-x-x  
(Gunavrat Bhivgade)  
Col  
Commanding Officer

**INSTRUCTIONS FOR SUBMISSION OF BID/ TENDER DOCUMENTS**  
**TO BE COMPLIED BY THE TENDERER**

1. **Earnest Money Deposit** : All eligible Contractors are required to submit Earnest Money Deposit ~~but have not executed the Standing Security Bond shall submit Earnest Money Deposit~~ as per details in NIT either in the form of Call Receipt Deposit or FDR from a Schedule Bank in favour of Commanding Officer, 110 Engr Regt. Non-submission of earnest money will render the tender as non-bonafide and consequently rejected.
2. **Performance Security Deposit**: The performance security shall be in favour of Accepting Officer in any of the forms to include Bank Guarantee (Issued by Nationalised /Scheduled Bank with modifications with respect to Performance Security in place of Security Deposit), Govt Security for an amount equivalent to 10% of the contract sum before Supply Order. In case a fixed deposit receipt of any bank is furnished by the contractor to the Government as part of the Performance Guarantee and the bank is unable to make payment against the said fixed deposit receipt the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Government to make good the deficit. Noncompliance of this provision shall constitute sufficient grounds for cancellation of awarded contract and forfeiture of Earnest Money. In case contractor fails to complete the work under the contract then the Performance Security deposit will be deposited in the govt treasury through MRO.
3. **General Instructions for Compliance**
  - 3.1 The tender will only be accepted in the electronic form. All bids to be submitted on website "[www.defproc.gov.in](http://www.defproc.gov.in)" portal. No offline submission of tender is acceptable. The tendering is based on 2 cover system. The tenderer shall submit the documents in requisite format as stipulated in NIT & tender documents and as mentioned herein after.
  - 3.2. Cover wise contents & documents are given herein after. All the enclosures/attachments to be uploaded by bidder for cover 1 shall be in pdf format. The bill of quantities (BOQ)/price Bid shall be uploaded under cover-2 and shall be in Excel sheet (.xls) format. All the documents must be signed by the bidder before submission. The list of documents & content are given as under:-
    - (a) **COVER -1** :The documents/details must be scanned & converted in pdf form before uploading to include all the documents as per list given below :- **(All the requisite documents must have quoted tender/bid ID/No and date on Firm letter Head wherever applicable)**

**Eligibility Criteria:-**

- (i) **Bidder Turnover**:- The minimum average annual financial turnover of the bidder during the last three years, ending on 31<sup>st</sup> March of the previous financial year, should be as more than 200% on total tender value. Documentary evidence in the form of certified audited balance sheets of relevant periods or a certificate from the Chartered Accountant/Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution incorporation of the bidder is less than 3 year-old, the average turnover in respect of the the completed financial years after the date of constitution shall be taken into account for this criteria.
- (ii) **Experience Criteria** :-
  - (a) The bidder should have regularly executed same or similar category work at any Central/State Govt Organization/PSU Public Listed Company in last 3 years before the bid opening date. Copies of relevant contracts to be submitted is as follows:-
    - (aa) Three works costing not less than **40% of estimated cost** or
    - (ab) Two works costing not less than **50% of estimated cost** or

- (ac) One work costing not less than **80% of estimated cost** or
- (b) Quality testing certificate of machinery and equipment not later than 2 year be uploaded with technical bid.
- (c) Self declaration certificate that the site has been recce and there are no issues with respect to site for construction of the said job.
- (iii) **Compliance of Tender Documents:** - The contractor should read all pages of tender documents and upload the same with bid duly signed and stamped.
- (iv) **Past Performance:** - Bidder should upload the Past performance certificate issued by respective buyer organization with SATISFACTORY and above remarks in atleast last one of the last two financial year for the same/ similar work on Supply work not less than 50% of the tender value. The works should be carried out only within Manipur, Arunachal Pradesh and Assam in AOR of HQ Eastern Comd region.
- (v) **Documents to be submitted under details of the firm.**
  - (a) Application for bid participation in Firm's letter head.
  - (b) Scanned copy of DD towards Cost of tender (original copy of EMD deposit to be handed over to CO, 110 Engineer Regiment before bid opening date).
  - (c) Scanned copy of GST Registration.
  - (d) Any other documents which the bidder feels relevant or mentioned in NIT.
  - (e) Scanned copy of EMD deposit in form of FDR/BGB (original copy of EMD deposit to be handed over to CO, 110 Engr Regt before bid opening date).
  - (f) Affidavit that the applicant firm is not black listed or banned by any Govt.
  - (g) Affidavit that no Govt recovery is due against the firm.
  - (h) Copy of valid passport or police verifications of each of the director/partner or proprietor of company/firm.
  - (j) Supply order/Work order details during last 03 years as per format given and other details to prove eligibility as per Manual of Contract 2007 (Available on internet). To include copies of Supply/Work order issued by any Govt department of works of similar nature/more than similar amount of work.
  - (k) Copy of Income Tax Return for last 03 years OR Form 26 AS for last 03 yrs.
  - (l) Turnover certificate for last 03 years duly signed by CA.
  - (m) **Bidders must carry out recce of area which the assets to be constructed and a certificate in this regard also be submitted along with bid documents duly signed by this unit representative.**
  - (n) List of work in hand under progress as on date of submission of bid in firm letter head (Work order/Supply order copy).



- (o) Bid Security declaration certificate.
- (p) Non-disclosure certificate.
- (q) Store delivery assurance certificate.
- (r) Adhar, Pan, firm GSTIN, NEFT Mandate form & cancelled cheque.
- (s) **Engineering Establishment.** The bidder shall have in his establishment:-

(aa) One (01) Graduate Engineer from a Government recognized institution with minimum experience of 02 years.

OR

One (01) Diploma Engineers from Government recognized institution with minimum experience of 04 years.

**Note** :-Please forward affidavits on non-judicial stamp paper each duly notarized from your side having employed each engineer and from engineer side of taking your employment duly supported by attested copy of engineering degree/ diploma certificate as applicable to the individual. T&P, Machinery and Manpower: - The contractor should give an affidavit for possession of required T& P, Machinery and manpower to complete the work as per standard engineering practice and IS Code.

**Note**:-Please submit affidavit on duly notarized affirming being in your possession and having ownership of above T & P.

- (p) Constitution of firm on an affidavit duly notarized indicating status of firm,i.e whether it is proprietorship, partnership, or Limited firm.
- (q) Certified copy of PAN No. /TIN No./GST No of proprietor / partners / firm.
- (r) Indemnity Bond on non-judicial stamp paper of requisite value duly attestedby Notary (on format given below)
- (s) Contractor should have worked in **Manipur** location for last 03 financial year.
- (t) **Solvency Certificate.** The bidder has to produce solvency certificate along withthe bid. The solvency amount to be more than the contract value (Format att as **Appx 'A'**).
- (u) User manual to be printed and supplied in hard & soft copy along with the sample structure.
- (iii) **Termination/ Cancellation of Supply Order.** In the event of slow progress/ work not started against the Supply Order offered to you for those items shall be terminated/cancelled instantly with respect to following work progress: -
  - (a) Work not started within 01 month (30 days) after issuing work order.
  - (b) Overall 25% of work has not been done within 01 months (30 days) afterissuing work order.

- (c) Overall 50% of work has not been done within 02 Months (60 days) afterissuing work order.
- (d) Overall 75% of work has not been done within 03 Months (90 days) afterissuing work order.
- (e) Overall 100% of work has not been done within 04 Months (120 days) afterissuing work order.

**NOTE:** - In the event of breach of contract on any account or no supply order of materials or delay in supply of work, Commanding Officer, 110 Engineer Regiment shall have the **right to cancel the supply order** and purchase the stores at your **RISK AND COST**. Additional expenditure incurred shall be recovered from your firm. Undertaking certificate in this regard **ON FIRM LETTER HEAD** should submit during technical bid. Format is as under:-

**UNDERTAKING CERTIFICATE FOR TERMINATION/CANCELLATION OF WORK ORDER**

It is certified that this firm M/s \_\_\_\_\_ has agreed the following terms and conditions against work progress on supply of the said job which fails Commanding Officer, 110 Engineer Regiment shall have the **right to cancel the supply order** and purchase the stores at our firm's **RISK AND COST**. Additional expenditure incurred shall be recovered from our firm: -

- (a) Work not started within 01 month (30 days) after issuing work order.
- (b) Overall 25% of work has not been done within 01 month (30 days) after issuing work order.
- (c) Overall 50% of work has not been done within 02 Months (60 days) after issuing work order.
- (d) Overall 75% of work has not been done within 03 Months (90 days) after issuing work order.
- (e) Overall 100% of work has not been done within 04 Months (120 days) after issuing work order.

Place:

(Name of the proprietor)  
(With seal and signature)

Date:

**Appendix –A****FORM OF SOLVENCY CERTIFICATE FROM A SCHEDULED BANK**

This is certified to the best of our knowledge and information M/s/Shri/Smt. \_\_\_\_\_ having address \_\_\_\_\_, a customer of our bank are/ is respectable and can be considered solvent/financially sound for any engagement upto Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_). This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

Signature of Bank Manager Place:  
Name, No. & Seal of Bank Date:

**Note:-** In case of partnership firm, certificate to include names of all partners as recorded with the bank.

(iv) **ADDITIONAL TERMS AND CONDITIONS: - (On Bidder Letter Head) to be uploaded with bid:-**

- (a) **Clause:-** The Vendor participating in the bidding must have certified a Fabrication Unit (Proof / certificate should upload alongwith technical bid)
- (b) ISO certification ISO 9001 (Quality and safety), 9000 (Quality Management).
- (c) Lab report from authorized source for PUF panel.
- (d) **NON-DISCLOSURE DECLARATION CERTIFICATE**
  - (i). I M/s. NAME OF FIRM hereby declare that I shall not disclose the contractor any provision, specification, plan design, pattern, sample or information thereof to any third party during and after expiry of Contract.
  - (ii) If defying the norms as per the Contract a legal action may be taken againstme as per the existing Rules.
- (e) **CONFIDENTIALITY CERTIFICATE** It is certified that the Company or any representative of the Company or Agents authorized by the Company will notdisclose any information gained by them or their representatives or Agents, while interacting with the persons of the 110 Engineer Regiment, C/o 99 APO or any other office of the Headquarters 3 Corps, c/o 99 APO or any documents prepared in connection with the project or any documents received by them, or any study carried out by them, directly or indirectly to any person or Company or Institution or Press. Anyviolation therein may be considered as a violation of Indian Official Secret Act 1923.
- (f) **STORE DELIVERY ASSURANCE CERTIFICATE** I hereby confirm that complete store is available for delivery within delivery period at FOR loc. No extensionwhatsoever will be requested w.r.t the delivery period.
- (g) OEM certificate of the firm as per specifications mentioned in specificationdocument uploaded with the bid.
- (h) Bidder's offer is liable to be rejected if they don't upload any of the certificates /documents sought in the Bid document, ATC and Corrigendum if any.
- (j) Undertaking Certificate for the rates quoted will remain valid for six months fromthe date of opening of quotation for repeat/option clause.
- (k) Bidder should have a **OEM auth/dealership certificate for cement/ OPC.**
- (l) **Sample Clause:-** All the bidders must attend pre-bid meeting and produce the sample as per technical specification of item prior to opening of the technical bid. Onlythe bidders with approved sample shall be considered for further technical and financialbidding. Bidders who fail to produce the sample and sellers whose sample gets rejected by the Board of Officers shall be rejected at technical stage.

**INDEMNITY BOND**

This bond of indemnity is executed on this \_\_\_\_\_ day\_ by M/s Shri \_\_\_\_\_ having registered office at \_\_\_\_\_  
\_\_\_\_\_ To indemnify the Govt of India of the following:-

1. We undertake to pay the Government of India any damages that may be found to be recoverable on order of our contracts or failure to execute the contract.
2. We undertake that in case Government is put to pay any loss or disadvantage in execution of contract, the firm shall indemnify the government for all loss or disadvantage.
3. This bond of indemnity is executed by M/s \_\_\_\_\_ and has signed before me. Whatever stated above is true and correct to the best of my knowledge and belief.

Signature of Contractor

Notary

(aa) Notarised affidavit that there is no relationship with any Gazetted/Commissioned Officers and JEs in Department/Corps of Engineers/Ministry of Defence. In case of relation the same shall be disclosed with details.

(ab) An affidavit affirming that all the information and details furnished are true and the bidder may be liable for suitable administrative and legal action in case the information and details are found to be false/ incorrect.

**Note:-** All affidavits must be submitted duly notarized and shall be on Nonjudicial stamp paper of requisite value.

**COVER-2**: Bill of quantities (price/financial Bid) shall be uploaded by bidder duly digitally signed in Excel sheet (.xls) format between the duration (time) allowed for bid submission. This shall be uploaded by contractor along with documents of cover-I. The price Bid/BOQ of those contractors who are considered technically qualified as per documents in cover-I only shall be opened.

3.3 All bids and documents will be digitally signed by the contractor.

3.4.1 The tender documents along with all concerned documents shall be published and made available in public domain (on website [www.defproc.gov.in](http://www.defproc.gov.in)). The time and date fixed under "Critical Dates" heading shall be complied by tenderers & Deptt respectively as applicable.

3.4.2. The tenderer shall login through by creating his login Account on above said website to participate in tendering. The bidder shall download complete tender documents & go through it thoroughly and quote his rates in BOQ (cover 2 enclosures) after downloading the same. The Bidder has to enter name of his firm/Company & the Lump Sum in relevant column & location and submit/ upload his bid after digitally signing the same. The bidder shall note that he will not modify or make any change in any of the documents uploaded by the deptt. In case any such modification/tempering is noticed at any stage, administrative and other action as suitable as per law shall be taken. Contractor shall note that after the date and time fixed for submission of bids no correction/revision can be made to any document. Contractor shall employ Indian national only after verifying their antecedents and credentials. Attention is drawn to condition No 24 & 25 of IAFW- 2249. Subletting of work/contract in any form is not allowed. In this connection Condition No 18 & 53 of IAFW-2249 shall be

referred. For submission of Bid (Technical & price both), the contractor shall ensure timely submission of all documents as per NIT & Tender stipulation.

3.4.3. In the event of lowest tenderer revoking his offer or revising his rates upwards/offering voluntary reduction, after opening of the Technical / Price Bid, the Earnest Money deposited by him shall be forfeited. Reduction offered by the tenderer on freak high rates referred to the tenderer for review shall not be treated as voluntary reduction.

3.4.4. Description of items of work mentioned in "Schedule of work – BOQ" shall be read in conjunction with notes given under Sch 'A' (Schedule of works - BOQ). The contractor shall employ Indian Nationals after verifying their antecedents and loyalty. The tenderer /bidder shall quote his rate on the BOQ file only. No alteration to the format will be accepted; else the bid will be disqualified and summarily rejected. Modification to the rates quoted in the BOQ (excel sheet) possible before the bid closing time and date.

#### 4. CPM

1.1 The tender is based on CPM.

1.2 The tenderer is expected to be fully conversant with the technique and employ technical staff who can use the technique in sufficient details. Sufficient books and other literatures on the subject are widely available which the tenderer may make use of. The tenderer is responsible for supply of all the stores/materials and construction of the shelter as per the specification specified in the tender documents. In case of any ambiguity on the design/specification, the minimum scope as per the provisions given in IS code/ MES SSR-2020 (Part-II) to be provided as per normal engineering practices.

1.3 The tenderers attention is drawn to special conditions of the tender regarding preparation of the detailed network and time schedules as 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 insufficiency and will affect his class of enlistment and future prospects for receiving tenders for the works.

1.4 The department may issue amendments/corrigendum to the tender documents before date & time fixed for start of bid submission. The tenderer is required to read tender documents in conjunction with the amendments if any, issued by the department. Only the errata/amendments issued by the department shall hold good.

#### 1. Detail of work of 02 X Living Shelter (OJL Modular) at 57 Mtn Div AoR:-

Ser No	Job No	Description	Location of work	Paying Authority	Qty of Assets
(a)	OT/EC/3/57/2025-26/2151	Supply of stores for 01 X Living Shelter (OJL Modular)	HQ 57 Mtn Div AoR (Leimakhong)	Commanding Officer, 110 Engr Regt	02

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

Sd-x-x-x-x-x  
(Gunavrat Bhivgade)  
Col  
Commanding Officer

Sig of Contractor \_\_\_\_\_

**110 ENGINEER REGIMENT**  
**NOTICE OF TENDER (e-TENDER)**

1. A tender is invited from the contractor's meeting eligibility criteria for the work as mentioned in para 3.2(a), page 3 of instruction for submission of bid documents.
2. The work is estimated to cost as indicated in Appendix 'A' to Notice of Tender. This estimate however is not a guaranteed and it is merely given as rough guide and if the work costs more or less, the tenderer will have no claim on this account. The tender shall be based as mentioned in Appendix 'A' to Notice of Tender.
3. The work is to be completed within the period as indicated in aforesaid Appendix 'A' to Notice of Tender in accordance with the phasing, if any, indicated in the tender from the date of handing over site.
4. One tenderer/bidder or one firm of the contractor shall participate in not more than one online submission of tender. Under no circumstances will a father and his son(s) or other close relations, who have business dealing with one another be allowed to tender for the same contract as separate competitors. Breach of this contract condition will render the tender of both parties liable to rejection.
5. The Commanding Officer, 110 Engineer Regiment, c/o 99 APO will be the Accepting Officer, hereinafter referred to as such for the purpose of this contract.
6. The tenderer/bidder are required to submit all the documents as given in para 3.2(a) of instruction for submission of bid documents. In case of any deficiency in the documents the same will be intimated to the bidder through document short fall on the portal and bidder will have opportunity to submit the same within prescribed period.
7. Complete status of bids Cover 1 & 2 and its opening etc will be updated on website immediately of the happening of the event or change in status. Submission of documents under cover 1 & price bid under cover 2 does not guarantee the acceptance thereof. The price bid of all bidders shall be opened subject to the condition that the bidder qualifies the laid down eligibility criteria and conditions of the tender.
8. Tender forms and conditions of contract and other necessary documents will be uploaded in cover - 1 & cover-2 as per date given in aforesaid Appendix 'A' to Notice of Tender.
9. The Commanding Officer, 110 Engineer Regiment will return the earnest money applicable to all unsuccessful tenderers by endorsing an authority on the deposit receipt for its refund. All tenderers must be very careful to upload a bonafide tender, and its related documents failing which the Accepting Officer may at his absolute discretion, reserve the right of forfeiting a portion of Earnest Money, Security Deposit or Security Bond amount (not exceeding amount of cost of tender) deposited by the tenderer. A bonafide tender must satisfy each & every condition laid down in this tender.
10. Contractor quoted rates shall be deemed to include amendments/ corrigendum's to tender documents published till last date & time of closing of bid submission. Contractor shall regularly check the corrigendum's published to keep them upto date.
11. Contractor shall quote his rate on the latest BOQ published online with reference to the tender. Bids quoted on previous BOQ shall be summarily rejected and not considered as Bonafide and suitable necessary action may be initiated against the contractor.



12. The tenderers are advised to visit the site by making prior appointment with the Engineer Regiment. A tenderer shall be deemed to have full knowledge of all related documents, samples, site etc. whether he has inspected site or not. The tenderers can submit the tender (cover No 1 & 2) up to the last date & time of submission of bid and the bid will be opened online by the opening officers on the date & time mentioned / stipulated.
13. Copies of the drawings and other documents pertaining to the work and sample of material and stores to be supplied by the contractor will be kept open for inspection of the tenderers in the office of Commanding Officer, 110 Engineer Regiment as mentioned in the aforesaid Appendix 'A' during working hours.
14. The Accepting Officer reserves the right to accept a tender submitted by a public sector undertaking giving a purchase preference over other tenders(s) which may be lowest, as are admissible under the Govt policy. No claim for any compensation or otherwise shall be admissible from such tenderers whose price bid (cover No 2) may be rejected on account of said policy.
15. Commanding Officer, 110 Engineer Regiment will upload status of tender on the date and time indicated in the aforesaid Appendix 'A' to this Notice of Tender.
16. Any tenderer, who puts any alterations to any of the conditions, laid down or puts any other condition of any description whatsoever in his bid submitted is liable to be rejected.
17. The submission of tender by a tenderer implies that he has read the conditions of the tender and has made himself aware of the scope and specifications of work to be done, local conditions and other factors bearing on the execution of the work. This shall also include all the taxes, GST, entry tax, vitality tax of forest department etc.
18. The Accepting Officer does not bind himself to accept the lowest tender or any tender or to give any reason thereof.
19. Subletting of work is not permitted.
20. This Notice of tender shall form part of the contract.
21. Scanned copy of DD with tender/bid enlistment details/documents shall be uploaded as packet 1/cover-1 ('T' bid) of the tender/bid one-tendering portal. DD is refundable in case T bid is not accepted resulting in non-opening of 'Q bid'. The applicant contractor shall bear the cost of bank charges for procuring and encasing the DD and shall not have any claim from the Government whatsoever on this account.
22. Tender form and conditions of contract and other necessary document shall be available on [www.defproc.gov.in](http://www.defproc.gov.in) website for download and shall form part of contract agreement in case the tender/bid is accepted.

