



INVITATION TO E-TENDER
WORKS DIRECTORATE, CENTRAL RESERVE POLICE FORCE
 Level – 3, Block-7, Sec -1, East Block, R.K.Puram,
 New Delhi–110066, Tel/Fax: 011-26108447

E-Mail id – digwks@crpf.gov.in

Tele / Fax No. :011-26108447

No. B.V (GC Ranchi)/24-25-/S-10/WksDte-C/Cell(NIT-44)

Dated, November,2024

To,

.....

Dear Sir,

On behalf of the President of India, I invite you to **online bid under two bid system** for the following work at **GC,CRPF, Sembo, Ranchi (Jharkhand):-**

Sl. No.	Details of proposal
1.	FIRE SAFETY RELATED WORKS IN CONSTRUCTION OF 350 NOS TYPE-II (G+5) QUARTERS AT GROUP CENTRE, CRPF, SEMBO, RANCHI

02. Details **of works**are mentioned in **Schedule- “A”** and **“B.O.Q. of Tender”**.

03. If you are in a position to quote for carrying out the proposed works in accordance with the requirements stated in the attached schedule to tender, all documents attached herewith should be properly filled in, signed and submitted through e-procurement site <http://eprocure.gov.in/eprocure/app>. You are further required to furnish along with the aforesaid tender all the information called for, attached list of questionnaire should also be answered and submitted along with documents through e-procurement site <http://eprocure.gov.in/eprocure/cpp>, failing which your tender will liable to be rejected and will not be considered.

04. This tender is not transferable.

Thanking you.

Yours faithfully

DIG (Engr), WorksDte.
 For and on behalf of the President of India

SCHEDULE TO TENDER (OPEN TENDER)
CENTRAL RESERVE POLICE FORCE
(Government of India, Ministry of Home Affairs)
Works Directorate, CRPF

No. B.V (GC Ranchi)/24-25-/S-10/WksDte-C/Cell(NIT-44)

Dated, November, 2024

TENDER SET IS NOT TRANSFERABLE

Tender Enquiry No.	:	
Date of Publishing of Tender	:	As per CPP Portal
Time and date of submission/receipt of tender	:	
Time and date for opening of tender	:	

01. The intending tenderers must read the terms and condition carefully and submit their tender if they consider themselves eligible and are in possession of all the required documents, through online tender (e-procurement web site in CPP Portal) before due date & time. Tenderers are also advised to go through the Earnest Money, Payment terms and other clauses, terms and conditions of this Tender Enquiry carefully before filling the Tender Application.

Tender No	Name of work with its description and location	Category of service required / Quantity / Work Timing / Periodicity / Period	Estimated cost put to tender	Earnest Money Deposit @2 %	Procedure for deposit of Earnest Money Deposit (EMD)	Critical date
B.V (GC Ranchi)/24-25-/S-10/WksDte-C/Cell(NIT-44)	Fire Safety related works in construction of 350 nos Type-II (G+5) quarters at Group Centre, CRPF, Sembo, Ranchi	As per attached Appendix-'B' of "Schedule to tender"	Rs. 5,11,59,966/-	Rs 10,23,199/- [Note: - EMD Should be valid for 90 days from the bid submission end date of tender. If there after validity of the E.M.D require extension, the firm will be responsible to extend the same suitably till the validity of the bid]	Rs 10,23,199/- Original Earnest Money Deposit (EMD) shall be deposited in office of the Works Dte, level-3, East Block-7, Sec -1, , RK Puram, New Delhi before the due date of submission of bid.	As per CPP Portal

02. Tenders will be opened online on the given date & time at CRPF Works Dte, Level-3, East Block – 07, RK Puram, Sector- 1, New Delhi.

03. Tenderers are requested to submit their bid/tender documents online through e-procurement in CPP Portal. EMD, Tender Acceptance Letter (On firms letter head), Integrity Pact (On firms letter head) documents shall be submitted in original either by hand or by registered/speed post to CRPF Works Dte, Level-3, East Block – 07, RK Puram, Sector- 1, New Delhi.