Sd-x-x-x-x-x-  
(Gunavrat Bhivgade)  
Col  
Commanding Officer

**APPENDIX 'A' TO NOTICE INVITING TENDER (NIT)**

1	Name of work	<b>Supply of Stores for 02 X Living Shelter (OJL Modular) at in 57 Mtn Div AOR</b>
2	Estimated Cost of Work	-
3	Cost of tender documents	Not Required
4	Period of completion	30 days from the date of Supply Order
5	Website/portal address	<a href="https://gem.gov.in">https://gem.gov.in</a>
6	Type of Contract	The tender shall be based on Lump Sum contract for carrying out complete supply of stores and execution of the shelters at site (inclusive of all the cost required to complete the work).
7	Information & Details:	
	(a) Bid submission start date	As per critical dates to be published online
	(b) Last date of bid submission	As per critical dates to be published online
	(c) Date of bid opening	As per critical dates to be published online
8	Eligibility Criteria	As per para 3.2(a), page 3 of instruction for submission of bid documents.
9	Amount for bid security/earnest money deposit	Eligible Bidders are required to submit Earnest Money Deposit (EMD) @5% of bid value (if applicable) along with their bids. FDR/Bank Guarantee on account of Earnest Money for contracts being concluded at this unit HQ will be made in the name of Commanding Officer, 110 Engineer Regiment C/o 99 APO only the earnest money of the lowest tenderer will be retained till submission of performance Bank Guarantee of 5% on the total cost value of the award of contract and within 28 days from the date of issue of supply order and refund of performance security released after expiry of defect liability period. Defect liability of this work shall be 24 (Twenty-Four) Calendar Months from the certify date of completion of work.
10	Tender issuing and Accepting Officer	Commanding Officer, 110 Engineer Regiment
11	Executive Agency	110 Engineer Regiment

**APPENDIX 'A' TO NOTICE INVITING TENDER (NIT) (Contd...)**

**Critical Dates.** The critical dates with respect to the Tender ref OT/EC/3/57/2025-26/2151.

Ser No	Item	Date	Time
(a)	Published Date	Refer critical dates uploaded on <a href="http://www.gem.gov.in">www.gem.gov.in</a>	
(b)	Bid Submission End Date		
(c)	Bid Opening Date		

**NOTES :-**

- Only Indian firms are eligible to participate in the bidding.
- Tender 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.
- 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 Shortfall in DPP 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 same.
- Invitation for e-tender docs 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 para 3.2(a), page 3 of instruction for submission of bid documents. 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.
- In case the BOQ is revised through the corrigendum and the bidder has failed to quote on revised BOQ (ie 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.
- 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 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.

7. 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.

8. **EPF Code & UAN**: All contractors shall mandatorily be in possession of the EPF Code Number and UAN of employees working under their establishment under EPF & MP Act 1952. So far this tender is concern, before release of Supply Order/Work Order the contractor shall submit EPF Code Number to the Engineer Regiment.

9. **Payment to Labour during execution work**: The payment to labour engaged by the contractor shall be made as per Wages Act. No payments to the contractor /firms will be made unless proof of payment of wages is submitted by the contractor/firm. Adherence to these instructions will be checked during various inspections. Being Principal Employer, the Commanding Officer, 110 Engineer Regiment shall ensure that the contractor fully comply with above provisions.

10. **Defect Liability Period**: The Defect Liability Period in respect of this tender shall be Twenty Four (24) months. In case contractor will not rectify any defects during defect liability period, recovery of the same shall be effected from the Performance Security.

11. **Refund of Performance Security**: The Performance Security Deposit shall be refunded to contractor after expiration of Defect Liability Period. Recovery if outstanding against the contractor shall be effected from the Performance Security as stipulated under Condition 67 of IAFW-2249 (as amended).

Station : c/o 99 APO

Dated : Mar 2025

Sd-x-x-x-x-x-  
(Gunavrat Bhivgade)  
Col  
Commanding Officer

**GENERAL CONDITIONS**

1. **PERIOD OF COMPLETION.** The entire work shall be completed within **75 days** from the date of supply order.
2. The work under this contract shall be executed in restricted area where working hours and **routes are restricted by the authorities controlling the area for security purpose.** This being vital factor regarding loss of man-hours etc. shall be considered by the contractor while quoting his rates for this work. Govt. shall not entertain any claims whatsoever on this account at subsequent date.
3. Probable distributions of various items are indicated on drawing these are tentative and may be varied where necessary at the discretion of Commanding Officer. The contractor shall not be entitled for any claim on account of such varied quantities, alignment or change in re- quantities, no price adjustment shall be done on account of final approved layout within the site plan area.
4. The rates quoted by the contractor shall be deemed to include for **“minor extras” and “constructional detail** “which may not have been specifically mentioned in Sch 'A' or given in particular specification but are essential for the execution of work and services in a workman like manner, sound construction and established engineering practice. The details of such items not specifically shown on drawings/specified shall be furnished during execution of the work. In case of difference of opinion between the contractor and the EPO as to whether or not certain items of work constitute **“minor extras” and “constructional detail”** which are deemed to have been included in the contractor's rates, the decision of the Commanding Officer, 110 Engineer Regiment (Accepting Officer) shall be final, conclusive and binding.
5. Unit rate quoted by the contractor against various items shall, inter alia, be deemed to include for any minor details of construction which are obviously and fairly intended and which may not have been specifically included in the tender documents but which are essential for the execution and completion of works. In case of difference of opinion between the contractor and the EPO as to whether or not, any item of work constitutes 'Minor details of construction', the decision of the Commanding Officer, 110 Engineer Regiment (Accepting Officer) shall be final, conclusive and binding.
6. Unless otherwise specified, unit rate against each item of work shall be deemed to be inclusive of materials and labour, all plants, equipment's and tools including testing for acceptance criteria complete.
7. The defects liability period mentioned in offer competition of Two year shall commence **from the date of completion of the entire work** under the contract. Date of completion shall be clearly indicated vide a letter stating the same by the EPO, on behalf of Govt. of India.

**General Note: -**

1. Site for execution of work shall be handed over as soon as the Supply order is placed in case it is not possible for the department to make entire site available on the date of issue of work order, the tenderer need to arrange his working programme /CPM accordingly. No claim whatsoever for not handing over the complete site to contractor on the date of issue Supply order will be admissible.
2. The LUMP SUM quoted against SCHEDULE 'A' PART-I item, shall deemed to include for all Items of Works complete as specified in Particular Specifications and show non DRAWINGS, NOTES thereon for completion of Work and all minor details though not specifically shown on DRAWINGS or specified in Particular Specifications except Works covered under SCHEDULE 'A' PART-I or unless specifically stated elsewhere in the Tender documents.

3. During Excavation & earth work any damage occurred to the existing services like water supply, sewage line and electric supply etc, the same shall be restored within 24 hrs by the contractors with his own resources. Cost of the effect demand to be included in the quoted rates and no extra will be paid on this account.

4. Road/track cutting for laying /passing the pipes of any required to be done by the contractor shall be made good by him (as directed by commanding officer 110 Engr Regt) using material obtained from cutting and the top surface shall be filled as specified in schedule and as directed by Engineer – in -charge.

5. **Stage wise Photographs:** Contractor shall maintain an album containing photos of each stage (stage Wise) 02 photograph at different angle per stage per building and album shall be kept at site. On completion of work, same will be deposited in office of Commanding Officer (Executive Officer) 110 Engr Regt. The cost of same is deemed to be included in the quoted rate by the contractor. In case off prohibited area for photograph no minus price, adjustment shall be made.

6. **e-Performance Bank Guarantee.** Performance security deposit in favour of Accepting Officer @ 10% of the amount of this Supply Order amount shall be deposited by the Contractor in form of e-Performance Bank Guarantee/BGB issued by a public sector bank or a private bank authorized to conduct government business within 28 days from the date of issue of supply order as per prescribed format. Vendor shall ensure that PBGs to be submitted by him should preferably be sent to Commanding Officer, 110 Engineer Regiment directly by Issuing Bank by registered post (AD). PBG should remain valid for a period of 24 Months beyond the successful completion of all obligations under this supply order. Contractor must revalidate Bank Guarantee, in case of grant of extension of Supply and period (as the case may be).

7. **Payment Instruction (e -payment) :-**

(a) Payment will be made in part or full, subject to receipt and inspection of stores/ constr of asset and satisfaction of the Board of Officers at designated location.

(b) Prescribed pre-stamped, pre-receipted bills in triplicate will be submitted to the paying authority after fulfilling (a) above.

(c) Original copy of supply order will be attached with the bill including necessary test certificates/instruction schedule.

(d) **Payment Schedule:** - On completion of following stages, payments will be released by the Engineer Regiment on successful ground verification.

(i)	On materials laying at site	:	30%
(ii)	On Completion work and site clearance of contract	:	70%

(e) Paying Authority: Commanding Officer  
110 Engineer Regiment  
PIN – 914110  
c/o 99 APO

8. **Taxes.** Firm will ensure that all the taxes are paid for stores supplied against this supply order and payment, as applicable, by the supplier and no additional cost whatsoever will be borne by the consignee.

9. The supplier will quote his GST Registration Numbers and endorse the following certificate on the bill:-

"Certified that the goods on which GST has been charged, have not been exempted under the tax Act or the rules made there under. The charges levied on account of GST on the goods supplied are correct under the provision of the Act or the rules made there under".

10. Where excise duty is claimed, the following certificate should be attached to the bill.

"Certified that the excise duty has been paid, have not been exempted, as noted under the Excise Duty Act. The excise duty charge on the bills is of what has actually been paid".

11. The contractor is responsible for design, execution and the entire scope of work. Therefore the contractor to visit site and assess the site/foundation condition. Nothing additional will be payable on any account for the complete scope of work.

12. In case any item of work left out and if found necessary to be undertaken for efficient use of the facility must stringent of the requirement to be provided.

**Tender Inviting Authority:** Commanding Officer, 110 Engineer Regiment

**Name of Work/ Job:-** **SUPPLY OF STORES FOR 02 X LIVING SHELTER (OJL MODULAR) IN 57 Mtn Div AOR**

**Name of Contractor :-** M/s \_\_\_\_\_

Please refer your offer in response to this unit Contract No **OT/EC/3/57/2025-26/2151** and rates quoted thereon by you.

1. The rates quoted by your firm against our above-mentioned enquiry for stores as per schedule below have been accepted. You are requested to Supply of Work to 110 Engineer Regiment as per the terms & conditions specified at BOQ & Technical specification of all assets and specification of work mentioned in Supply order as applicable :-

**Schedule A part-1/BOQ**

Ser No	Description of Items	A/U	Qty	Lowest rate quoted by the bidder for the Assets (L1 rate)	Remarks
(a)	Supply of Stores for 02 x Living Shelter in 57 Mtn Div AoR	Nos	02		Rate as per BOQ after financial bid opening.
<b>Total amount including GST Rs.</b>					
<b>(Rupees _____ only)</b>					

**SPECIAL NOTE :** The drawings attached with the bid documents is tentative in nature for quoting of rates only. Refers to size/dimensions of building / structure members can be taken. The contractor is required to provide the following:-

(a) Structural design and structural adequacy certificate with design proof checked from Practicing Structural Engineer (Registered)/NIT/Government Engineer College should be submit before commencement of Job.

(b) The contractor has to submit a structural suitability certificate as affidavit design has been got verified from NIT/Government Engineer College/Registered structural practicing Engineer and design offered for execution is suitable for the structure.

- (c) Modification in the design if any to be approved from Chief Engineer and to be submitted before execution for approval of competent authority.
- (d) Certificate of Min 50 years of structural stability and adequacy to be provided by the contractor. Failure in structure in future will be the responsibility of the contractor wholly.
- (e) Site test lab with graduate Engr to be established at the site. Sample of the site test lab to be fwd to NIT/IIT/CETL/Govt Engineering College for monitoring of test result. The tests to be conducted as per IS Codes and IS-456-2000 for the concrete as discussed by the Commanding Officer.

**Consignee.** CO, 110 Engineer Regiment, c/o 99 APO.

2. The items para 2 Ser No (a) shall be supplied at **Leimakhong, 110 Engr Regt (Manipur).**
3. The entire supply should be completed on or before \_\_\_\_\_ **2025.**
4. The quantity of items mentioned in this supply order may be increased/decreased due to change in scope of work on the direction of the Commanding Officer, 110 Engineer Regiment. The Commanding Officer reserves the right to add or delete any item based on the assessed cost.
5. **Technical/ Particular Specifications.** The technical specifications of the item of works is given as **Appendix 'A' & 'B'** of the General Conditions of the tender document. These particular specifications are to be read in conjunction with the drawings and any missing detail if any to be provided by the tenderer as per standard engineering practices/ MES SSR/ IS Code to make the shelters fit for use.
6. **Confidentiality.** The Vendor will ensure confidentiality of the project and will not disclose any information, explicit or tacit, gained by them or their representative or agents, while interacting with the Officers of 110 Engineer Regiment. The authorized representative of the Vendor will sign the **'Certificate of Confidentiality'** given at **Appendix 'A'** with the Company Seal duly affixed.
7. **Inspection Authority.** The store/work will be subjected to an inspection to ascertain that they confirm to the specification as laid down in the supply order. The costs incurred during inspection, if any (only for testing of material), will be borne by the Vendor / Supplier.
8. **Raw Materials.** All raw materials used should be new and as per particular specification given in Technical specifications. Test certificate for all raw materials will be submitted by the seller.
9. **Cancellation.** In case the work is not completed within stipulated period, or if defective shelter is made and the defective work/stores is not replaced/ rectified within 30 days from the date of intimation of such defects, the supply order will be cancelled at the sole discretion of Accepting Officer ie, CO, 110 Engineer Regiment either wholly or to the extent of such defaults. If the defect exceeds Bank Guarantee amount and not rectified after one week from the date of encashment of Bank Guarantee, no stores would be accepted and Supply Order shall be cancelled.
10. **Bidder's offer is liable to be rejected if he fails to upload any of the certificate as asked by the buyer.**
11. **Restricted area condition.** All the work need to be restricted area hence vendor



has to follow all security guidelines given by user unit and accepting officer time to time work. A copy of the same will be given to vendor prior to commencement of work. All documents & sketches pertaining to work will be returned on completion of work. Only Indian Nationals shall be employed for the work. Vendor is required to obtain necessary security passes from the Army formations for labours and technicians employed for the work.

12. In case of inferior quality store or fake item, Accepting Officer has full right to cancel the Supply Order on quality grounds and due to breach of trust and no representation on this account will be entertained. The vendor will be black-listed for the for six months. All vendors to check the given specifications as per the TS before dispatch on account of quality and quantity as per the SO clauses. **Accepting offr will share the list of rejected items to all units in AOR of 3 Corps.**

13. **This RFP is being issued with no financial commitment and the Buyer reserves the right to cancel/ change or vary any part thereof at any stage. Buyer also reserves the right to withdraw the RFP or Supply Order before delivery of stores, should it become necessary at any stage.**

14. In case of failure of supply of items by due date, the Officer Commanding reserves the right to cancel this Supply Order.

Sd-x-x-x-x-x-x  
(Gunavrat Bhivgade)  
Col  
Commanding Officer

TECHNICAL SPECIFICATION

DRAFT COSTED SCHEDULE OF WORK

Name of Work : Provision of 02 x Officer/JCO Living Shelter (Modular) under 57 Div AOR  
Job No : 2151/2024-25

Ser No	Description of work	Brief Specifications	A/U	Qty
1	Provision of 02 x Officer/JCO Living Shelter (Modular) under 57 Div AOR	<b>Officer/JCO Living Shelter.</b> Supply of prefabricated Officers/JCO Living FEMS Type Shelter of size 9.99m x 7.50m x 2.7m (clear headroom upto false roof excluding verandah) with the stores. 1.83m wide covered verandah with column height of 2.5mtr at cantilever end all along the length of the shelter. Technical Specification as per Appx 'A', detail drawing as per Appx 'B' and detailed job card as per Appx 'C'. Electrical items as per Annex I. Plumbing for PPR items as per Annex II and Toilet Block Sanitary/Plumbing Fixtures/toilet Accessories as per Annex III.	Set	2
2		<b>Handstanding</b> Const matrl for handstanding approx (50.00 Sqm) in front of O.J.L. List of stores attached as per Appx 'E' as per Annex-VI	Set	2
3		<b>Drain</b> Const mtrl of drain around O.J.L Shelter. List of stores attached as per Appx 'F' as per Annex-VII	Set	2

**TECHNICAL SPECIFICATION (Contd....)****Appx 'A'**(Refers to Ser No 1 of DTS No 1  
of Job No 2151/2025-26)**TECHNICAL SPECIFICATION FOR OJL SHELTER (MODULAR)**

1. **Scope of Work.** The work consists of manufacture and supply of prefabricated Officers/JCOs Living Shelter (Reloc)/(FEMS) Type Shelter of size **9.99m x 7.50m x 2.7m** (clear headroom upto false roof excluding verandah) with the stores as include the following:-

- (a) 1 x Bed room of size 5.27mtr x 3.76 mtr
- (b) 1 x Bed room of size 4.55 mtr x 3.50 mtr
- (c) 1 x Living room of size 5.26 mtr x 3.50 mtr.
- (d) 1 x Store room of size 2.37 mtr x 3.81 mtr.
- (e) 2 x toilets cum bathrooms, one connected to each bed room. The sizes of toilet blocks will be 2.10 mtr x 1.88 mtr with height of 2.7mtr.
- (f) All electrical items incl accessories all as specified.
- (g) Furniture like single bunks with mattress bed-04Nos, locker -04 Nos etc all as specified.
- (h) **Verandah.** - 1.83m wide covered verandah with column height of 2.35 mtr at cantilever end all along the length of the shelter.

2. **Design criteria.**

- (a) Seismic Co-efficient – As per Seismic Zone V.
- (b) Snow load - 1 meter standing on roof.
- (c) Wind load - Equivalent to wind speed of 55 mtrs /sec as per IS-875.
- (d) Roof slope - 12 degrees.
- (e) External temperature – (-) 40°C to + 35°C.
- (f) Water absorption/Penetration – Nil.
- (g) Termite proofing – Termite proof.
- (h) Fire resistant – Fire retardant & should not emit toxic fumes.
- (j) Ease of construction – Shelter should be modular in design.
- (k) Design load – As per IS 875.
- (l) 'U' value of external walls will not exceed 0.36(+) 5% W/m<sup>2</sup> K.

3. **Design Data.**

- (a) Length - 9.99Mtr (In to In measurement of PUF panel walls).
- (b) Width - 7.50Mtr (In to in measurement of PUF panel walls) excluding verandah.
- (c) Height- 2.70Mtr (clear headroom upto false roof).

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**TECHNICAL SPECIFICATION (Contd....)**

**Material.** All material required for the manufacturing of shelters will be of year 2021 and will comply with relevant Indian standard specification and those given in proceeding as per. The Building shall be considered and manufactured as per IS: 875 for structural design. Steel used shall be conform to IS: 2062/2011 for steel for general structural purposes. The material should provide insulation against extreme cold weather condition.

5. **Structural Members.** All SHS and RHS sections will be of Make TATA , APL Apollo, Swastik or equivalent make Structural Members shall be as per the schedule of structure:-

(a) **Corner Columns (C1)– 4 Nos-** Corner columns shall be made using SHS of 100 x100x 5 mm. The corner columns will have a base plate of 300 x300 x 6mm and top plate of 200 x 100 x 6mm. The corner column is welded to the base frame pedestal.

(b) **Centre Side Wall Columns (C1) - 4 nos** - Centre Side Wall Columns shall be made using SHS of 100 x100x 5 mm. The columns will have a base plate of 300 x300 x 6mm and top plate of 200 x 100 x 6mm. The Centre Side Wall Column is welded to the base frame pedestal.

(c) **Centre Gabel Wall Columns (MC1) - 2 nos** - Centre Gabel Wall Columns shall be made using SHS of 100 x100x 5 mm. The columns will have a base plate of 300 x300 x 6mm and top plate of 200 x 100 x 6mm. The Centre Gabel Wall column is welded to the base frame pedestal.

(d) **Verandh Column (MC2) – 4 nos** – Verandha columns shall be made using RHS of 80 x40x 4.00 mm. The columns will have a base plate of 300 x300 x 6mm and top plate of 200 x 100 x 6mm. The Verandha column is welded to the base frame pedestal.

(e) **Truss– 4 Nos** (As per Drawing) – Split truss shall be made using RHS sections. The top & bottom cord shall be of 100 x 50 x 4.00mm. The Truss inside lacing members will be of RHS 80 x 40 x 4.00 mm. The truss will be welded and will be fixed on to all structural columns using 4 nos 16 mm dia nut bolt on all column jointing. The truss base plate will made of 6 mm this of suitable size.

(f) **Purlin – 36Nos**(As per Drawing) – The purlins shall be made using RHS of 80 x 40x 4.00 mm. The purlins will be fixed in between truss using suitable size plate of 6mm through 12 mm dia nut & bolts with washers.

(g) **Base Frame &Flooring:** Base frame to be designed and fabricated as given in drawing and as per the following specifications Base frame shall be constructed using RHS 80mm x 40mm x 4.00 mm thick. The primary & secondary members will be connected together using suitable end plates of 6 mm thick / angle cleats of 75x75 x 5mm . The base frame has to be completely on nut & bolt system. All members will be joined using 12 mm dia nut bolts with washers.

(h) **Base frame Pedestals. Total 24 Nos Pedestals (14 nos with column (C1) and 10 nos (P1) Base frame supporting)** will be made of SHS 150 x 150 x 6mm of height 400mm with base plate 400 x 400 x 8mm and top plate of size 300 x 300 x 8mm with 4 Nos of 15mm dia hole for providing 75mm long 12 mm dia nut & bolt including 2 x 12 mm dia MS washer.

(j) **Pedestal foundation.** PCC 1:2:4 type B1 using 20mm crushed stone aggregate for foundation of size 500 x 500 x 450mm, as per drawing attached.

(k) **Column Anchoring.** 48 nos - Columns pedestal anchorage made from round / TMT bars of 12 mm x 600mm long to be provide with each, made from The bolts must be made from high tensile steel and minimum length of threads shall be 100mm.

6. **Workmanship:-**

(a) **Welded Connections.** Welded connection will be provided unless otherwise specified in the drawings. The welded connections will be conformed to IS 806-1968Welded connection, unless otherwise specified in the drawings, will confirm to Para 6.7.3 of IS 9595 meeting at a point so as to avoid eccentricity. Connection will be machined and chamfered to fit accurately before welding. Welds will be in accordance with IS-9595.



**TECHNICAL SPECIFICATION (Contd....)**

(b) **Various Fasteners and Fittings.** Fasteners and fitting of mild steel will be fixed where required, fastening means will be provided for the items to be fitted at the time of erection. 10% spare nuts/bolts/J bolts/ Fasteners with washers will be provided per shelter. The fasteners supplied will confirm to relevant IS specification.

(c) **Finishes.** All steel work will be given two coats of red oxide Zinc Chromates paint by the manufacturer in the factory. Requisite of red oxide zinc chromates paints will be provided in sealed containers for retouching and painting after erection. The suppliers to give a neat and fine finish. All surfaces will be thoroughly cleaned by adopting solvent cleaning or any other cleaning method as described in IS 1477, of dust, dirt, stains, oil etc. before painting

7. **Wall & False Ceiling Panels** ( To be provided in shelter and verandah) The PUF Panels shall be 60 mm thick made using 0.60 mm PPGI skins on both sides and CFC Free 44 kgs bulk density (+/- 2 kgs ) PUF Insulation in between. The PUF Panels will be joined together using tongue & groove and cam lock arrangement as per Manufacturer standard. The PUF insulation material in the panel shall have fire retarding and self- extinguishing properties as per international standard. The Wall/ False Ceiling panels shall be manufactured on dis continuous production line having integrated decoiler, forming machine capable on line ribbing and folding PPGI sheet and shall use PLC controlling high pressure dispensing machine of required capacity to inject specified amount of PUF chemical for consistence quality on line. The PUF panel manufacturing machine shall be capable of monitoring and controlling the injection rate to assure specified uniform density dimensional stability and compressive strength. The manufacture/manufacturing facility must full fill following criteria on quality and production capacity **The Wall Panel** outside PPGI colour will be RAL 1001 and Inside colour will be RAL 9002 / 9003. **The False Ceiling Panel** outside & Inside PPGI colour will be RAL 9002 / 9003. **Other details of panels are as follows:-**All material required for the manufacture of shelter shall be new and shall comply with relevant Bureau of Indian Standard Specification.

(a) The bulk density of PUF insulation should be 44 Kg/Cum  $\pm$  2 Kg/ Cum made from CFC free close cell polyurethane foam and the dispensing machinery should be kept with a PLC controlled panel for monitoring and controlling the injection rate to assure specified uniform density requirements. The total thickness of the finished composite wall panel should be 60 mm. The tolerance in the panel can only be on the plus side.

(b) 0.6 mm thick PPGI sheet 'U' channel of size 65mm x 40mm at the bottom (Floor level) and top shall be provided to slide and fit the wall panels. Suitable arrangements will be made to fix the U channel to floor at bottom and on top to structural members. PUF Panel Joining arrangement. The PUF panels shall have Tongue and groove type of joint formed on line on the forming machine integrated with PUF panel manufacture machine.

(c) The manufacture shall have facilities for conducting bend test, impact resistance test pencil hardness test, cross hatch adhesion test, paint coat thickness test to IS-14246 and for galvanizing test to IS-277. The manufacture of PUF panel shall have test certificate/report for fire BS 476 chapter V, VI, VII from CBRI Roorkee for any sample of PUF panels.

(d) The outer color coated **combat disruptive pattern** GI skin made from hot dipped galvanized steel of the panels should be 0.6 mm thick TCT (Total coated thickness). Each panel should be supplied pre-painted with a colour coating of 50 microns of architectural polyester on a minimum 175 gms/m<sup>2</sup> base of Zinc coating on the finished surface only for protection against scratches during handling and transportation. Base metal of GI skin CRCA should be as per IS-513 and grade of zinc coating will be 175 as per IS-277. The pre coated GI sheet skin should have min coating of 4.5 micron epoxy primer and 25 micron polyester top coat on the finished surface and 7-8 micron primer Alkyd Backer on backside which is bounded to the polyurethane foam. The pre coated GI sheet should conform to IS 14246-1995 with manufacturer test certificates conforming to specification.



**TECHNICAL SPECIFICATION (Contd....)**

The PUF insulated core of these composite panels should have the following properties:-

- (a) Density – 44 Kg/Cum  $\pm$  2 Kg/Cum.
- (b) 'U' value of external walls will not exceed 0.36 (+) 5%W/m<sup>2</sup>K
- (c) Flammability – B2 DIN 4102 Part-I.
- (d) Blowing Agent (non CFC) –R-141B..
- (e) Compressive Strength At10%deformation- 2.1 Kg/cm<sup>2</sup>.
- (f) Tensile Strength - 3.7 Kg/cm<sup>2</sup>.
- (g) Bending Strength - 4.0 Kg/cm<sup>2</sup>.
- (h) Adhesion Strength (Foam to Steel) - 2.9 Kg/cm<sup>2</sup>.
- (i) Close Cell Content - 90-95%.

8. **Floor Panels** - The Floor panels of the shelter & wind breaker room shall be of 60 mm thick. The panels will be made using 0.60 PPGI skin ( RAL – 9002 /9003) at the bottom and 40 mm CFC Free 44 kgs bulk density (+/- 2 kgs ) PUF Insulation in between along with 18 mm thick BWR grade plywood on top. The Floor panels will be joined using cam locks & tongue and groove arrangement produced on discontinuous panel production line. The floor top will be provided with 2 mm thick aluminum chequered sheet fixed with suitable counter sunk screws with joint sealing.

9. All Shelter flashing shall be provided using 0.60 mm PPGI of RAL 1001 and RAL 9002 / 9003 as per the colour scheme.

10. **Shelter Roof** - The roof slope shall be 1:4 (12 Degree slope ). Roof shall be provided with 0.60mm pre coated pre coloured steel **combat disruptive pattern** pre- profiled sheets with zinc coating 120 GSM conforming to IS-277 for zinc coating and IS 14246-1995 for steel component. Roofing sheets shall have minimum side overlap of one full corrugation and end overlap of minimum 150mm. The roof will have minimum projection of 300mm beyond the outer surfaces of front & rear walls. There should not be any gap at junctions of false ceiling and walls. These junctions shall be covered with suitable flashing sheet of 0.6mm thick pre-coated sheets of same colour of walls/roof.

11. **Ridge cover.** 0.60mm thick pre coated plain sheet of colour **combat disruptive pattern** matching with the roof for the entire length of the shelter. (The size of each sheet 3000mm long and 600mm wide) will be provided.

12. **Wind Tie.** Flat iron of size 30mm x 3mm thick covering the entire length of the shelter including roof sheet projections will be provided with self tapping screw incl washers to be provided.

13. **Covered Verandah.** Verandah shall be of 1.83 Mtr wide (As per the drawing). Front portion of the verandah shall be covered with the following:-

(a) The verandah frame is to be made using 50mm x 50mm x 1.50mm aluminum box frame all round (as per drawing – dotted line) Top portion from 2mm thick aluminum frame to be fitted with double insulated toughened glass (5mm toughened glass +10mm air gap using strip +5 mm toughened glass = double glass Insulated will be fixed along the length of the verandah with supporting aluminum frame at suitable distances.

(b) Middle portion from 1.50 mm thick aluminum frame to be fitted with double insulated toughened glass sliding window -- 2nos (5mm toughened glass +10mm air gap using strip +5 mm toughened glass = double glass Insulated will be fixed along the length of the verandah with supporting aluminum frame at suitable distances with to be fixed with 1.5mm thick anodized aluminum - Section 2 track sliding window of size 1000 mm x 1000 mm. Aluminum sliding shutters with double insulated toughened glass (5mm toughened glass +10mm air gap using strip +5 mm toughened glass = double glass Insulated window) along with aluminum 3mm thick grill of standard pattern . Window will have proper locking arrangement and will be fixed to the wall panels using suitable

**TECHNICAL SPECIFICATION (Contd....)**

(c) The bottom portion 0.90m height made of 10 mm thick Multiwall Polycarbonate sheet with ISI Mark of 20% transparency fixed with aluminum frame work with supporting frame at suitable distance.

(d) Glass / polycarbonate sheets shall be fixed with the help of rubber gasket and aluminum beading as per good engineering practice.

**14. Doors :-**

(a) **Main Verandah Door (D1) (Size 1200mm x 2100mm) (2Nos)** The door shall be made in integrated door assembly (integrated with wall PUF panel) methodology. Door outer frame shall be made out of 2.0mm thick MS frame. The door will be made of 40 mm thick PUF panels having 0.60mm PPGL on both sides and 39 mm thick 44 kgs PUF density. Door shall be fitted with two numbers 300mm long sliding door bolt with ISI Mark with nuts & bolts. Two numbers 150mm long door D Type handles one on each side shall be fixed. All fittings will be aluminum anodized and shall have ISI mark on these. The door frame shall be fixed using 4 Nos 100mm size, Heavy duty MS anodized hinges. It will be ensured that the door shutter is fixed properly into the door frame and the door is smoothly opening and closing without leaving any gap between frame and shutter. Doors will be provided with one number aluminum hydraulic door closer and door stopper. Door will be provided with a padlock each with two spare keys minimum.

(b) **Door (D2) (Size 1000mm x 2100mm) (3Nos)** The door shall be made in integrated door assembly (integrated with wall PUF panel) methodology. Door outer frame shall be made out of 2.0mm thick MS frame. The door will be made of 40 mm thick PUF panels having 0.60mm PPGL on both sides and 39 mm thick 44 kgs PUF density. Door shall be fitted with two numbers 300mm long sliding door bolt with ISI Mark with nuts & bolts. Two numbers 150mm long door D Type handles one on each side shall be fixed. All fittings will be aluminum anodized and shall have ISI mark on these. The door frame shall be fixed using 4 Nos 100mm size, Heavy duty MS anodized hinges. It will be ensured that the door shutter is fixed properly into the door frame and the door is smoothly opening and closing without leaving any gap between frame and shutter. Doors will be provided with one number aluminum hydraulic door closer and door stopper.

(c) **Toilet / Bathroom Door (D3) (Size 750mm x 2100mm) (2 Nos)** The door shall be made in integrated door assembly (integrated with wall PUF panel) methodology. Door outer frame shall be made out of 2.0mm thick MS frame. The door will be made of 40 mm thick PUF panels having 0.60mm PPGL on both sides and 39 mm thick 44 Kgs PUF density. Door shall be fitted with two numbers 300mm long sliding door bolt with ISI Mark with nuts & bolts. Two numbers 150mm long door D Type handles one on each side shall be fixed. All fittings will be aluminum anodized and shall have ISI mark on these. The door frame shall be fixed using 4 Nos 100mm size, Heavy duty MS anodized hinges. It will be ensured that the door shutter is fixed properly into the door frame and the door is smoothly opening and closing without leaving any gap between frame and shutter. Doors will be provided with one number aluminum hydraulic door closer.

15. **Windows – Double Insulated glass units (W) (03Nos)** PUF wall panels (of the specification mentioned above for the walls) to be fixed with 1.50 mm thick anodized aluminum - Section 3 track sliding window of size 2000mm x 1200 mm. The center portion of the window of size 1000 mm x 1200 mm will be fixed portion. 2 sliding portions of 500 mm x 1200mm on each side will be provided. Aluminium sliding shutters with double insulated toughened glass (5mm toughened glass +10mm air gap using strip +5 mm toughened glass = double glass Insulated window ) along with aluminum 3mm thick grill of standard pattern . Window will have proper locking arrangement and will be fixed to the wall panels using suitable screws. provide decorative curtain rod of length min 2300mm incl all accessories.

16. **Window Canopy.** Rain/sun shed of 0.60 mm thick PPGL sheet of size 2300mm x 450 mm using angle iron frame of size 35mm x 35mm x 3mm duly painted over with red oxide primer.

✓ 17. **Window, Double insulated glass unit (W1) – 02 Nos** PUF wall panels to be fixed with 1.50 mm thick anodized aluminum - Section 2 track sliding window of size 1000mm x 1200 mm. The center portion of the window of size 1000 mm x 1200 mm will be fixed portion. 2 sliding portions of 500 mm x 1200mm on each side will be provided. Aluminium sliding shutters with double insulated toughened glass (5mm toughened glass +10mm air gap using strip +5 mm toughened glass = double glass Insulated window ) along with aluminum 3mm thick grill of standard pattern . Window will have proper locking arrangement and will be fixed to the wall panels using suitable screws. provide decorative curtain rod of length min 2300mm incl all accessories.



**TECHNICAL SPECIFICATION (Contd....)**

Arrangement and will be fixed to the wall panels using suitable screws. provide decorative curtain rod of length min 1300mm incl all accessories.

18. **Ventilator - Double Glass Insulated – 2 Nos-** Ventilator of size 450mm x 600 mm with aluminum top hung shutters (inside opening) and double insulate toughened glass 20 mm (5mm glass + 10 mm air gap+ 5 mm glass) shall be provided conforming to IS-2553, Part I of 1992 with aluminum grill 3 mm thick and of aperture 75 x 75mm and locking arrangement.

19. **Ventilator Canopy** Rain/sun shed of 0.60 mm thick PPGI sheet of size 750 mm x 450 mm using angle iron frame of size 35 x 35 x 3 mm duly painted over with red oxide primer.

20. **Finishes.** All hidden steel surfaces of shelter other than pre coated GI sheet shall be given two coats of red oxide, zinc chromate primer and all exposed surfaces of steel i.e. verandah truss, false ceiling T-iron and outer purlins etc will be given two coats of synthetic enamel paint of matching shade with adjacent shelter surface over a coat of red oxide primer before dispatch of shelters. In addition to above, the following quantity of paints grade 1st quality shall be supplied with each shelter to make good the scratches occurred in handling for construction team only to make good the scratches and the same will not be handed over to the users :-

- |     |                    |   |          |
|-----|--------------------|---|----------|
| (a) | Paint white colour | - | 04 Ltrs. |
| (b) | Turpentine Oil     | - | 04 Ltrs. |
| (c) | Primer red oxide   | - | 04 Ltrs. |
| (d) | Paint brown colour | - | 08 Ltrs  |

21. **Erection tools.** One set for each shelter. Sample set of erection tools will be produced to inspection team and approved during pilot sample inspection. Each set of erection tools will have items as per details given below ISI marked:-

- |     |   |          |
|-----|---|----------|
| (a) | Electric Hand Drill Machine 10mm Make : Bosch     | - 01 No  |
| (b) | Drill bits 9/64" in packet of 10 Nos              | - 01Nos  |
| (c) | Drill bits 1/8" in packet of 10 Nos               | - 01Nos  |
| (d) | Double ended spanner – 3/8" x 5/16"               | - 01Nos  |
| (e) | Double ended spanner – 1/2" x 7/16"               | - 01Nos  |
| (f) | Adjustable spanner – 12"                          | - 01 No  |
| (g) | Screw driver with insulated plastic handle 12"    | - 01 No  |
| (h) | Screw driver with insulated plastic handle 15"    | - 01 No  |
| (i) | Ball pin hammer 1 Kg with wooden handle           | - 01 No  |
| (k) | Centre punch 100mm                                | - 01 No  |
| (l) | Insulated electric pliers 6"                      | - 01 No  |
| (m) | Hand rivet gun machine                            | - 01 No  |
| (n) | Hack saw frame                                    | - 01 Nos |
| (o) | Hack saw blades                                   | - 12Nos  |
| (p) | Bustard half round file 18"                       | - 01 No  |
| (q) | Round file – 3/8"                                 | - 01 No  |
| (r) | Aluminum spirit level 4' long                     | - 01 No  |
| (s) | Aluminum spirit level 6' long                     | - 01 No  |
| (t) | PGI tool box of size 60cm x 45cm x 30cm           | - 01 No  |
| (u) | Tile cutter (type C1, 110mm) with 6 spare blades  | - 01 No  |
| (v) | Silicon gun                                       | - 02Nos  |
| (w) | Jig saw with blade for metal cutting              | - 01 No  |
| (x) | Screw tapping drill bit for Drill machine         | - 01 No  |
| (y) | Measuring tape metallic 30 mtr Long               | - 01 No  |
| (z) | Water leveling pipe (transparent) PVC 100mtr long | - 01 No  |

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**TECHNICAL SPECIFICATION (Contd....)**

- (aa) Silicon tube - 24Nos  
 (ab) Drill bits 10 mm in pkt - 01Nos  
 (ac) PPR joining machine with adapter along with 15mm,20mm,25mm,32mm and 40 mm adapter -01 Set  
 (ad) PPR pipe cutting scissors -01 No

22. Details missing, if any, will be assumed as per good engineering practice and will be provided by the supplier after being approved by inspection team of consignee and the rates will be inclusive of this fact, whenever there is variation between technical specifications and drawings, technical specifications are to be followed.

23. **Quality of steel.** Steel will be of YST- 310 grade. RHS members will conform to IS 4923-1997 and for other steel members conform to IS- 2062. No rerolled steel will be used IS specifications. Test certificate of steel and original bill of purchase of steel will be submitted by the vender (steel which will be used for column, trusses, purlin and runners used).

24. **Flashing.** Suitable flashing with 0.60mm thick pre-coated sheet of matching colour with wall panels will be provided at all joints between roof and wall corners.

25. **Quality of PUF Panels.** PUF panels will be of IS specifications subject to conforming IS - 12436 specification.

26. **Lightning Conductor with earthing:-**

(a) Lightning Conductor made of copper Tube 150 cm long x 25 mm dia with five copper prongs of length 15 cm each fixed to copper ball of dia 50mm and 4mm thick with securing arrangement. Bottom 40 cm portion of the copper tube will be covered with PVC insulating material to avoid direct contact between the building and the lightening conductor. GI plate of 60cm x 60cm x 3mm will be provided for earthing purpose and will be placed 2.5 m below GL. GI plate and copper conductor will be connected by using 4mm dia GI conductor wire of length 6.00 Mtr. GI conductor wire will pass through 6.50 Mtr long PVC conduit pipe to avoid direct contact between building and GI wire. Necessary 10 Nos insulated MS clamps for fitting PVC conduit pipe with building will be provided. For effective earthing of the struck lightening, moisture near GI plate needs to be maintained. Moisture will be maintain by covering GI plate with 15cm alternative layers of 25 kg wood charcoal granules size not less than 10 mm (in HDPE bags), 25 kg edible rock salt granules (in HDPE bags) complete as per details given in the drawing attached. Two GI funnel fixed with 20mm dia GI pipe of length 1.5 m will be provided for passing GI conductor wire and supplying water at 2.5 m depth. Man hole will be covered by using PVC cover of size 45cm x 45cm over PCC pit. 15 cm long Termination point Aluminum strip of size 25mm x 3mm having holes at both ends for fixing GI conductor wire coming from copper tube and GI plate with suitable nuts and bolts, will be provided at plinth level to check the resistance of the earthing.

(b) **Earthing of Building.** Earthing of building will be provided using 4mm dia 3.00 Mtr GI wire connecting to main board to GI earth plate of size 60cmx60cmx6mm thick, 300x300mm PCC pit, GI cover of size 45cmx45cm, GI funnel, GI tube 20mm 1.50 m long, termination point, 15 cm alternative layers of 25 kg wood charcoal granules size not less than 10 mm (in HDPE bags), 25 kg edible rock salt granules (in HDPE bags) complete as per details given in the drawing attached. Cost of earthing is included in the shelter.

27. **Water Supply Fittings.** Two Nos HDPE Triple layer storage tank capacity 500ltrs with all accessories incl staging and connections will be provided as per IS 12701 (1996) Specifications.