04. All Tender documents attached with this invitation to tender including the specifications are sacrosanct for considering any offer as complete offer. It is therefore important that Tender Acceptance Letter which is a written undertaking that all the terms and conditions of the tender are understood and accepted should be signed and submitted along with all documents as required through e-Procurement site <http://eprocure.gov.in/eprocure/app>.

05. All bidders required to submit earnest money as mentioned above along with their offer. EMD should be paid by the bidder mandatorily. If the bidder fails to submit EMD then his tender will be rejected summarily.

06. All bidders are required to submit their offer in **two bid system**.

07. The enlistment of the contractor should be valid on the last date of submission of the bid. In case only the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bid.

08. Details required to be furnished by all bidders in the bid (Composite i.e. Technical & Price or financial Bid together) are as under. The bid should contain the following: -

i) Documents to be submitted online in scanned copy on CPPP:-

1.	Tender acceptance letter (In firm's letter head)
2.	Earnest Money deposit (As per schedule to tender failing which offers will be summarily rejected).
3.	Copy of GST registration certificate & PAN Card.
4.	Copy of registration of the firm/contractor for Building Workswith CPWD, MES, BRO, RAILWAY and Jharkhand PWDor All Documents required for Enlistment as specified in the latest CPWD Enlistment Rules.
5.	Copy of certificate of registration for EPFO and certificate of registration for ESIC (Declaration, if not applicable) failing which offers will be summarily rejected).
6.	The offered rates (Price Bid) in the B.O.Q format provided in CPP Portal.
7.	Satisfactorily completed as a prime contractor at least one similar work of 80% value or two works of atleast 60% value or 3 works of atleast 40% value. (for non – enlisted contractors) Bidder has to submit on-line scanned copy of work order alongwith Work Completion certificate of similar nature work equal to required value during last five years issued by not below the rank of Executive Engineer.
8.	Partnership Agreement of the firm if the firm is a partnership firm. (If no papers submitted with the bid it will be assumed that the firm is a Single/Sole Proprietary and will be fully responsible if found false at later stage)
9.	Check list as per Appendix-‘B’ after compliance.
10.	Information regarding any litigation or arbitration resulting from contracts executed by the bidder in the last five years or currently under execution as provided. Bidder has to submit on-line scanned copy of an information regarding litigation, arbitration, black listing, debaring etc. This document must be up loaded on line duly signed by the bidder.
11.	Bidder has to submit on-line scanned copy of an affidavit duly signed stating that the near relations defined as first blood relations, and their spouses/are not working in CRPF. If working, give details for the same. (a relation shall mean wife, husband, parents, grandparents, children, grandchildren, brothers, sisters, uncles, aunts, cousins and their corresponding in-laws)
12.	Bidder has to submit on-line scanned copy of an affidavit duly signed stating that no retired personnel in his employment is working who retired withinlast two years from CRPF. If employed, give details for the same.
13.	Non-enlisted bidders are required to submit (i) Either Banker's Certificate of Rs. 4.80 Crore(Proforma as Appendix-E) OR Net worth Certificate of Rs. 1.5 crore(proforma as Appendix-D) AND (ii) Average Annual Turnover Certificate of Rs. 4.80 crore(Proforma as Appendix-C) on works during the last three financial years from a Chartered Accountant.

(ii)Documents to be submitted in original manually or by registered/speed post to CRPF Works Dte, Level-3, East Block – 07, RK Puram, Sector- 1, New Delhi.

1.	Tender acceptance letter (On firms letter head)
2.	Earnest Money deposit
3.	Integrity Pact (On firms letter head)

09. Following should be noted and kept in mind while submission of rate in price bid format of C.P.P Portal-

- i) Price should only be quoted as per price bid format / B.O.Q along with tender documents at e-procurement site <http://eprocure.gov.in/eprocure/app>.
- ii) The price bid in B.O.Q format / template should not be modified and replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for the tender. Bidders are allowed to enter the Bidder Name and Values only.

10. Bidder should deposit earnest money with required validity along with their Tender. Earnest Money should be in form of **Account payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque** from any of the commercial banks in an acceptable form in favour of **“THE DIGP GC, CRPF, SEMBO, RANCHI”** [Payable At-SBI, HEC SECTOR-II, RANCHI (Code-5596)]”

11. The tender documents are consisting of specification, schedule of quantities of works to be provided and terms and conditions of this contract to be complied with other necessary documents.