28. **MS angle iron staging for water storage tank: As per drawing**—Staging for water storage tank of size 1.35m x 2400 m x 4.50m height, shall be made of MS AI 65x65x6mm vertical posts (04 Nos), 50x50x6mm diagonal members and 65x65x6mm horizontal members as shown in drawing. MS chequered top plate made of 3 mm thick, surrounding & diagonally supported from bottom with MS AI 50x50x6mm thick. MS Flat Iron 40x6mm thick will be provided at the center joint of the MS plate. At the bottom of each vertical post 100mm x100mm x6mm thick MS plate shall be provided for stable of the staging complete as shown in drawing. The parts of staging should be dismountable& fixed using suitable size nut bolts All steel surfaces of staging shall be applied two coats of first quality synthetic enamel paint of sand color

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**TECHNICAL SPECIFICATION (Contd....)**

over two coats of red oxide primer after preparation of surfaces. The water supply system should be planned properly. Air vent pipes should be incl at the out lets from overhead tanks. OHTs should have a control valve at the exit. The water supply pipe lines should be designed in such a manner that a drain pt with a tap is provided to drain the water from all pipes at night during winters. For this, the water sup lines may be arng in a sloping manner.

29. **Manhole.** Manhole shall be made of cement block of size 400 x 200 x 200mm in CM 1: 4. The internal size of manhole shall be of 600x600x600 mm depth (depth vary as per ground condition). The external joints of the PCC block shall be finished flush, and joints of pipe and the masonry shall be made perfectly leak proof. The Man hole shall be built on a 100mm thick bed of PCC 1:4:8 type D2 (40mm graded crushed stone aggregate). The channels and benching shall be done in PCC 1: 2: 4 type B1 (20mm graded crushed stone aggregate), rendered smooth with extra cement. The wall of manhole shall be plastered with 15mm thick water proof cement plaster in CM 1:4 finished smooth. RCC manhole cover shall be provided.

30. **Sewage Disposal.** All outlets from EWCs will be connected to a manhole of size 0.6x0.6x0.6Mtr. The manhole will be connected to a septic tank. The outlet of septic tank would be connected to soakage pit of size 1.80 x 1.80 x 1.50m.

31. **Soakage Pit Cover** 01 x Soakage pit cover made of 3mm thick MS sheet of size 2mx 2m suitably welded with 50x50x6mm thick MS angle iron along the corners and diagonally shall be provided as shown in drg. MS sheet will be welded with the help of MS Flat Iron 40x3mm thick on all sides and at the center joint of the MS plate. Four Nos of lifting handle made of MS round bar shall be provided with each cover. One No of openable MS Hinged cover for inspection of size 600x400mm made of 3mm thick MS sheet, frame with MS angle Iron 30x30x6mm and lifting handle with 5mm dia MS round bar complete as shown in the drawing attached. The cover shall be applied two coats of first quality synthetic enamel paint of sand color over two coats of red oxide primer after preparation of surfaces.

32. **Fire Extinguisher.** Supply of 02 Kg (02 Nos) for each shelter of fire extinguisher dry powder type conforming to IS 13849 along with its accessories.

33. **Iron Foot Scraper.** 01 x of Iron foot scraper with each shelter of size 600 x 450mm made up of MS angle iron frame using MS Al 25x25x3mm of height having 100mm at front and 150mm at rear side compete as shown in drawing attached. 25 Nos of MS flat iron 12x3mm ribs along with a spacer shall be provided as shown in the drawing. The foot scraper shall be applied two coats of first quality synthetic enamel paint of sand color over two coats of red oxide primer after preparation of surfaces.

34. **Iron foot mat.** 01 x Iron foot mat of size 1200mm x 900mm shall be made up of 10mm dia MS round bar frame duly welded all around and chain link mesh of aperture of 20mm made up of 3mm GI wire complete as shown in drawing attached. The MS round bar shall be applied two coats of 1st quality synthetic enamel paint over a coat of red oxide.

35. **FRP Septic Tank (01 No).** FRP Septic tank of wall thickness 5 mm thick 3000 ltrs capacity as per IS specifications:-

- (a) Provn of 110mm dia inlet and 110mm dia outlet with a minimum of 75mm level difference.
- (b) Provn of 75mm dia PVC gas vent pipe 1200mm long toward the inlet with cowel.
- (c) Top side to be reinforced to cater for 900mm of earth filling.
- (d) Tank to be fabricated in two compartments with one baffle wall.
- (e) Manhole of 480mm (dia of opening) towards the inlet side to cater for desludging. The manhole lid of 4mm thick FRP flat sheet duly bolted with 37.5mm long bolts, nuts and washers.

- (f) Total septic volume - 1.50 cum.



**TECHNICAL SPECIFICATION (Contd....)**

(g) One No PVC vent pipe 75mm dia, 2.75 mtr length along with vent cowl be connected with 'P' or 'S' trap of the each water closet. The distance of the septic tank shall be maintained at least 08 mtr from the external face of the shelter, and it should be connected to 'P' or 'S' trap by laying with minimum 110mm dia PVC pipe. PCC bed (1:3:6) of size 2.5m x 1.5m, 100mm thick (using 40mm stone aggregate) shall be provided beneath the septic tank.

36. **Geyser (02 Nos).** Geyser 10ltr capacity including suitable connection pipe, mixture (hot and cold water) and stop cock along with complete accessories. Make-BAJAJ/HAVELLS/USHA.

37. **Bed Side Locker:** Bed side locker of size 0.9M x 0.50M x 1.00M made out of 20 gauge CR steel sheet conforming to IS:513:1994amdt 1& 2. The locker will have two compartments with two separate doors on the front side and a partition on the inner side in the middle dividing the width of the locker into two equal parts. Left Compartment will have two shelves placed horizontally at equal distance and right compartment will have one 20mm dia steel rod 65mm below the top level for hangar arrangement. Vertical reinforcement of 800/400mm to be fitted inside on both the doors as well as on right side of the locker (hanger side).

(a) **Painting.** Two coats of enamel paint dark OG colour/as indicated by consignee over a coat of anticorrosive primer applied through spray painting. Before application of paint all the steel surface shall be thoroughly cleaned to make the same free of rust, mill scale, dirt, oil etc either by mechanical or chemical means.

(b) **Lock.** The locker shall have Hasp & staples as locking arrangement and two steel handles fitted on the front doors. Two tower bolts of 100mm to be fixed inside the left door on top & bottom for locking arrangement. For restricting the move doors inside, two stoppers shall be provided one on the top for full width of the locker and second at the middle of the bottom (1400mm) all as shown in the drg.

(c) **Base.** The locker will be placed on 2 Nos. 100mm high hollow base made with M.S sheet channels.

(d) **Minor Details.** Minor details not mentioned separately in the specifications but required as per sound and good engineering practice shall be adhered to.

(e) **Reference of Drawing :** Drawing No 1/1 of Bed Side Locker.

38. **Single Bunks with mattress. (4 Nos)** Manufacture and supply of single bunk (MS) of size 1830mm (L) x 930mm (W) x 500mm (H) at leg side & 910mm (H) at head side as per drawing attached. Mild steel will be of Grade-304. One No of Mattresses will be provided with Single Bunk.

**Structural Details:-**

(a) **Head & Leg Side Structure :-** Head & Leg Side Structure Head side made of two vertical legs of height 930mm Mild steel square tube of 50 x50x3mm thick and Leg side made of two vertical legs of ht 500mm Mild steel square tube of 50 x50x3mm thick. These verticals are connected with two horizontal connectors 930mm Mild steel square tube of 50 x50x3mm thick (bottom is horizontal and top connector in U shape). Two vertical MS square tubes of size 25 x25 x3mm thick shall be connected between the horizontal members of both head & leg side and 12mm pre-laminated board with teak finish ply is fixed in between two vertical MS square tube with the help of 40mm x 6mm MS flat will be provided at back side of 12mm pre-laminated board. PVC caps in legs of bed is provided for stability. Head side verticals will be provided with 75mm thick leathered cushion over 12mm thick pre-laminated board as shown in drawing. All the welding work shall be organ welding for better finish and durability. Four spare PVC caps for bottom of legs shall be provided.

(b) **Centre Structure:-** 02 x 1830mm long RHS of size 50mm x 35mm x 3.00mm Horizontal members for connecting head & leg side structures and 6 Nos 930mm long MS cross members of size 50mm x 35mm x 3.00mm thick shall be provided over long MS square tube in equal distance for one single bunk as shown in drg and drilling done by 9mm bore for fixing it with vertical legs with the help of flat head bolts. MS strip of size 25mm x 6mm thick be welded on these horizontal members in zigzag shape for supporting the cross members.

**TECHNICAL SPECIFICATION (Contd....)**

(c) **Mattress.** Coir mattress of size 1800mm x 900mm x 100mm shall be provided with each bunk with bed mattresses conforming to IS : 13489/2000 Type 2 and a warranty period of one year. Inner Cushioning Material Rubberized Coir Sheet Medium graded conforming to specification No 8391-87. **Make : Sleepwell/Kurl-on/Duroflex.**

(d) **Beautification.** For beautification proper PVC caps shall be fixed on top of legs. Four spare caps shall also be provided with each bunk.

39. **Chair Writing (Nos 02)** The Writing Chair will be Lacquer finish, synthetic resin and medium back with arms, seat & back cushion. (Drg encls with TS).

- |     |           |   |  |
|-----|-----------|---|--|
| (a) | Brand     | - | Supreme/ Nilkamal/ Cello                       |
| (b) | Material  | - | Plastic  |
| (c) | Color     | - | Ornate Rose wood, Brown                        |
| (d) | Dimension | - | Height -815mm, Width -- 560mm & Depth -- 560mm |
| (e) | Cushion   | - | Back & Seat                                    |

40. **Writing Table (Nos 02)** Table of size 1145 x 610 x 760 mm shall be provided. Table top shall be 19 mm thick pre-laminated decorated particle board fixed with hollow section frame with screw @ 200 mm c/c. The frame work of table shall be of MS hollow section of size 25 x 25 mm all as per drg. End of legs will be sealed with MS sheet 1.6 mm thick with proper welding process to avoid the dust entry. 6 mm thick teak wood lipping shall be provided on all the exposed edges of MDF duly treated with french polish as specified. All steel surface will have two coats of synthetic enamel paint over a coat of red oxide primer. The legs will be fitted with hard PVC shoe. Refer Drg No WT 1/1.

41. **Peg Table (Nos 06)** Peg Table of size 400mm x 400mm x 380mm as per drg. Table top will be 18mm thick pre laminated MDF board of grade-I, exterior quality as per IS-14587 shall be provided. All the wood work and veneered surface shall be French polished. First grade seasoned teak wood as per IS free from knots and cracks shall be used. 6mm thick teak wood lipping shall be provided on all the exposed edges of MDF duly treated with French polish as specified. The legs will be fitted with PVC shoe hard. Ref drg No FD/MAP/11 sheet 1/1.

42. **Chair Easy (Nos 04)** Chair easy of teak wood with plastic cane sheet and back rest of over all size 545 x 545 x 740 mm. All wood work and teak veneered surface shall be French polished. First grade kiln seasoned teak wood free from knots and cracks shall be used. Ref Drg No FD-229 sheet 1/1.

43. **Table Dressing Gents (Nos 02)** All as shown on drawing. Overall size shall be 900mm long, 300mm wide and 150mm high at bottom with support of mirror as 1115mm high. The frame of mirror shall be of overall size of 410 wide and 790mm high. Fixed at 150mm from top of lower base. The box of Table Dressing Gents shall be provided with the back of 12mm thick teak wood plank in one piece and top shall have pre-laminated particle board 12mm thick with teak veneer face on top irrespective of what is shown on drawing. Bottom shall be of 12mm thick pre-laminated particle board with teak veneer face of both sides. Sides and partitions shall be of 12mm thick pre-laminated particle board teak veneer face. The two side drawers equally spaced having 255mm in the middle. Front of drawers shall be of 12mm thick pre-laminated particle board, teak veneer face. Sides of the drawers shall be of 12mm thick teak wood plank running smoothly in the drawers. The bottom and back of drawer shall be of 6mm thick plywood commercial. Front face of shelves shall have 3mm thick teak wood edging as shown on drawing. Two supports of 25mm x 35mm x 1115mm teak wood batten shall be provided as shown on drawing. 5.5mm thick mirror of swastik or Modiguard or Atul, free from distortion and other defects shall be provided on 6mm thick plywood backing. The mirror and plywood backing shall be enclosed in the teak wood frame of 20mm x 12mm in section teak wood bead shall be provided at the back of mirror. All wood surfaces exposed to view when placed in position shall be French polished with high gloss finished. Two knobs of aluminum anodized dark brown in shade shall be provided to both the drawers as directed by Engineer-in-charge. 3mm thick flat key plates of mild steel 25mm x 25mm in section shall be provided at top of mirrors as directed by Engineer-in-charge and painted with black paint. Fixing of Table Dressing Gents shall be done by other sources, if not stated otherwise. Ref Drawing No FD - 230 Sheet No 1/1.



**TECHNICAL SPECIFICATION (Contd....)**

**Bottled Water Dispenser :** Bottled Water dispenser body made of ABS plastic and tank made of Food Grade stainless steel. Capacity of cooling and hot water shall be of 3 liters and 5 liters respectively with 3 temperature taps like Hot, Plain and cold. Heavy duty bottle piercer with bottle holder shall be provided to hold the water bottle of capacity 20 ltrs. Bottom of the body shall consist of a refrigerator of 14 ltrs capacity.

45. **Powder based Fire Extinguisher (Red) :** Supply and installation of fire extinguisher dry powder type 01 Kg (05 Nos) for each shelter conforming to IS 13849 along with its accessories wall mounting holder. It shall be helium leak tested and with 3 years warranty.

46. **Electric items.** Internal electrification of the shelter shall be carried out all as per Make mentioned for the respective items in Annexure- I and shall be having ISI mark on them.

45. **PP-R items** As per Annexure II.

47. **Toilet Block Sanitary/Plumbing Fixtures/Toilet Accessories.** All accessories will confirm to relevant IS code and shall bear ISI mark on them wherever applicable and shall be of first quality. All sanitary items to be approved during pilot sample inspection for make & quality. Details are attached as per Annexure III.

48. **Ceiling Fan.** Ceiling Fan 1200mm sweep with 5 step fan regulator one modular, conforms to IS:2312. ISI marked with double ball bearing with modular fan regulator. Make : Fan – Khaitan/Usha/ Crompton Greaves. Modular Fan Regulator : Havells/Legrand.

49. **Fan Hooks.** Hooks for fixing of ceiling fans are to be provided with supporting rod connected with the 'T' joint supporting the false ceiling panels with proper arrangements for securing it with help of nuts and bolts along with safety locking pin.

50. **Exhaust Fans.** Two Nos Exhaust fan compact type with Louvers of plastic body of 300mm sweep will be provided in utility area. Necessary provision in the form of circular cut of required size for fixing in wall panels will be made at factory end.

51. **Fasteners.** Each shelter shall be supplied with 10% extra fasteners, nuts, bolts, screws, washers etc than actually required.

52. **User Hand Book.** It will be supplied at the scale of One per shelter. The user hand book will be complete with drawings, all details of all parts of the shelters, fittings and fixtures and instructions for erection with detailed drawings. The users hand book will be supplied well in advance and got verified from this department that the parts mentioned in the hand book, their specifications and quantity are strictly and correctly as per technical specifications and the supplier has not changed the specifications. Based on the checked hand book the store will be supplied and received.

53. **Materials Make :-**The quality and sizes of the various types of items provided or used while supply or fabricating shall be conforming to relevant technical specifications. The make that are offered by successful bidder from the list mentioned below will be intimated for approval of Accepting Officer within 14 days from date of placing of supply order. Once make approved as offered and accepted will be final and all materials supplied under supply order will conform to the approved make offered. In case of any disputes / missing of details on account of specifications / makes, bidders are requested to intimate to tender inviting officer before bid quoting. Once tender is accepted no deviation shall be entertained. In this case decision of Accepting Officer shall be final and binding. The supplied items shall be of make as mentioned below:-

(a) All PPGI Coils Shall Be From SAIL / TISCO / RINL / JSW / JINDAL / CRIL / Vardhaman / Uttam Galva / Tata Bhushan

(b) All SHS & RHS Sections Will Be Of Make TATA, APPOLO, SWASTIK, HI-TECH, JINDAL, PRAKASH SURYA

(c) Discontinuous Line Puf Panels Shall Be Of Make MODERN, SVARN

(d) Synthetic Enamel Paint / Primer Berger / Asian Paints / Shalimar / Nerolac / Johnson & Nicholson / Goodlass / ICI India Dulux / Aquolac Paints / Acro Paints

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(e) Multi Strand Copper Wires Avels / Anchor / Finolex / Polycab / Svarn / L&T / RPG / RR Kable / Grandlay / Indoaisan / Kalinga Premium / HPL / Plaza / Paragon (Elektron) / Anchor

(f) Electrical Fittings Anchor / Havells / Bajaj / Finolex / Surya / Wipro / Philips

54. Details missing, if any, will be assumed as per good engineering practice and will be provided by the supplier after being approved by inspection team of consignee and the rates will be inclusive of this fact. Whenever there is variation between technical specifications and drawings, technical specifications are to be followed.

55. **Drawings**. List of drawings is attached as Appx 'B'.

56. All type of accessories like wall panels, floor panels, roof sheets, screw, nuts- bolts etc will be provided 10 % extra for each shelter.

57. Various members and their quantities to be provided with each shelter as given drawings enclosed is tentative and an indicative only. The exact quantities to be provided with each shelter shall be as per actual requirement.

58. **Assets**. List of Job card for each shelter is attached as Appx 'C'.

59. Stencil marking must be done with Paint on all major components and following must be written :-

- (a) Firm's name.
- (b) Supply order No and year.
- (c) Name of the component.
- (d) Job No

**NOTE** :- The supplier will be whole and sole responsible to supply the items required for construction of the asset as per specifications and good engineering practice including minor extras.



**TECHNICAL SPECIFICATION (Contd....)****Appx'C'**

Refers to Ser No 1 of DTS No 1  
of Job No 2151/2025-26

**JOB CARD FOR EACH SHELTER**

<b><u>Se No</u></b>	<b><u>Items Nomenclature</u></b>	<b><u>A/U</u></b>	<b><u>Qty</u></b>
1	Supply and fabrication of Offrs/ JCOs Living Shelter (FEMS Type) of size (9.99m x 9.33m x 2.70m). All as per Technical Specification and as shown in drg attached.	Nos	01
2	Erection tools (Each Shelter) approved make. All as per Technical Specification attached.	Set	01
3	Lightening Conductor with earthing and building earthing complete. All as per Technical Specification attached.	Set	01
4	HDPE triple layer Water Storage Tank 500Ltr All as per Technical Specification and as shown in drg attached. Make:- Sintex/ Supreme / Plasto water tank	Nos	02
5	Water Staging of size 1.80m x 2.91m x 4.50m height. All as per Technical Specification and as shown in drg attached.	Nos	01
6	Soakage Pit and sewage disposal all as per Technical Specification and as shown in drg attached.	Nos	01
7	Soakage Pit Cover of size 2mx2m. All as per Technical Specification and as shown in drg attached.	Nos	01
8	Fire Extinguisher 2Kg (Powder Type). All as per Technical Specification and as shown in drg attached.	Nos	02
9	Supply of Iron foot scrap per of size (600x450) mm. All as per Technical Specification and as shown in drg attached.	Nos	01
10	Supply of iron foot mat of size (1200 x 900) mm. All as per Technical Specification and as shown in	Nos	01
11	FRP Septic Tank wall thickness 5mm thick (3000 Ltrs). All as per Technical Specification and as shown in drg attached. Make Sintex.	Nos	01
12	Geyser 10 ltr capacity including suitable connection pipe, mixture (hot and cold water) and stop cock alongwith complete accessories. Make - BAJAJ/HAVELLS/USHA.	Nos	02
13	Steel Cupboard of size 920x485x1985mm Make : Godrej/ Feather Lite/ Antique)	Nos	04
14	Single Bunk of size 1830 x 930 x 500mm and Mattress of size (1800 x 900 x 100 mm). All as per Technical Specification and as shown in drg attached.	Nos	04
15	Provn of Chair Writing Wooden as per tech specification	Nos	02
16	Provn of Writing Table as per tech specification	Nos	02
17	Provn of Peg Table as per tech specification	Nos	06
18	Provn of Chair Easy as per tech specification	Nos	04
19	Provn of Dressing Table Gents as per Tech specification.	Nos	02

**TECHNICAL SPECIFICATION (Contd....)****Annex 'I'**

Refers to Ser No 1 of TS No 1  
of Job No 2151/2025-26

**ELECTRICAL ITEMS SUPPLIED WITH EACH SHELTER**

Ser No	Items Nomenclature	A/U	Qty
1	LED tube light fitting 1 x 20 watt, complete with all accessories internally prewired and including connecting up within core twisted flexible copper conductor cable with suitable size.	Nos	07
2	Building Security light Fitting 25watt in suitable size of bracket bend to shape with fixing arrangement including connecting up with twin core twisted flexible copper conductor cable with suitable size.	Nos	02
3	Angular batten holder with ISI mark.	Nos	14
4	LED Bulb 15Watt with ISI mark.	Nos	14
5	Switch socket combination 3pin 5Amps box type ISI mark.	Nos	08
6	Switch socket combination 5pin 5Amps cum 15 Amp box type ISI mark.	Nos	05
7	Ceiling rose three terminals/PVC poly carbonate, isolated body with ISI mark.	Nos	14
8	PVC Square block of size 4" X 4" ISI mark for fixing of switches, sockets on bakelite phylum sheet	Nos	25
9	Casing capping double locked box type 25mm x 1800mm long with all fittings/fixtures such as Tee, 'L' for inner and outer corners and joint cap with ISI mark.	Nos	120
10	Casing capping double locked box type 32mm x 1800mm long with all fittings/fixtures such as Tee, 'L' for inner and outer corners and joint cap with ISI mark.	Nos	50
11	Gang Box (3 switches 5 Amps) of ISI mark.	Nos	08
12	Gang Box (2 switches 5 Amps) of ISI mark.	Nos	02
13	Gang Box (1 switches 5 Amps) of ISI mark.	Nos	05
14	Piano type Switch 5Amp of ISI mark.	Nos	25
15	Screw full threaded 15mm	Pkt	03
16	Screw full threaded 25mm	Pkt	03
17	Screw full threaded 50mm	Pkt	02
18	Screw full threaded 75mm	Pkt	02
19	Wire flexible 40/76 with ISI mark.	Roll	01
20	PVC insulated wire multi stranded copper conductor 1.5 Sqmm with ISI mark.	Roll	06
21	PVC insulated wire multi stranded copper conductor 2.5 Sqmm with ISI mark.	Roll	04
22	PVC insulated wire multi stranded copper conductor 4 Sqmm with ISI mark.	Roll	01
23	Distribution Board 12way, double door, single pole and neutral with ISI mark.	Nos	01
24	MCB 10 Amp SP, 240 Volts, 'C' Series.	Nos	05
25	MCB 16 Amp SP, 240 Volts, 'C' Series..	Nos	05
26	MCB 32 Amp SPN, 240 Volts, 'C' Series.. Havells/Indoasian/HPL/Legrand	Nos	01
27	PVC earth wire 1.5sqmm PVC insulated 1100volts copper conductor.	Roll	01
28	Insulation tape 25mm width of 20mtr long.	Roll	03
29	Cable PVC insulated with aluminium conductor multistranded 1100V grade twin core circular type 16Sqmm ISI mark (Unarmoured).	Mtr	100
30	Supply of metallic body Electric Exhaust fan size of 300mm dia, 230v, 50Hz, single phase with louvers complete.	Nos	02
31	Exhaust Fan of size 300mm x 300mm	Nos	02
32	Ceiling Fan 1200mm sweep with 5 step fan regulator one modular, conforms to IS:2312, ISI marked with double ball bearing with modular fan regulator. Fan hooks with MS clamps, bolt and nuts. Make : Fan - Khaitan/Usha/Crompton Greaves. Modular Fan Regulator : Havells/Legrand.	Nos	03



**TECHNICAL SPECIFICATION (Contd....)****Annx 'II'**

Refers to Ser No 1 of DTS No 01  
of Job No 2151/2025-26

**PPR FITTINGS SUPPLIED WITH EACH SHELTER**

<b><u>SerNo</u></b>	<b><u>Items Nomenclature</u></b>	<b><u>A/U</u></b>	<b><u>Qty</u></b>
1	PP-R Pipe (PN20/SDR-6) 3layer with outer dia 25mm.	RM	25
2	PP-R Pipe (PN20/SDR-6) 3layer with outer dia 20mm	RM	20
3	PP-R Pipe (PN20/SDR-6) 3layer with outer dia 15mm.	RM	20
4	PP-R Tank connector outer dia 25 mm	Nos	02
5	PP-R Gate valve connector outer dia 25mm.	Nos	02
6	PP-R Elbow 90 degree plane outer dia 25mm.	Nos	12
7	PP-R Elbow 90 degree plane outer dia 20mm.	Nos	10
8	PP-R Elbow 90 degree plane outer dia 15mm..	Nos	10
9	PP-R Union outer dia25mm.	Nos	02
10	PP-R Wall Clamp dia 25mm.	Nos	10
11	PP-R Wall Clamp dia 20mm.	Nos	10
12	PP-R Socket outer dia 25mm	Nos	04
13	PP-R Plug dia 20mm	Nos	04
14	PP-R Plug dia 15mm	Nos	04
15	PP-R Tee outer dia 25mm	Nos	02
16	PP-R Female Threaded Elbow outer dia 25mm	Nos	10
17	PP-R Male Threaded Elbow outer dia 25mm	Nos	02
18	PP-R Female Threaded Socket outer dia 25mm	Nos	04
19	PP-R Female Threaded Socket dia 20mm	Nos	04
20	Gate valve 25mm dia	Nos	02
21	PVC float valve 25mm bore with aluminum rod and PVC ball. Make: Syment/Aqatek/Ashish/Supreme	Nos	02
22	Gate Valve 20mm dia	Nos	02
23	PP-R Socket 15mm dia	Nos	06
24	PP-R Tee 15mm dia	Nos	06
25	PP-R Elbow 15mm dia	Nos	06

**TECHNICAL SPECIFICATION (Contd....)****Annex 'III'**(Refers to Ser No 1 of DTS No  
1 of Job No 2151/2025-26)**SANITARY FITTINGS SUPPLIED WITH EACH SHELTER**

<b><u>SerNo</u></b>	<b><u>Items Nomenclature</u></b>	<b><u>A/U</u></b>	<b><u>Qty</u></b>
1	Vitreous china ceramic EWC 'P' or 'S' (white colour) with 10 ltrs capacity PVC flushing cistern with seat cover (PVC) complete with entire accessories as per good engineering practice.	Nos	02
2	Corner shelf of toughened glass with Chromium plated steel frame with ISI Mark..	Nos	02
3	CP Towel Rail 600mm long 20mm dia with ISI Mark..	Nos	02
4	Ceramic wash basin (600x450mm) pedestal type (white colour) accessories to include waste pipe, coupling etc. with ISI Mark.	Nos	02
5	Chromium plated 15mm pillar cock with ISI Mark..	Nos	02
6	Chromium plated soap dish with ISI Mark..	Nos	04
7	Chromium plated (CP) bib cock mixture (Long body)..	Nos	02
8	Chromium plated (CP) brass bib cock (short body) with ISI Mark.	Nos	02
9	Chromium plated (CP) brass bib cock (long body) ISI Mark.	Nos	02
10	Chromium plated (CP) brass stop cock.	Nos	08
11	PVC connection 15 mm dia 450 mm long with ISI Mark.	Nos	08
12	Decorative Looking Mirror (600mm x 450 mm) with suitable PVC frame	Nos	02
13	Wash Hand Basins half of toughened glass With Chromium plated steel Frame with ISI Mark).	Nos	02
14	Chromium plated steel coat hook with four prongs with ISI Mark..	Nos	04
15	PVC pipe 75 mm dia	Rm	20
	(i) Socket	Nos	04
	(ii) Tee	Nos	02
	(iii) Elbow	Nos	10
16	PVC pipe 110 mm dia.	Rm	20
	(i) Socket	Nos	02
	(ii) Tee	Nos	03
	(iii) Elbow	Nos	02
17	100 mm dia Stainless steel Jali with hole for waste pipe	Nos	02
18	100 mm dia Stainless steel Jali without hole with ISI mark..	Nos	02
19	PVC Nahani trap 75 mm dia with ISI mark.	Nos	04
20	PVC Cowel 110 mm dia with ISI mark.	Nos	02
21	Bio Digester capacity 1500 ltrs for 4-5 Men	Nos	02
22	Portland Pozzolana Cement (PPC) in 50 Kg bags ISI marked	Nos	25
23	Fine aggregate (Natural sand) conforming to IS : 383 -1978.	Cum	2.5
24	Coarse aggregate (Crushed stone) 20mm graded conforming to IS	Cum	2.0
25	Coarse aggregate (Crushed stone) 40mm graded conforming to IS	Cum	0.50
26	Bricks sub class 'B' old size best locally available (minimum	Nos	1500
27	Mild steel TMT bars 8mm dia reinforcement ISI marked	Kg	20



**TECHNICAL SPECIFICATION (Contd....)****STORE LIST OF CONSTR MTRL FOR APPR**

Ser No	Description of Stores	A/U	Qty for 01x Nos
1	Ordinary Portland cement (OPC) 43 grade in 50 KG bags (Make: ACC/Ultra tech/ Star/CCI/Birla Gold/Dalmia)	Bags	8.00
2	Sand fine best Quality(Dimapur Sand)	Cum	3.00
3	Stone aggregate graded 20 mm	Cum	2.00
4	Stone aggregate graded 40 mm	Cum	3.00
5	Stone aggregate graded 40 - 63mm (Hardcore)	Cum	3.00
6	Interlocking Paver block M-35 grade of size 230mm x 110mm x 80mm	Nos	1923

**STORE LIST OF CONSTR MTRL FOR DR**

Ser No	Description of Stores	A/U	Qty for 01 X shelter	Ql X
1	Ordinary Portland cement (OPC) 43 grade in 50 KG bags (Make: ACC/Ultra tech/ Star/CCI/Birla Gold/Dalmia)	Bags	21.00	
2	Sand fine best Quality	Cum	2.00	
3	Stone aggregate graded 12/20 mm	Cum	2.00	
4	Stone aggregate graded 40 mm	Cum	3.00	
5	Stone aggregate graded 40 - 63mm (Hardcore)	Cum	4.00	
6	Sub class B Bricks of size 230mm x 115mm x 75mm	Nos	3160.00	

**SPECIAL CONDITIONS**

1. **INSPECTION OF SITE** :- It will be ensured by the tenderer that the site visit is undertaken by him/her before placing the bid. No representation in this regard shall be entertained.
2. All precautions shall be taken by the contractor in demolition/dismantling of items. Any damage to existing structure/fittings during course of demolition/dismantling shall be made good by the contractor at his own cost and without any extra cost to the Govt.
3. The location of plant, labour camp, contractor's site office & lab and routes to follow to reach the plant and site shall be as approved by local mil authorities. Contractor shall not be allowed to follow any other route. Changes may, however, be made in the route on any later date. Nothing extra shall be paid to the contractor in this regard.
4. All the works pertaining to this contract shall be supervised by **110 Engineer Regiment**.
5. **Engr-in-Charge Detailed by Commanding Officer 110 Engr Regt for complete execution work. (Part-I Order).**
6. A duly equipped site lab of appropriate size shall be established by contractor for conducting site level tests. The site lab & site office shall always be maintained in a neat & clean condition and the size & quality shall be approved from Commanding Officer, 110 Engr Regt.
7. The equipments and T&P to be deployed by Contractor shall be in good working condition and should not be more than 05 (five) years vintage.
8. Where reinforcement details/thickness of RCC members such as slab, beams, lintels etc are not shown on the drawings, the same shall be supplied by the EPO on the basis of provisions in IS-456- 2000 and IS-13920, the same shall be provided and incorporated in the works by the contractor and no extra payment will be admissible on this account.
9. **CPM Chart**. L1 vendor to submit CPM chart within 15 days of receiving supply order.
10. **CONDITIONS OF WORKING IN RESTRICTED AREA**. The entire work under this contract lies in "RESTRICTED AREA". Restriction for entry to work site and working conditions in Restricted Area shall be as under:-
  - (a) **ENTRY AND EXIT**. The contractor/his agent(s)/ representative(s)/ workmen etc., and his materials carts, trucks or other means of transport, etc., will be allowed to enter through and leave from only such gate or gates and at such times as the EPO or authorities in charge of the restricted area may at their sole discretion permit to be used. The contractor's authorised representative is required to be present at the places of entry and exit for the purpose of identifying his carts, trucks, etc, to the personnel- in- charge of the security of the restricted area.
  - (b) **IDENTITY CARDS OR PASSES** :-
    - (i) The contractor, his agents and representatives **are required individually to be in possession of an identity card or pass duly issued by station authorities or EPO as per latest instruction applicable at station**. The identity card or pass will be examined by the security staff at the time of entry into or exit from the restricted area and also any time or number of times inside restricted area.
    - (ii) **IDENTITY OF WORKMEN**. Every workman shall be in possession of an

Identity Card. The identity cards shall be issued after a thorough vestigation of the antecedents of the labourers, by contractor and attested by the officer-in-Charge of the gen area of wk concerned in accordance with the standing rules and regulations of the unit.

(iii) The contractor shall be responsible for conduct of his workmen, agents or representatives.

(c) Workers/supervisor/contractor and their agents are not allowed to carry smart mobile phone having features like camera, net connection and related apps to the work site. Smart phone are to be deposited with security personnel's of the unit/station. If any worker/supervisor/contractor and their agent found with smart phones at work site then said phones will be seized by the concerned unit/station security authorities for further action.

(d) **SEARCH**. Thorough search of all persons and transport shall be carried out at each gate and for as many times as gate is used for entry or exit and may also be carried out any time or any number of times at the work site within the restricted area.

(e) **WORKING HOURS**. The units controlling restricted area, usually work during six days in a week and remain closed on the 7th day. The working hours available to contractor' labor/staff shall however accordingly get reduced because of the time taken in security checks observed at the time of entry and exit and during working hours. The exact working hours, working days and non working days observed for these restricted area(s), where works are to be carried out shall be deemed to have been ascertained by contractor before submitting his tender. The tenderers attention is invited to the fact that total number of working hours for a unit are prescribed in regulations and that they cannot be increased by the EPO. The definition of "Working Day" as given under condition 1 (t) of IAFW-2249 does not apply in case where the works are carried out in restricted area.

(f) **WORK ON HOLIDAYS**. The contractor shall not carry out any work on gazette holidays, weekly holidays and other non-working days except when he is expressly authorized in writing to do so by the EPO. **The CO may declare any day as non- working day due to exigencies of service.**

(g) **ACCESS TO RESTRICTED AREA AFTER COMPLETION**. After the works are completed and surplus stores etc. removed, the contractor, his agents, representatives or workmen etc., will not be allowed any access to the restricted area except for attending to any rectification of defects pointed out to him by the Commanding Officer, 110 Engr Regt, Engineer-in-Charge.

(h) **FIRE PRECAUTIONS:-**

(i) The contractor, his agents, representatives, workmen etc, shall strictly observe the orders pertaining to fire precautions prevailing within the restricted area.

(ii) Motor transport vehicle, if allowed by the authorities to enter the restricted area must be fitted with serviceable fire extinguishers.

**11. SECURITY OF CLASSIFIED DOCUMENTS**. Contractor's special attention is drawn to condition 2-A & 3 of General Conditions of Contracts (IAFW-2249). The contractor shall not communicate any classified information regarding the works either to Sub-contractors or others without prior approval of the Commanding Officer, 110 Engr Regt, Engineer-in- Charge. The contractor shall also not make copies of the design/drawings and

other documents furnished to him in respect of the work and he shall return all documents on completion of the work or earlier or termination of contract. The contractor shall along with final bill attach a receipt from the EPO in respect of his having returned the classified documents as per condition 3 of General Conditions of contracts (IAFW-2249).

12. **OFFICIAL SECRET ACT.** The contractor shall be bound by the Indian Official secret Act 1923, particularly section 5 thereof, all as per condition 2A of IAFW-2249.

13. **EMPLOYMENT OF PERSONNEL.** Contractor shall employ only Indian Nationals as his representatives, servants and workmen after verifying their antecedents and loyalty. **He shall ensure that no person of doubtful antecedents and nationality is, in anyway, associated with the work.** If for the reasons of technical collaboration or other considerations the employment of foreign national(s) is unavoidable, the contractor shall furnish full particulars to this effect to the Accepting Officer at the time of submission of the tender. As a proof that the contractor has employed only Indian Nationals, he shall render a certificate to EPO within one month from the date of acceptance of tender to this effect. In case the Accepting Officer desires, contractor will have the police verification done of personnel employed by him.

14. **AVAILABILITY OF LAND FOR STORAGE OF MATERIALS, TEMPORARY WORKSHOP AND OFFICES ETC**

(a) **ALLOTMENT OF LAND FOR STORAGE OF MATERIALS INCLUDING TEMPORARY WORKSHOP AND OFFICE.** Refer condition 24 of IAFW-2249. The contractor shall be permitted to store his materials including erecting temporary sheds at the area of land marked on site plan and he shall pay a license fee of Rs 1/- per year or part thereof in respect of each and every separate area of land allotted to him.

(b) **ALLOTMENT OF LAND FOR FABRICATING WORKSHOPS ETC.** Refer condition 24 of IAFW-2249. The contractor shall be permitted to erect his temporary workshops and the like at the area of land marked for the purpose on the site plan and he shall pay a license fee of Rs. 1/- (Rupees one only) per year or part thereof in respect of each and every separate area of land allotted to him.

15. **APPROACHES.** The contractors 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 Engineer-in-Charge/EPO to the layout of such approaches.

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

17. **WATER.** Water will not be supplied by the unit. The tenderers are advised to visit the site of works to ascertain availability of water from civil sources or from nearby natural sources outside ministry of Defence 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 Commanding Officer, 110 Engr Regt/Engineer-in-Charge/EPO 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/EPO and in any case on completion of the work and before issue of completion certificate, unless Engineer-in-Charge 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 what so ever shall be admissible to the contractor, if he is required to remove the pump (s) tube wells before completion of work. Use of water from

such sources shall only be permitted if, found after testing, potable and fit for use in the work. The water from such sources shall be got tested by the contractor from laboratory approved by the Commanding Officer, 110 Engr Regt/Engineer-in- Charge, who shall after satisfying himself permit the contractor to use the water from such sources. Testing charges shall be borne by the contractor.

18 **Electricity.** Electricity will not be supplied by user units.

19 **Layout.** In laying out buildings Centre line dimensions mentioned in the drawings or deduced there from shall be strictly followed.

20 **DEWATERING.** No extra payment shall be admissible for dewatering, if water is met with or accumulated in the foundations or any other excavations due to any cause, whatsoever, and for excavation in mud, bailing and pumping of water if required, shall be done.

21 **CONSTRUCTION LABOUR WELFARE CESS/TAX.** Consequent upon promulgation of ordinance by the President of India, the contractor is liable to pay element for construction labour welfare CESS/Tax. The rates quoted by the contractor shall be deemed to be inclusive of this CESS/TAX.

22 **MINIMUM WAGES PAYABLE.**

(a) Refer condition 58 of IAFW-2249. Govt. of India Min of Labour (Deptt of labour and Employment) vide notification dated have fixed minimum rates of wages as up to dated from time to time for various categories of employees under the Minimum Wages Act 1948. The contractor shall not pay wages lower than minimum wages including allowances as fixed under said notification as updated till the date of receipt of tender. Where in any area the minimum rates of wages are also fixed by state Government for employees in employment in the construction/maintenance of buildings/roads/runways, the labour wages as fixed vide above said updated notification of Ministry of labour or respective state Government whichever is higher in respect of these areas shall be deemed minimum rates of wages payable under this contract and the contractor shall not pay lower than this minimum rates of wages.

(b) Contractor's attention is also drawn, amongst other things to the "explanations" to the schedule of minimum wages referred to above.

(c) 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 up to dated from time to time.

(d) Sch. of minimum wages has not been enclosed along with tender documents. However, contractor shall be deemed to have verified the minimum wages payable as on the last due date of receipt of tender.

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

(f) Wages/salary of employed labourers and supervisor/deployed staff shall be paid by the contractor through Aadhar Linked bank account of individual labour and deployed staff. Relevant details of payment made by the contractor through bank EPO shall be produced for verification of principal employer (EPO).

- 23     **TAXES.**     (a)     Tendered rates are inclusive of recently rolled out  
                             (b)     Goods & Services Tax (GST) made applicable from 01 July 2017  
                             (c)     Labour welfare cess.  
                             (d)     Other levies, royalties & duties.

24     **EQUIPMENT AND MATERIALS :-** All equipment and materials to be incorporated in the work shall be new and of the best of their kind conforming to the latest IS or in their absence to British or other relevant standard specifications.

25     **TESTING OF MATERIAL.** The contractor shall be responsible for various tests to be carried out as listed in Appx 'A' in the site laboratory which will be set up by the contractor for testing of material at his own cost and arrangement and for that, they shall employ a competent technical representative as approved by EPO. All such tests shall be carried out in presence of Engineer-in-Charge. The cost of labour & materials for testing shall be borne by contractor. The quantity of items & work mentioned in this supply order may be increased/decreased due to change in scope of work on the direction of the Commanding Officer, 110 Engineer Regiment. The Commanding Officer reserves the right to delete any item based on the assessed cost.

26     **Joint Receipt Inspection (JRI).**

(a) JRI of stores shall be carried out at FOR/delivery location between the representatives of the firm and a board of officers (BOO) detailed by the consignee's formation within 96 hours of the delivery. The JRI shall consist of:-

- (i) Quantitative checking to verify that the quantities of the delivered items correspond to the quantities defined in the supply order and the invoices. In case of ambiguity, handbook for various established norms will be followed in consultation with CO, 110 Engineer Regiment.
- (ii) Complete functional checking of the stores/equipment as per specifications in the supply order.

27     Upon completion of JRI, the proceedings shall be signed by the BOO and representatives of the firm. In case the representative of the firm is not present, the board proceedings shall be signed by the BOO alone and the same shall be binding on the firm. Deficiencies in Quantity, Quality or Defects shall be recorded in the JRI proceedings and the firm informed in writing to replace/make up the deficiencies/defects.