SIGNATURE OF THE TENDERER

DIG (Engr), WorksDte
For and on behalf of the President of India

TENDER ACCEPTANCE LETTER
(To be given on Firm’s/Company’s Letter Head)

Date:

To,

Subject:-**Acceptance of Terms & Conditions of Tender.**

Tender Reference No:- _____

Name of Tender / Work: - _____

Dear Sir,

1. I/We have downloaded/obtained the tender document(s) for the above mentioned ‘Tender/Work’ from the web site(s) namely..... as per your advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. _____ to _____ (including all documents like annexure(s), schedule(s), etc.) which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organizations too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality/entirety.
5. In case any provisions of this tender are found violated , then your department/ organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)
SIGNATURE OF TENDERER

Check list for tenderer**(Tenderers should check following requirements for compliance before submission of the tender documents)**

Sl. No.	Requirements to be checked by the tenderer before submission of the tender	Compliance (To be indicated With “YES” after Compliance of the requirements)
1.	Whether Tenderers has submitted required Earnest Money Deposit with their bid as specified (As per schedule to tender failing which offers will be summarily rejected).	
2.	Whether rates have been quoted only as per price bid format / B.O.Q along with tender documents?	
3.	Whether rates have been quoted inclusive of all taxes including GST (ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. The EPF & ESIC contributions on the part of the employer paid by the contractor shall be reimbursed by the department to the contractor on actual basis with site of work at GC CRPF, Sembo, Ranchi . only on producing original receipt of EPF & ESIC paid by the contractor to Govt. organization. (It may also be noted that the quoted rates are inclusive of all taxes.)	
4.	Whether copy of GST & PAN Card submitted?	
5.	Whether copy of registration of the firm/contractor with CPWD, MES,BRO, RAILWAY&Jharkhand PWDsubmitted?	
6.	Whether copy of registration of certificate registration for EPFO and certificate of registration for ESIC submitted? (Declaration, if not applicable) (Failing to submit the certificates offers will be summarily rejected).	
7.	Whether agree to the Tolerance Clause of the Tender Enquiry?	
8.	Satisfactorily completed as a prime contractor at least one similar work of 80% value or two works of atleast 60% value or 3 works of atleast 40% value. (for non – enlisted contractors) Bidder has to submit on-line scanned copy of work order alongwith Work Completion certificate of similar nature work equal to required value during last five years issued by not below the rank of Executive Engineer.	
9.	Non-enlisted bidders are required to submit (i) Either Banker’s Certificate of Rs. 4.80 Crore(Proforma as Appendix-E) OR Net worth Certificate of Rs. 1.5 crore(proforma as Appendix-D) AND (ii) Average Annual Turnover Certificate of Rs. 4.80 crore(Proforma as Appendix-C) on works during the last three financial years from a Chartered Accountant.	
10.	Tenderers should mention that Business dealing with their firms has not been banned by any Govt. / private agencies.	
11.	Tenderer should ensure to sign each page of the Tender documents with name, designation of the authorized signatory under his seal.	
12.	If the tenderer want to mention any specific condition, it should be mentioned on the covering/forwarding letter in letter head only which will be placed on the first page of the bid. Such condition mentioned in any other document shall not be given any consideration.	
13.	Tenderers should mention their address for communication with Telephone/Fax Number and e-mail address.	
14.	Whether all the Points under heading “Terms & Conditions”, “Additional Conditions” and instructions are fully abided by the contractor or not?	
15.	Whether all the requisite documents as asked in tender Schedule of inviting tender notice have been submitted by the tenderer?	
16.	Whether the firm has enclosed valid documents if the firm is a partnership proprietary in nature? (If no papers submitted with the bid it will be assumed that the firm is Single/Sole Proprietary)	
17.	Whether any other relevant documents which the firms wish to submit as a part of offer?	
18.	Tender acceptance letter (In firm’s letter head)	
19.	Integrity Pact (on firm’s letter head)	

SIGNATURE OF THE TENDERER

Appendix-“C”**FORM OF CERTIFICATE OF ANNUAL TURNOVER ON WORKS FROM CHARTERED ACCOUNTANT**

Certified that following is the annual turnover on works of the individual/firm/company as per returns filed with Income Tax Department for the past 3(three) financial years.