28.     In case of rejection of goods in full or in part during JRI, the items so rejected shall be removed from the delivery point by the firm at their own cost within 96 hours. The rejected stores shall be replaced by the firm at delivery point free of cost within fifteen days of receipt of intimation from the consignee. On failure to do so, the consignee will be at liberty to purchase the rejected stores at the firms risk and cost.

29.     **Termination of Supply Order.** In the event, items offered by you repeatedly fail in inspection for more than two times or you are not able to rectify the defect at the first instance itself and offer items not conforming to the quality standards mentioned in the Supply Order, the Supply Order offered to you for those items shall be terminated/cancelled instantly.

**Delivery.**



30. **Freight.** Packaging and freight will be sole responsibility of the supplier. Damage/ losses in transit shall be the responsibility of the supplier upto the construction site (s) specified in clause 3 of the Supply Order. The stores will be securely packed and transported without any additional cost to the Govt. to avoid loss or damage during transit so as to reach the consignee in perfect serviceable and fit for use condition. The supplier shall remain responsible for adequacy of packages during transit. The packages shall be marked with the Supply Order and other necessary details for easy identification at the consignee's end. The supplier will be responsible for unloading of stores at FOR and to ensure that the stores are delivered in sound condition without any damage.

31. **Marking.** All the major components will be marked with the following details using suitable stencil or by screen printing :-

- (a) Manufacture/Firm's Name.
- (b) Part No (if any).
- (c) Supply Order
- (d) Consignee.

32. **Risk and Cost Purchase.** In the event of breach of contract on any account or no supply of materials or delay in supply of work, Commanding Officer, 110 Engineer Regiment shall have the right to cancel the supply order and purchase the stores at your risk and cost. Additional expenditure incurred shall be recovered from your firm.

33. **Quality Assurance.** The materials supplied should conform to the ISI standards and specifications as mentioned in Supply Order. An Assurance certificate as per specifications will be produced by the supplier for the supplied quantity of the materials.

34. **Discrepancies.** If there are varying or conflicting provisions made in any of the documents forming part of the Supply Order, Commanding Officer, 110 Engineer Regiment shall be the sole deciding authority with regard to the intention and his decision shall be final and binding. If any item not mentioned in this SO is required for usage of the stores supplied as per good engineering practices, the same will be supplied by the contractor and is deemed to be included in the rate quoted by the contractor.

35. **BLASTING.** Blasting in any form is prohibited. Unless specifically permitted through written approval of competent authority.

36. **Loss Or Damage On Account Of Enemy Action :-** Applicable for works in operational /border Area.

37. **SITE DOCUMENTS.** In addition to the site documents which are normally maintained for works, the following additional documents (as applicable for this work) shall be maintained at site and signed by Engineer-in-Charge his authorised representative and the Contractor.

- (a) Site Order Book
- (b) Sample Approval register
- (c) Stage Passing register
- (d) Works Diary
- (e) Hindrance register
- (f) Register of materials daily arrived at site.
- (g) Cement consumption register.
- (h) Silt Content register.

- (j) Compressive cube test for PCC block.
- (k) Cement & Steel Acceptance Register.

38. **EMPLOYMENT OF PERSONNEL.**

(a) The contractor shall employ only Indian National as his representative, servants and workmen and verify their antecedents and loyalty before employing them for 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 EPO within one month from the date of acceptance of the tender to this effect. In case the EPO 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.

(b) The Commanding Officer, 110 Engineer Regiment 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 or servant or employee whose continued employment is, in his opinion, undesirable.

(c) **Contractor's Supervision:-** Refer Condition 25 of IAFW-2249 along with latest amendments. Contractor shall employ Engineering staff to supervise the execution of work/contract for the value of contract shall be as mentioned below:-

Contractor has to employ at least, one degree holder from a Government Recognised Institution or equivalent / final or direct final pass of sub -division II of the Institution of Surveyors (India) with at least 4 years practical experience of work.

OR

Contractor has to employ at least, two Diploma holder (one civil + One electrical) in Engineering from a Government recognised institution with at least 4 years practical experience of works.

41. **T&P, Machinery & Transport ( Refer Condition 15, 16, & 34 of IAFW -2249):-** For smooth execution of work the contractor shall engage adequate quantities of T&P , machinery & transport to complete the work. In case of any discrepancy the decision of the CO 110 Engineer Regiment will be final to mobilise the required plant. Contractor will be liable to deploy at site any other tool or machine required as directed by Engineer -in- charge to execute specified nature of work or as per manufacturers instructions.

42. Please note that you will be required to strictly ensure engagement of engineers / deployment of T&P, Machinery & transport as stipulated in the contracts. Inadequate engagement of engineers /deployment of T&P Machinery and Transport as per contract condition shall be considered as serious lapse attracting ban /removal / downgrading / debarment of the firm / Company. The above provision shall be deemed to be included in the quoted rate of contractor and nothing shall be admissible.

43. **Leakage/Seepage.** The contractor shall be liable for seepage/leakage in the bldg. for a pd of 10 yrs from the date of issue of completion for wk and shall take over repair at his own cost within 30 days of receiving of complaints through emails, letters from EPO. All

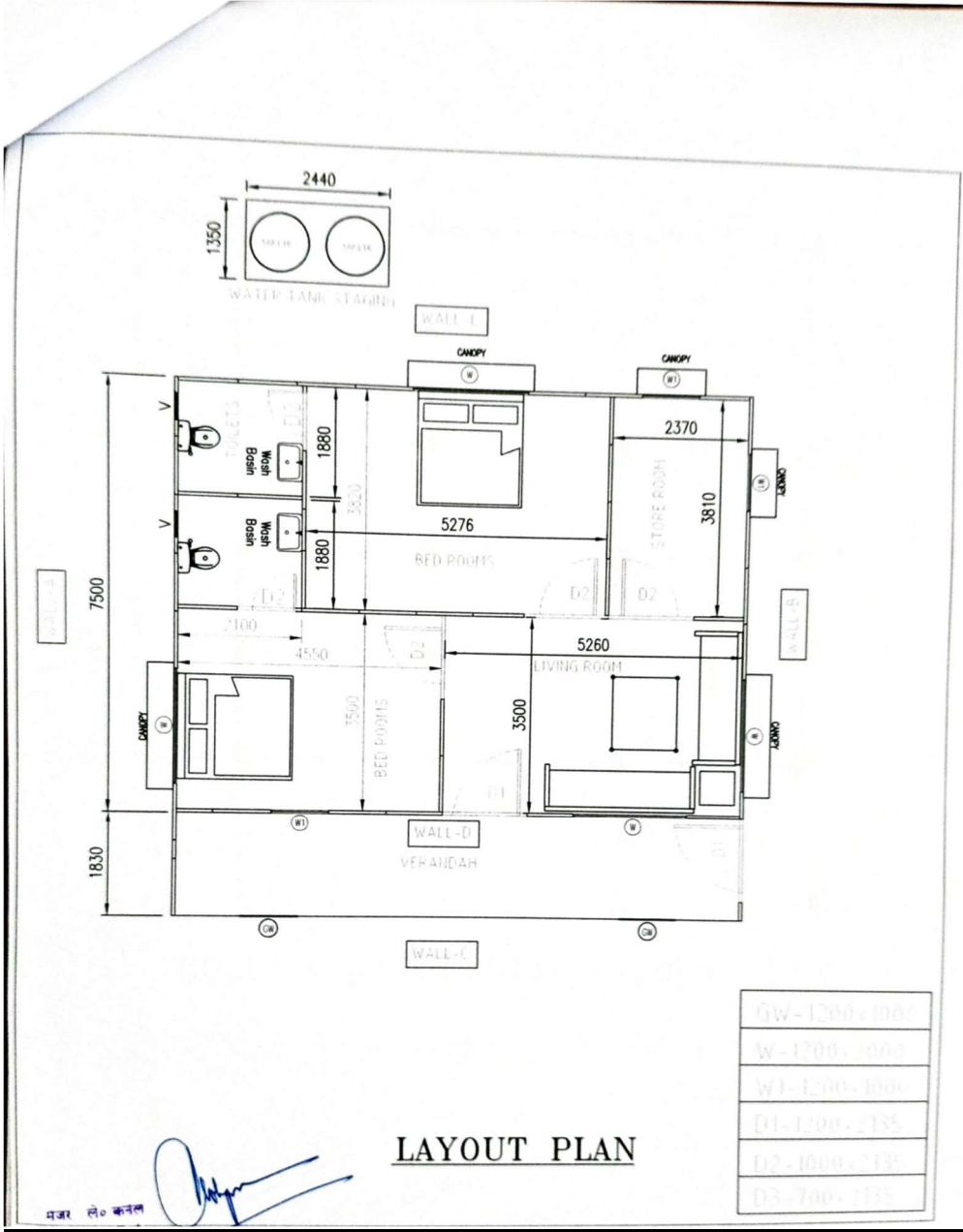
necessary items like DPC designed to arrest the seepage should be used while constr of plinth and roof or as directed by Engineer -in Charge.

44. **Compensation.** Contractor/Firm fails to complete the work within PDC, 0.5% of contract value per week maximum to 5% of Contract value will be recovered from the contractor during part/final payment to the Contractor/Firm. Thereafter, Accepting Officer reserves the right to cancel the contract.

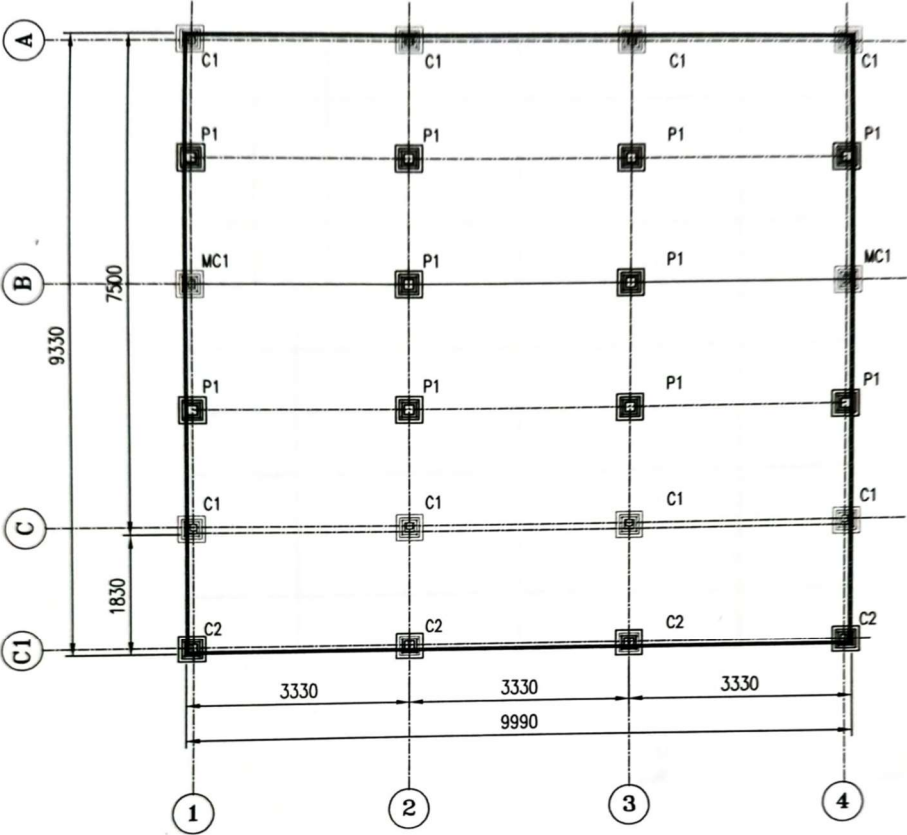
45. The Vendor should be in possession of last 3 years experience certificate of contracts and works executed with other offices within the Arunachal Pradesh. Vendor should submit the confirmation on **Awareness about the FOR location and construction site area** for the acceptance of the contract.

Sd-x-x-x-x-x-x  
(Gunavrat Bhivgade)  
Col  
Commanding Officer

**DRAWINGS**



**DRAWINGS**

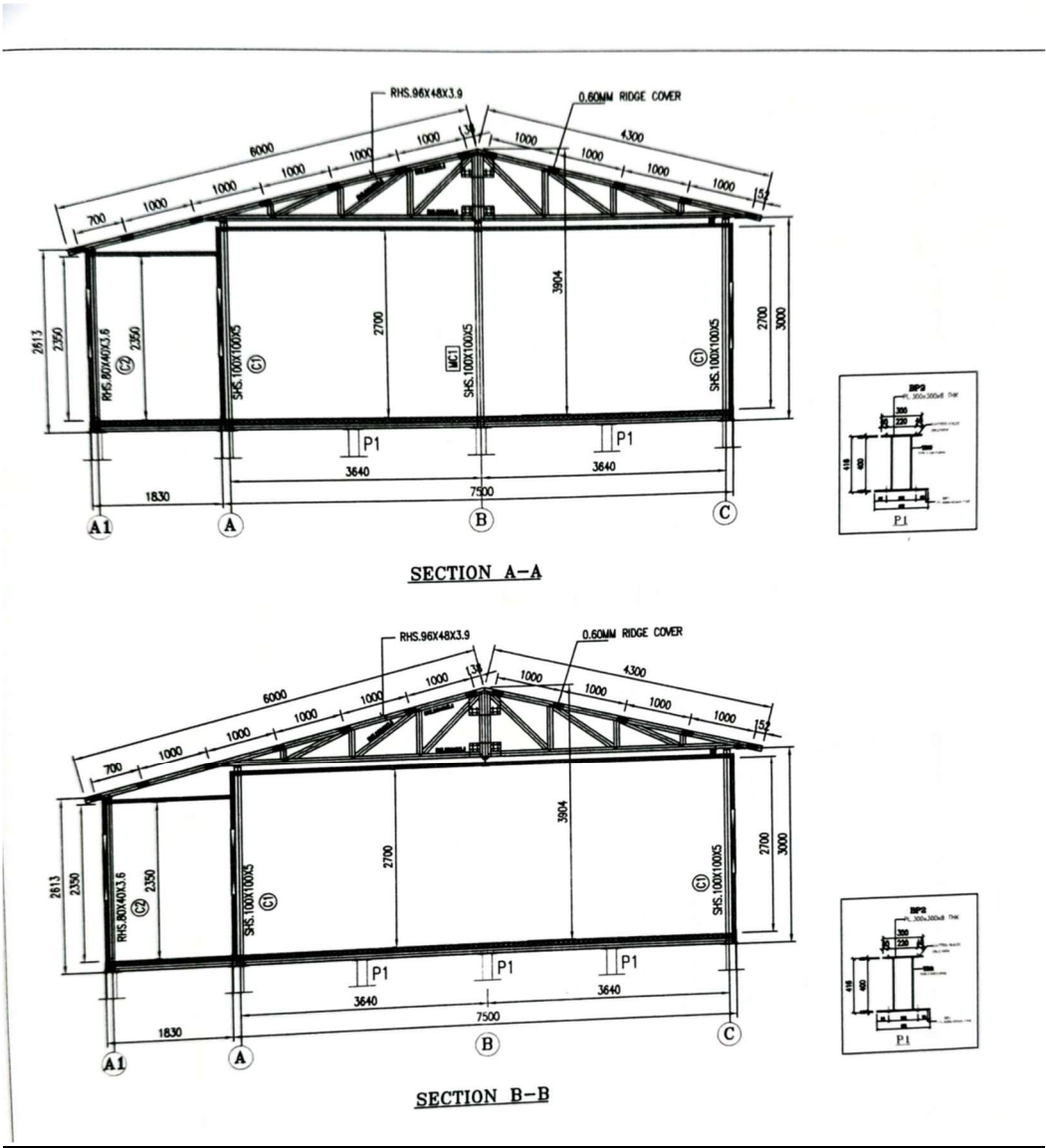


COLUMN & PEDESTAL LAYOUT PLAN

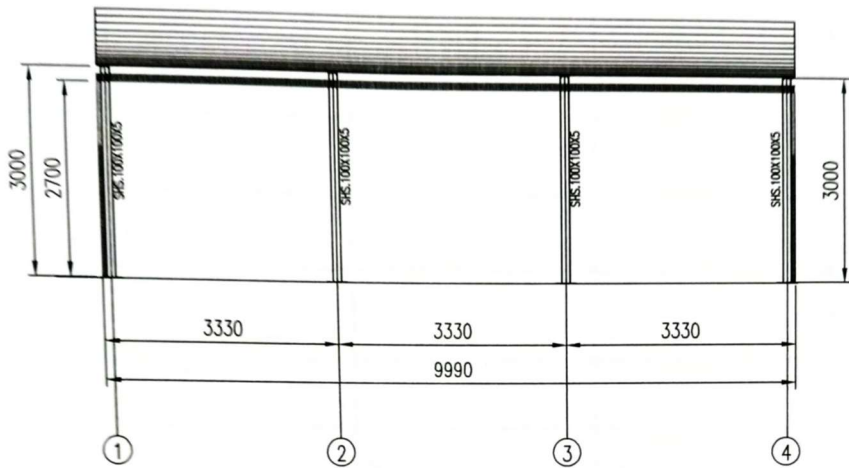
**COLUMN & PEDESTAL LAYOUT PLAN**

ALL MEMBER ARE RHS.80X40X3.6

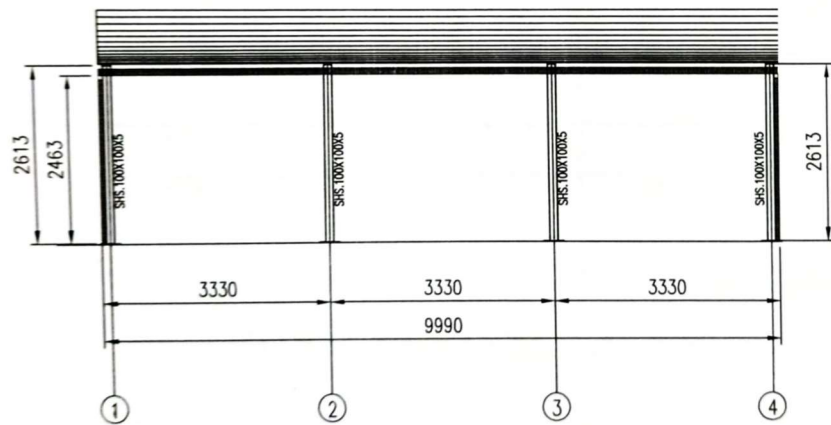
**DRAWINGS**



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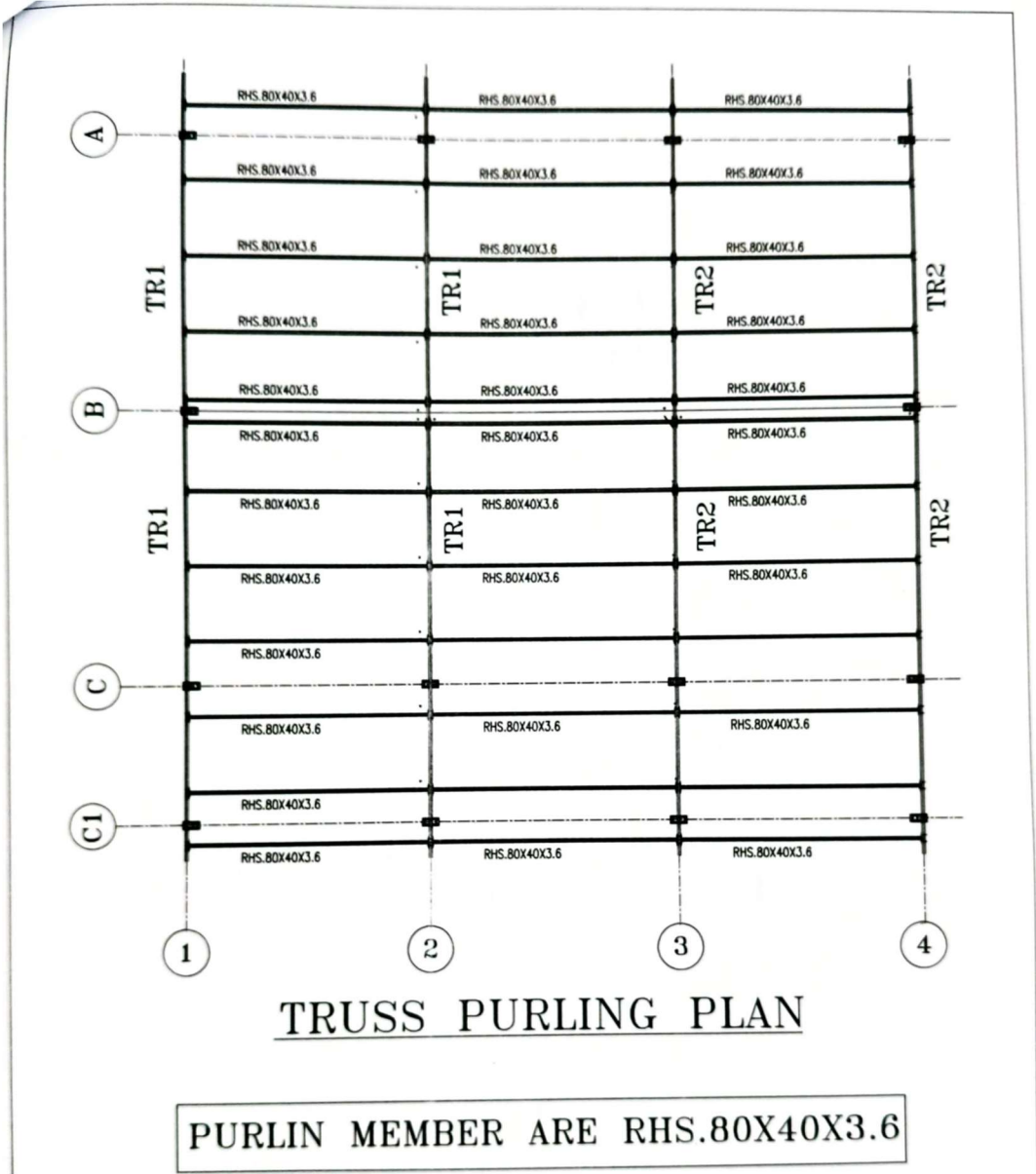
ELEVATION ALONG GRID -A & C