Name and registered address of individual/firm/company :.....

S. No.	Financial Year	Annual Turnover on Works in Rs. lakhs

Unique Document Identification Number (UDIN).....

(Signature of Chartered Accountant)

(Name of Chartered Accountant)

Membership No. of ICAI

Date and seal

FORM OF CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

It is to certify that as per the audited balance sheet and profit & loss account during the financial year....., the networth of Shri/Smt/M/s..... (Name & Registered Address of individual/firm/company), is Rs..... after considering all liabilities. It is further certified that the networth of the individual/firm/company has not eroded by more than 50% during the last three years ending on 31st March

Unique Document Identification Number (UDIN).....

(Signature of Chartered Accountant)

(Name of Chartered Accountant)

Membership No. of ICAI

Date and seal

Appendix-“E”**FORM OF BANKER'S CERTIFICATE FROM A COMMERCIAL BANK**

This is to certify that to the best of our knowledge and information Shri/Smt/M/s.....having registered address, a customer of our bank, is/are respectable and can be treated as reliable for any engagement upto a limit of Rs..... (Rupees).

This certificate is issued without any guarantee or responsibility on the Bank or any of the officers. This certificate is issued on the request of Shri/Smt/M/S.....For obtaining Works tender in CRPF in..... (Name of Works).

(Signature)
For the Bank

Note:

- 1. Banker's certificates should be on the letter head of the bank, addressed to enlisting authority.**
- 2. In case of partnership firm, the certificate shall include names of all partners as recorded with the bank.**

NOTICE INVITING TENDER

The **DIG (Engr)**, Works Dte.invites online item rate bids for & on behalf of the President of India from approved and qualified firm/contractor with CPWD, MES, BRO, RAILWAY & JHARKHAND PWDfor **Fire Safety related works in construction of 350 nos Type-II (G+5) quarters at Group Centre, CRPF, Sembo, Ranchi**

1. The enlistment of the contractors should be valid on the last date of submission of bids. In case the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of bids.
 - 1.1 The estimated cost put to the work is **Rs. 5,11,59,966/- (Rupees Five Crore Eleven Lakh FiftyNine Thousand Nine Hundred Sixty Six) only** including all taxes.
2. Agreement shall be drawn with the successful bidders on prescribed form of CPWD (or other Standard Form as mentioned) which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The work has to be completed by within **300 days**from the date of placing of Work Order or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents. Site of work is within the **RESTRICTED AREA.**
4. The site for the work is available.
5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from CPP Portal (<http://eprocure.gov.in/eprocure/app>).
6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
8. Bidder should deposit earnest money with required validity along with their Tender. Earnest Money should be in form of **Account payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque** from any of the commercial banks in an acceptable form in favour of **THE DIGP GC, CRPF, SEMBO, RANCHI**" [Payable At-**SBI, HEC SECTOR-II, RANCHI (Code-5596)**]"

The Earnest Money shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The physical EMD of the scanned copy of EMD uploaded shall be deposited in original at **Works Dte, Sec - 1, East Block, Block – 7, RK Puram, New Delhi – 110066** failing which the tender shall be rejected.

Interested contractor who wish to participate in the bid has to make following payments in the form of Demand Draft / Pay order or Banker's Cheque of any Scheduled Bank to the e-Tendering website within the period of bid submission:

- (i) Copy of Enlistment Order and other documents as specified in the press notice shall be scanned and uploaded to the e-Tendering website within the period of bid submission. Original Demand Draft of Earnest Money Deposit (EMD) shall be deposited in the office of the **Works Dte, Sec -1, East Block, Block – 7, RK Puram, New Delhi – 110066** before the due date of submission receipt of tender bids
 - (ii) **The bid/tender submitted shall be opened as per timing specified on CPP Portal.**
9. The bid/tender submitted shall become invalid and cost of bid shall not be refunded if:-
 - I. The bidders are found ineligible.
 - II. The bidders does not upload all the documents (including Labour Licence, GST registration, EPFO & ESIC registration, PAN card and copy of registration/enlistment) as stipulated in the bid document including the undertaking about deposition of physical EMD of the scanned copy of EMD uploaded.
 - III. Any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically in the office of tender opening authority.

10. The contractor whose tender is accepted will be required to deposit **PERFORMANCE SECURITY** for an amount of **Fivepercent (5%) of the value of the contract within a period of 07 (SEVEN) days after the Tender is accepted by the Competent Engineering Authority. Performance Security may be furnished in the form of an Fixed Deposit Receipt from a commercial bank in an acceptable form.** Performance Security should remain **valid for a period of 180 (06 months) days** beyond the date of completion of all contractual obligation of the supplier including warranty obligations if any. In case the contractor fails to deposit the performance security within the stipulated period including extended period, if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registrations or Proof of applying for obtaining labour licenses and registration with EPFO & ESIC within the period specified in Schedule-“F”. Failing to submit the above certificates / documents, offers will be summarily rejected.
11. The reimbursement of EPF & ESI contributions paid by the contractor on the part of employer is to be made on submission of documentary proof of payment provided the same is in order.
12. Intending Bidders may inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidders implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
13. The Competent Engineering Authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
14. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
15. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
16. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or before submission of the bid or engagement in the contractor's service.
17. The bid for the works shall remain open for acceptance for a period of Ninety (90)days from the end date of submission of bids, if any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the re-bidding process of the work.
18. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-
- a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - b) Standard C.P.W.D. Form 7/8 or other Standard C.P.W.D. Form as applicable.

**GOVERNMENT OF INDIA
CENTRAL RESERVE POLICE FORCE**

STATE: JHARKHAND

Work Site : GC CRPF, SEMBO, RANCHI

ITEM RATE TENDER & CONTRACT FOR WORKS

Tender for the work of—Fire Safety related works in construction of 350 nos Type-II (G+5) quarters at Group Centre, CRPF, Sembo, Ranchi

- (i) To be submitted online through website <http://eprocure.gov.in/eprocure/app>
- (ii) To be opened in online at **Works Dte, Sec -1, East Block, Block – 7, RK Puram, New Delhi – 110066**

T E N D E R

I/We have read and examined the Notice Inviting Tender, Schedule A, B, C, D, E & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special Conditions, Schedule of Rate and other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule-“F”, viz. Schedule of Quantities and in accordance in all respects with the Specifications, Designs, Drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause-11 of the Conditions of Contract and with such materials as are provided for, by and in respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for Ninety (90) days from the date of opening of tender and not to make any modifications in its terms and conditions.

A sum of **Rs. 10,23,199/- (Rupees Ten Lakh Twenty Three Thousand One Hundred Ninety Nine)**only is hereby forwarded in Bank Draft/ FDR of a Scheduled Bank/ Demand Draft of a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/ We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work. I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in CRPF in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety & integrity of the State.

**Dated :
Witness:
Address:
Occupation:**

**Signature of Contractor
Postal Address**

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs. (Rupees)

The letters referred to below shall form part of this contract agreement:-

- (a)
- (b)
- (c)

Dated: -

DIG (Engr), WorksDte.
For and on behalf of the President of India

SCHEDULES (A TO F)**SCHEDULE -“A”**

Name of work :- **Fire Safety related works in construction of 350 nos Type-II (G+5) quarters at Group Centre, CRPF, Sembo, Ranchi**

Schedule of quantities:-As per BOQ :-

SCHEDULE - “B” :-

Schedule of materials to be issued to the contractor.