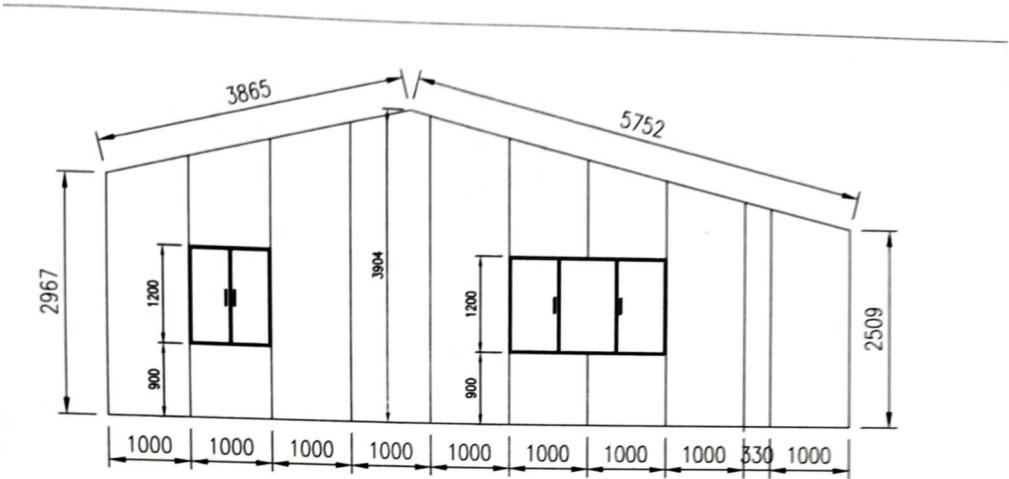
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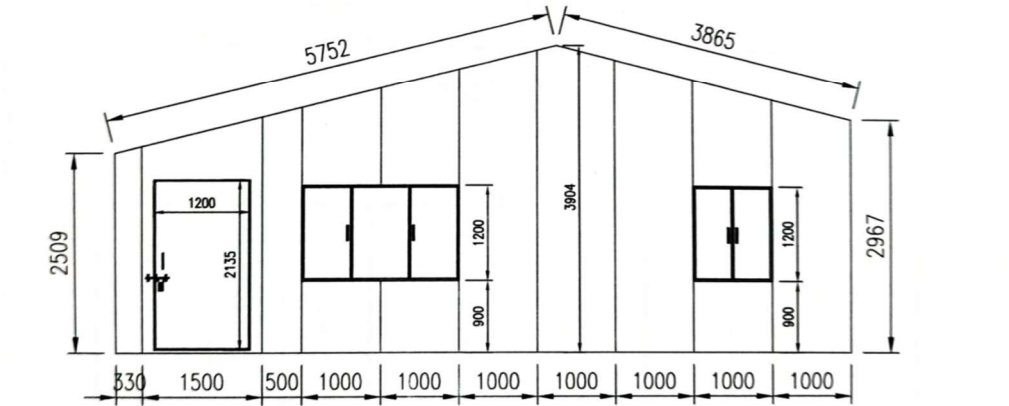
DRAWINGS



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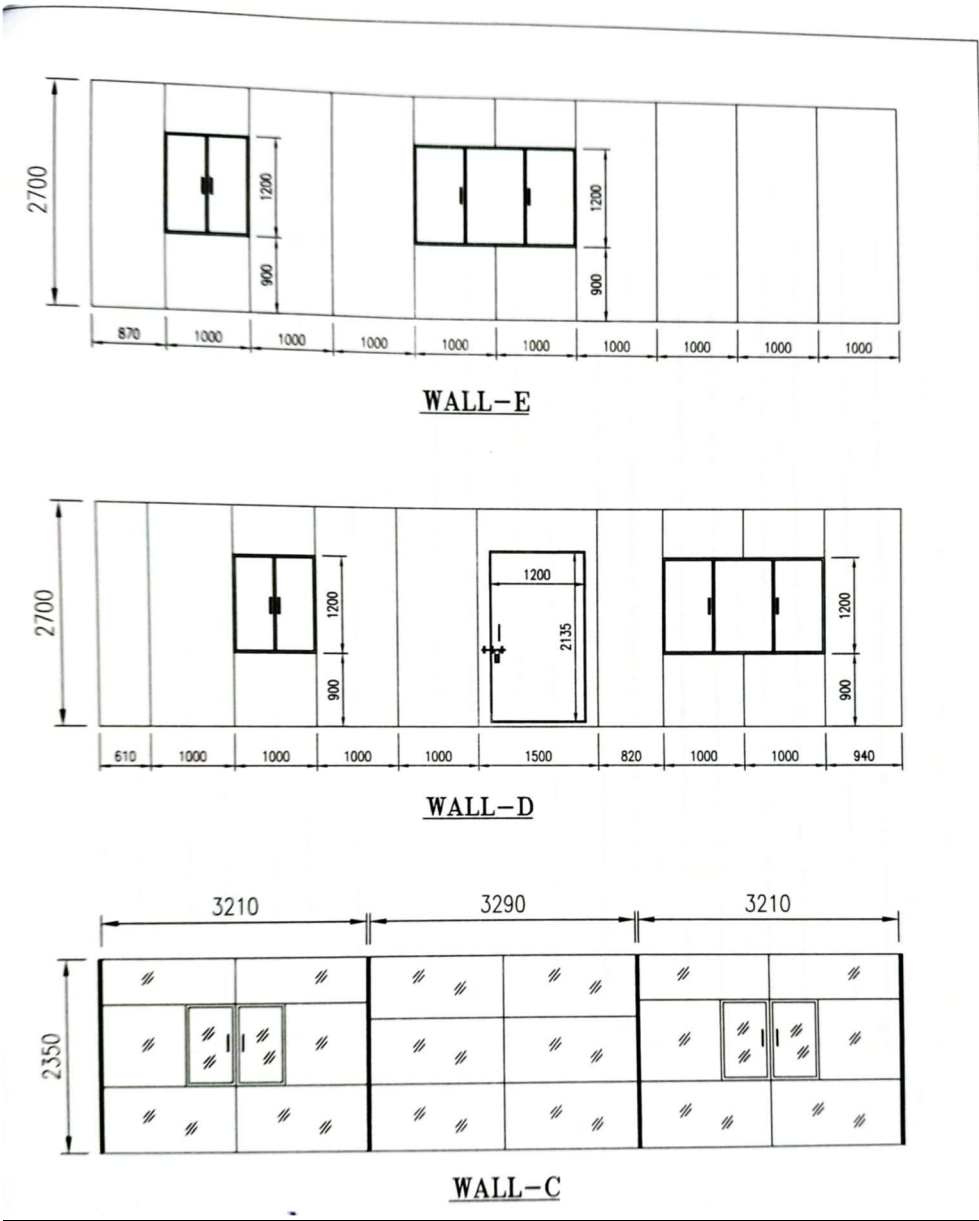


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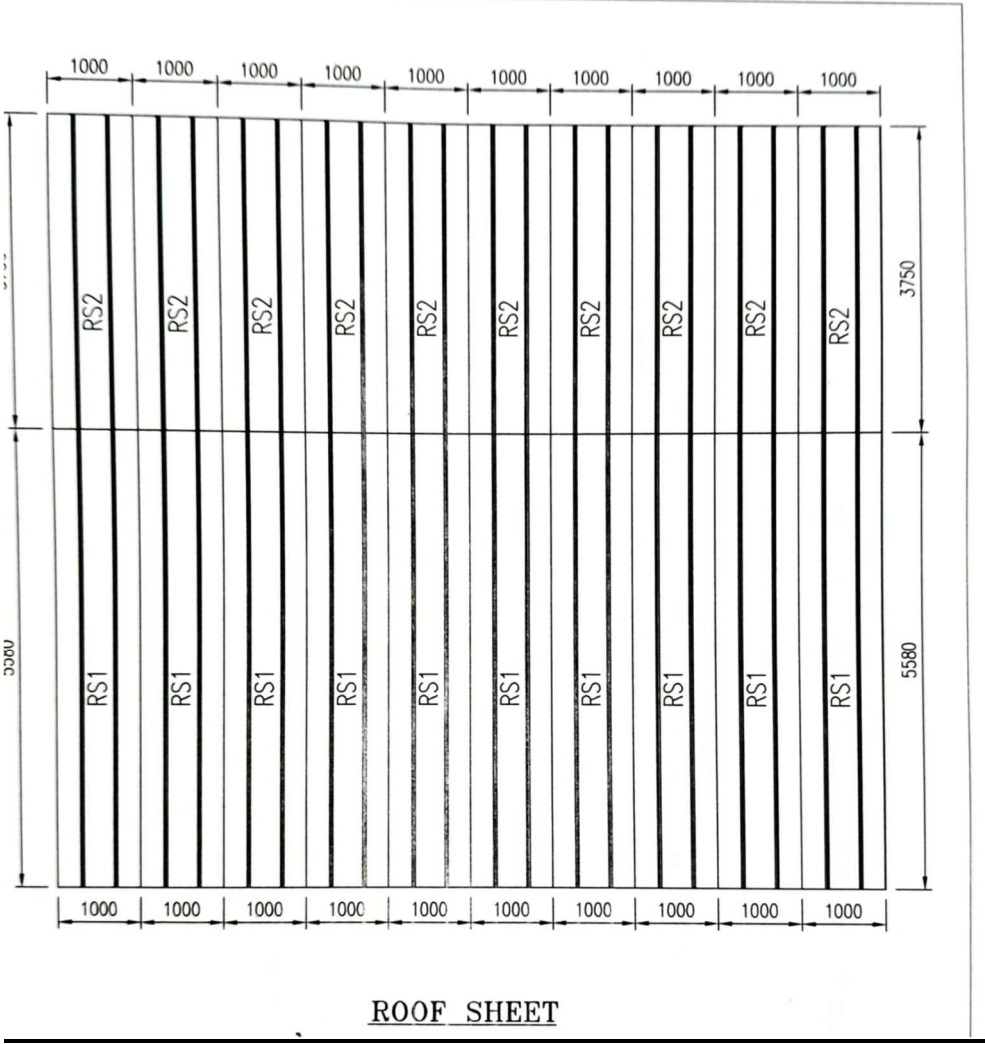


**WALL-B**

**DRAWINGS**

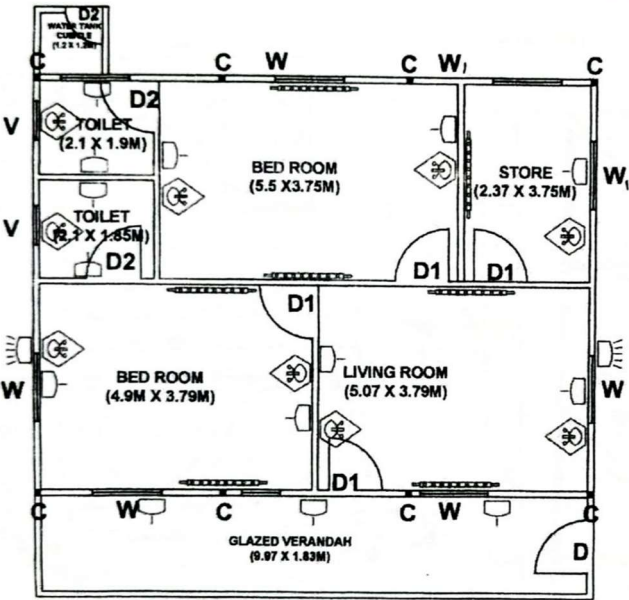


**DRAWINGS**



DRAWINGS

ELECT ACCY LAYOUT : OFFR LIVING SHELTER



LEGEND

SYMBOL	TYPE OF FITTING	QTY
	LED TUBE LIGHT 20 W	07
	LED BULK HEAD 14 W	02
	SWITCH SOCKET 15 AMP	09
	LED BULB 15 W	14

CHIEF ENGINEER HQ 14 CORPS C/O 56 APO

OFFR LIVING SHELTER

DRG No - OFFR / 235 ER

SCALE - NTS

EPO 235 ER

DATE -

SHEET No - 2/3

NOTE : ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.

मजदर ले. कनल

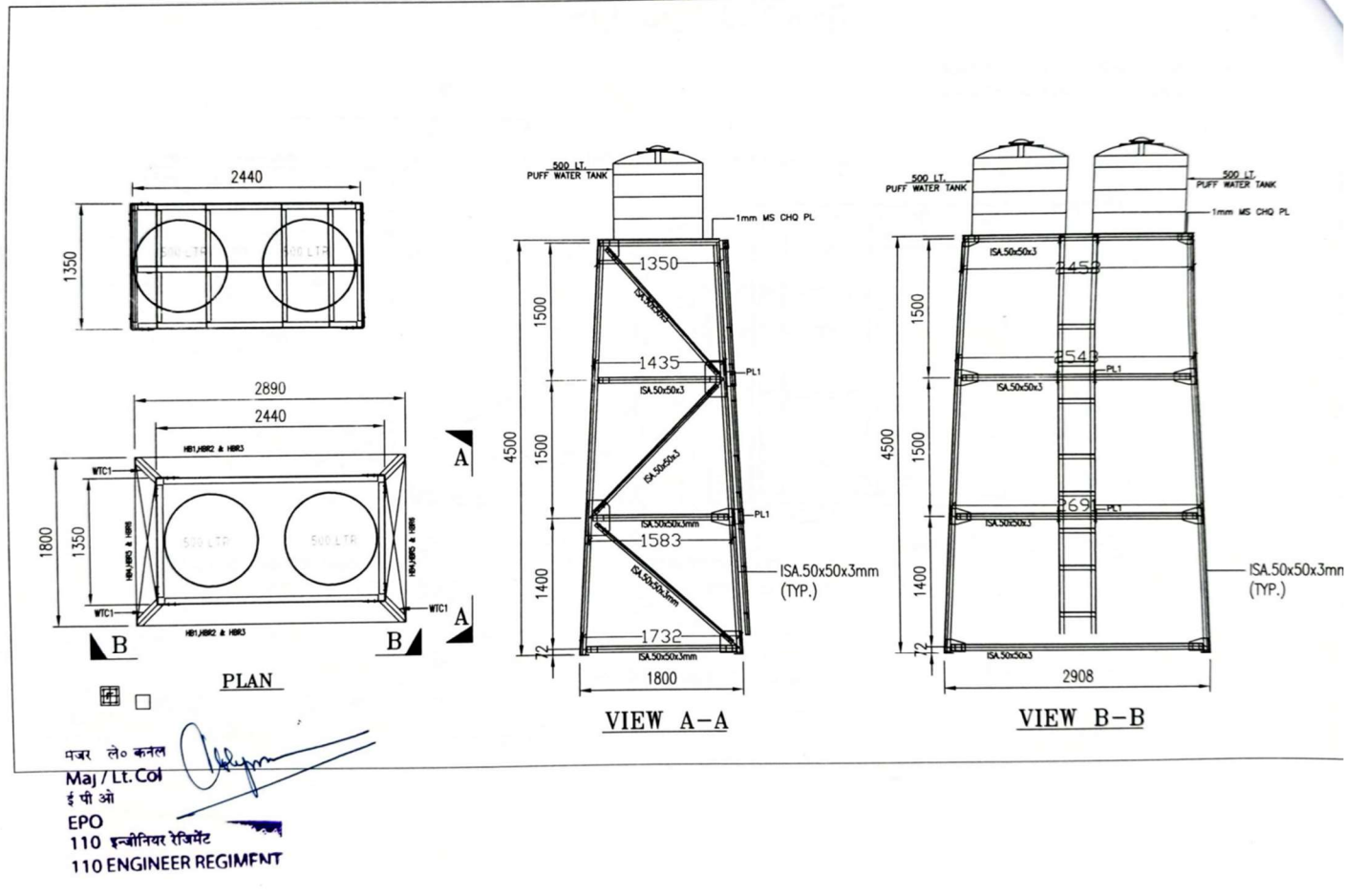
Maj / Lt. Col

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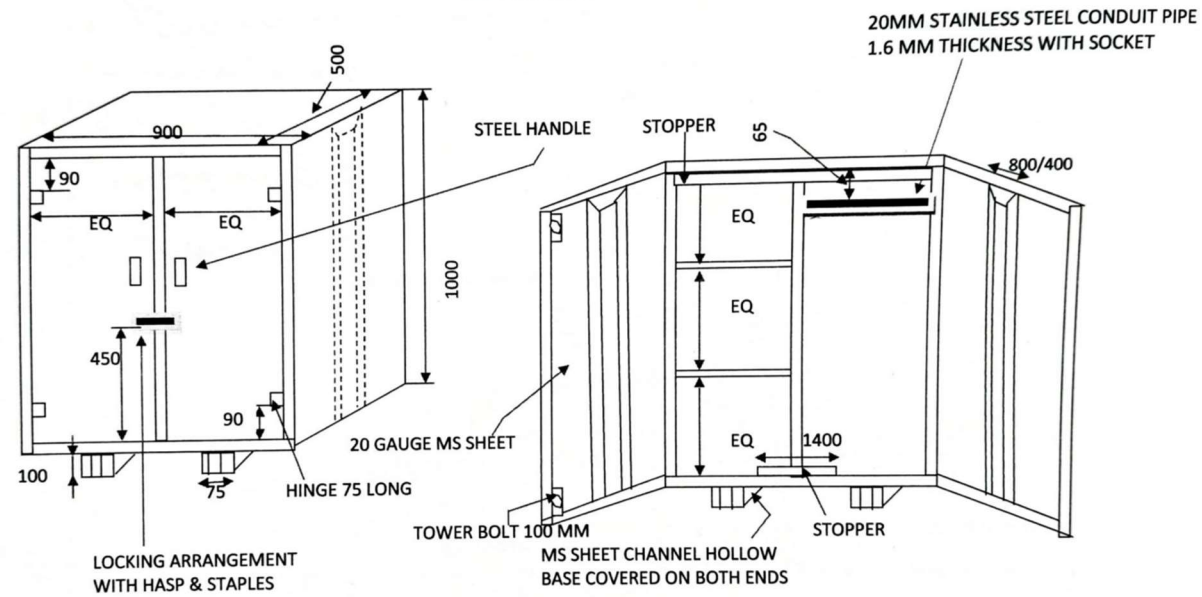
EPO

110 इन्जीनियर रेजिमेंट

110 ENGINEER REGIMENT

**DRAWINGS**

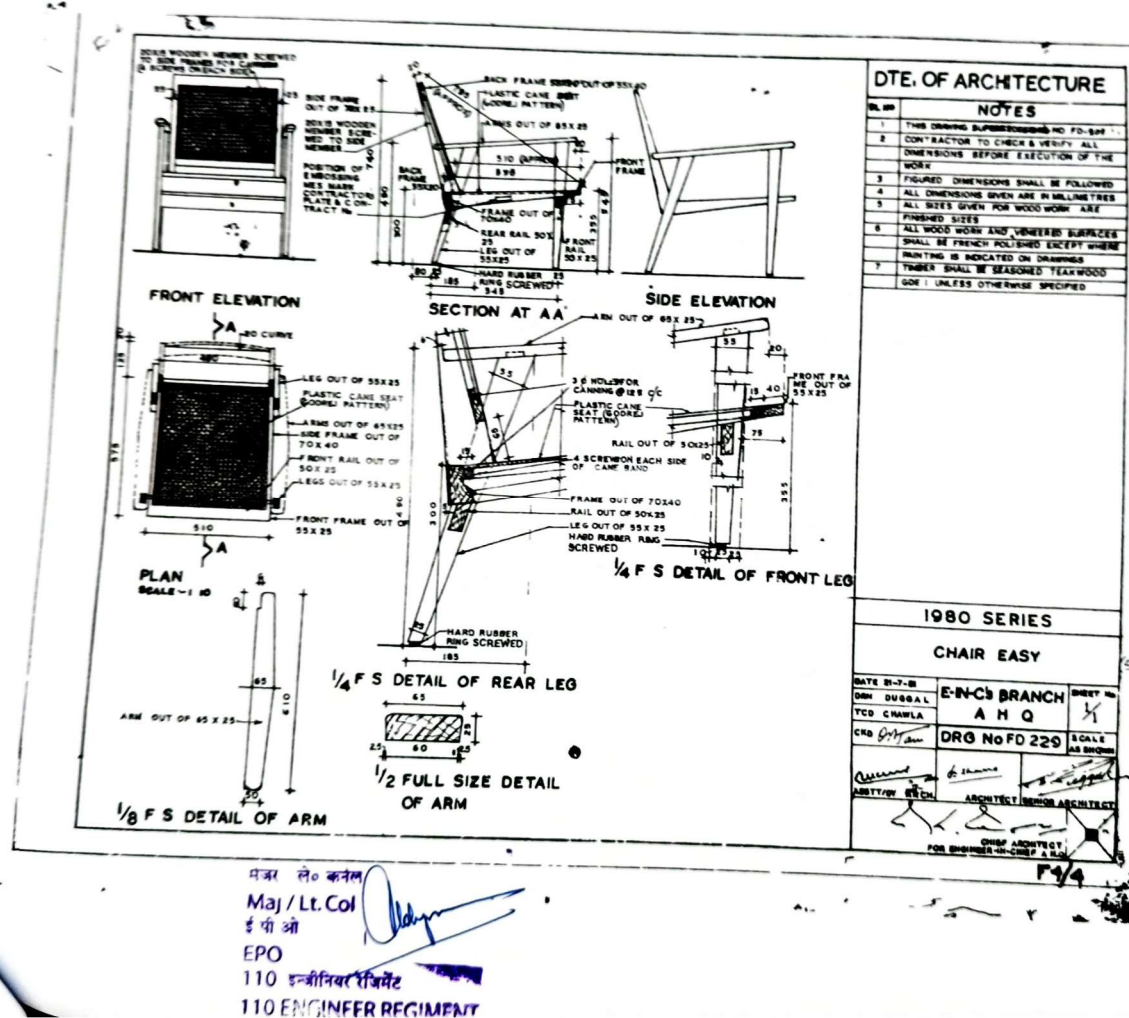


**DRAWINGS****BED SIDE LOCKER**

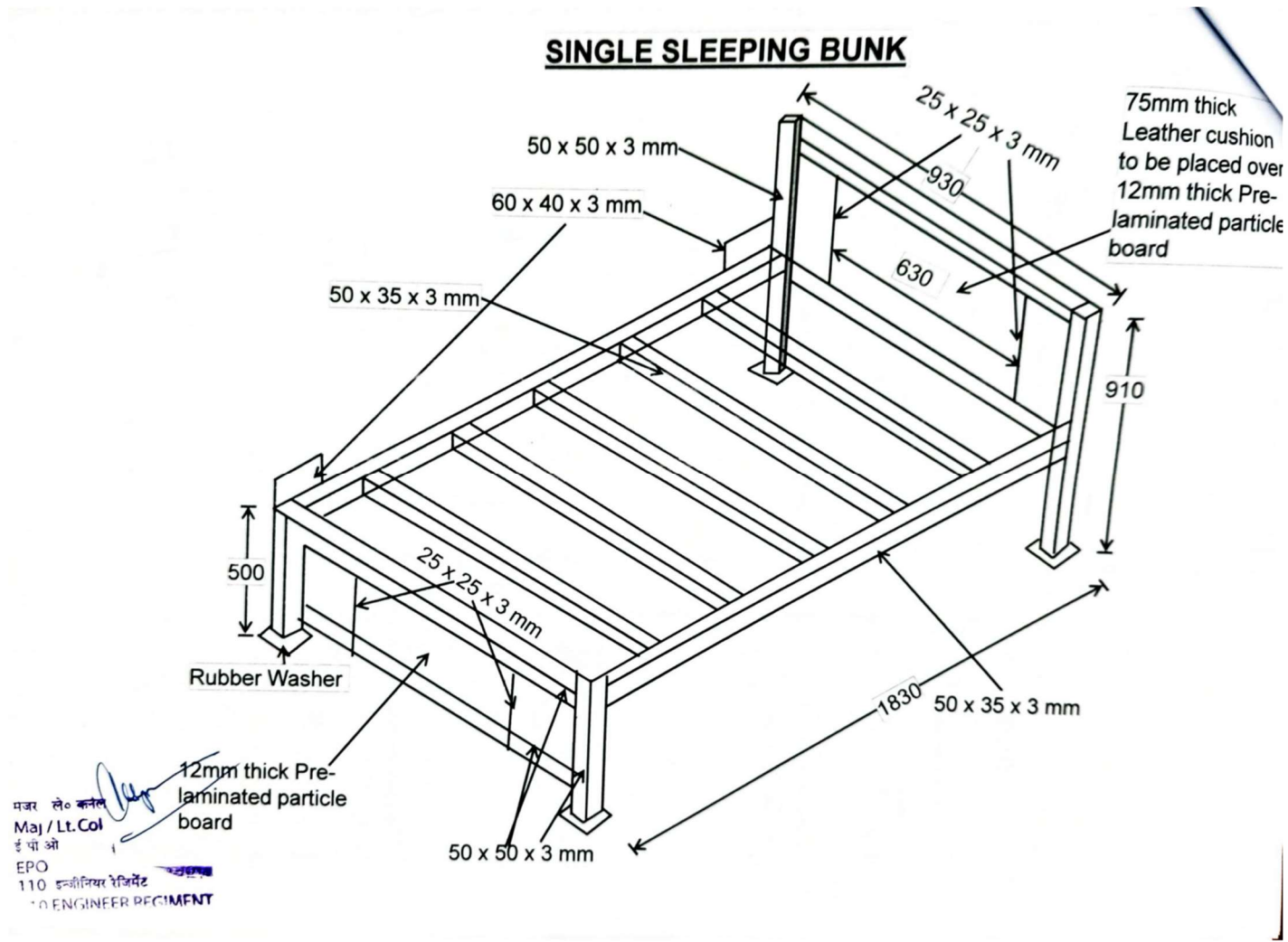
**NOTE :** ALL DIMENSIONS ARE IN MM  
AND DRAWING NOT TO SCALE

<b>H Q 3 CORPS, ENGRS BRANCH</b>
<b>BED SIDE LOCKER</b>
DRG NO : BSL 1/1
GSO 1 (OP WKS)

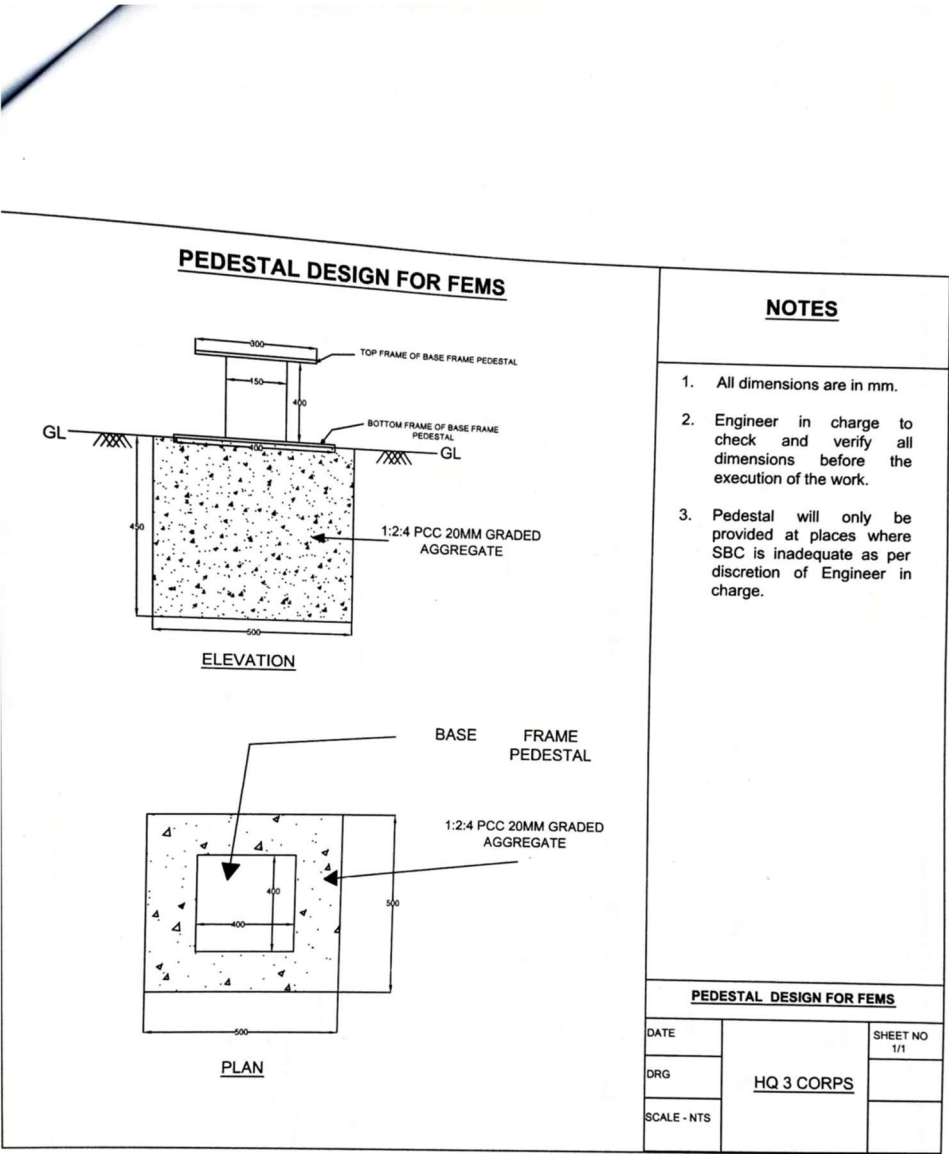
मजर ले० कर्नल  
Maj / Lt. Col  
ई पी ओ  
EPO  
110 इन्जीनियर रेजिमेंट  
110 ENGINEER REGIMENT

**DRAWINGS**

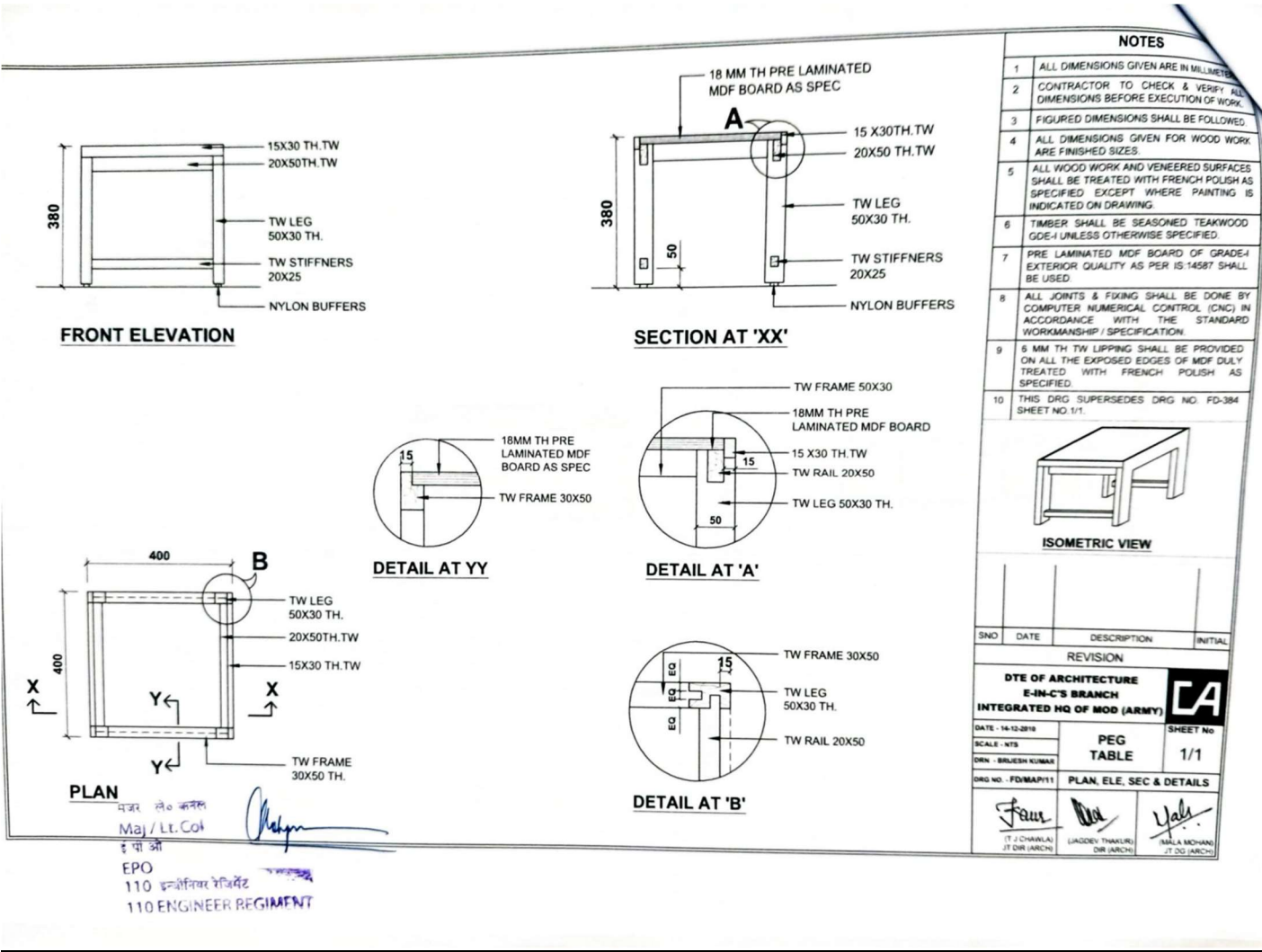
## DRAWINGS



**DRAWINGS**



DRAWINGS





**DRAWINGS**

**WATER DISPENSER**

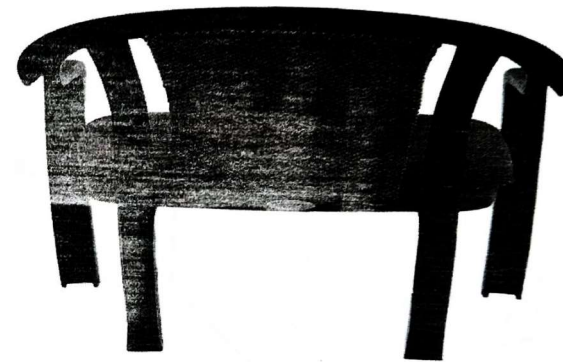
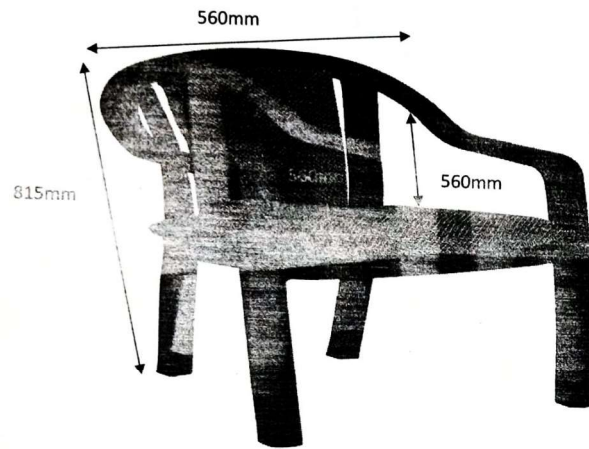


**FIRE EXTINGUISHER**



DRAWINGS

WRITING CHAIR



मजर ले० कर्नल

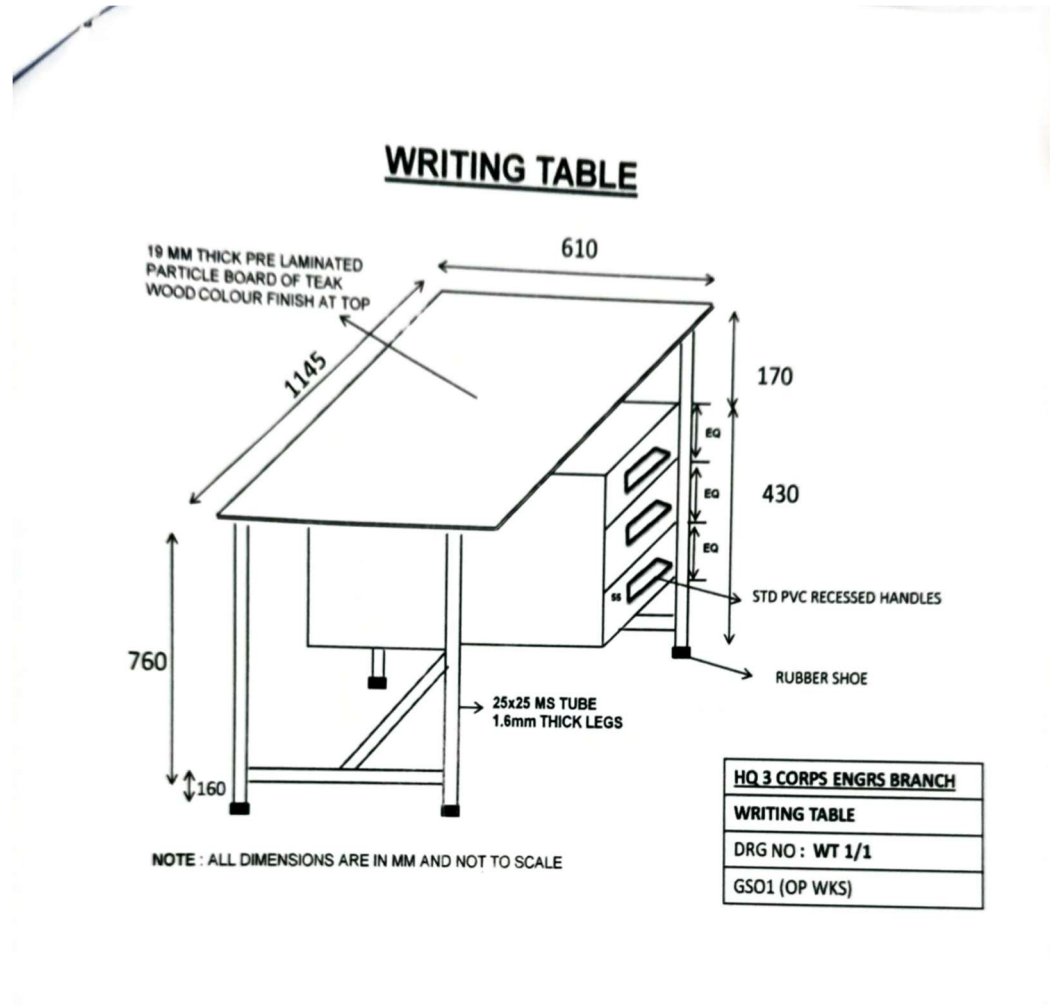
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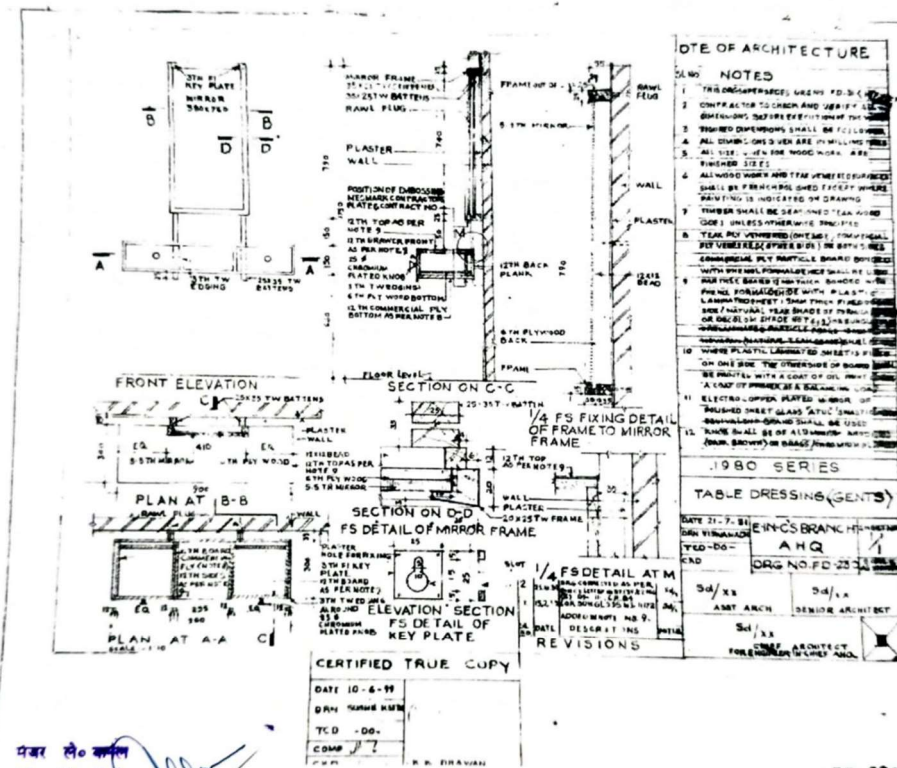
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110 ENGINEER REGIMENT

**DRAWINGS**

**DRAWINGS**

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Maj/Lt. Col  
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EPO  
110 इंजीनियर रेजिमेंट  
110 ENGINEER REGIMENT