S.No.	Description of item.	Quantity.	Rate in figures & words at which the material will issue be charged to the contractor	Place of
(1)	(2)	(3)	(4)	(5)

----- NIL -----

SCHEDULE - “C” :-

Tools and plants to be hired to the contractor

S.NO.	DESCRIPTION.	HIRE CHARGES PER DAY	PLACE OF ISSUE
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----- NIL -----

NOTE :-ALL THE TOOLS, PLANTS AND MACHINERY REQUIRED FOR CARRYING OUT THE SUBJECT WORK SHOULD BE OWNED/REGISTERED/LEASED EITHER IN THE NAME OF THE SOLE PROPRIETOR OF THE FIRM OR THE NAME OF FIRM AND THE CONTRACTOR SHALL ALSO MEET THE MINIMUM REQUIREMENT OF TOOLS, PLANTS AND MACHINERY SUCH AS VIBRATORY ROLLERS, PNEUMATIC WHEELED ROLLER, FULLY AUTOMATIC CONCRETE BATCHING PLANT, CONCRETE PAVER FINISHER ,CONTINUES TYPE HOT MIX PLANT, PAVER FINISHER (HYDRAULICALLY CONTROLLED SENSORS OPERATED ELECTRICALLY FOR THE PAVE FINISHER (HYDRAULICALLY CONTROLLED), BULL DOZERS, ROAD ROLLERS, DRILLING MACHINES, CONCRETE MOBILE WEIGH BATCHERS, TRANSIT MIXERS ONE BAG CAPACITY CONCRETE MIXER(DIESEL), VIBRATORS (NEEDLE AND PLATE TYPE), TRUCKS/ TIPPERS, TOTAL STATIONS, CONCRETE CUBE TESTING MACHINE(HYDRAULICALLY OPERATED), FULLY AUTOMATIC CONCRETE BATCHING PLANT AND ANY OTHER TOOLS, PLANTS AND MACHINERY REQUIRED FOR THE WORK AS PER GOOD ENGINEERING PRACTICE/RELEVANT IS-CODES WHICHEVER APPLICABLE.

SCHEDULE - “D” :-

Extra schedule for specific requirements/ documents for the work, if any - NIL

SCHEDULE- “E” :-

Reference to General Conditions of Contract:-

General Conditions of Contract for CPWD Works 2023 with upto-date amendments.

1.1Name of Work:

(1) Fire Safety related works in construction of 350 nos Type-II (G+5) quarters at Group Centre, CRPF, Sembo, Ranchi

1.2Estimated Cost of work: -

Rs. 5,11,59,966/-

1.3 Earnest Money: -

Rs. 10,23,199/- (The EMD will be returned post receipt of Performance Guarantee)

1.4 Performance Guarantee **5% of tendered value (It shall be valid up to the stipulated date of completion Plus 60 days beyond that)**

1.5 Security Deposit **2.5 %**

SCHEDULE- "F" :-

General Rules & Directions:-

Officer Inviting Tender: - **DIG (Engr)**

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3

See below

Definitions :-

2(v) Engineer-In-Charge **AC Engr. or Designated by DIG(Engr.)**

2(viii) Accepting Authority **DIG (Engr)**

2(x) Percentage on cost of Materials and labour to Cover all overheads and Profits **15%**

2(xi) Standard Schedule of Rates **DSR**

2(xii) Department **CRPF**

9(ii) Standard CPWD contract Form CPWD form 8 & General Conditions of Contract for CPWD Works-2023 with upto-date correction slips.

Clause-1 :-

(i) Time allowed for submission of Performance guarantee **Programme Chart (Time & Progress) and** from the date of issue of letter of acceptance. **07days**

(ii) Maximum allowable extension Beyond the period as provided in (i) above **10 days by DIG (Engineer) Dte.**

Clause-1A :- Recovery of Security Deposit of GCC :- **Applicable**

Clause-2 :- Authority for fixing compensation under clause 2. **DIG (Engr)**

Clause-2A:- Whether Clause 2A shall be applicable **No**

Clause- 3 :- **Applicable**

Clause 3A:- **Applicable**

Clause 4 :- **Applicable**

Clause-5:- **Applicable**

Time allowed for execution of work **300 days**

Authority to decide

i) Extension of time **DIG (Engr)**

ii) Rescheduling of mile stones **DIG (Engr)**

iii) Shifting of date of start in case of delay in handing over of site **DIG (Engr)**

Clause-6 :- Computerized Measurement Book **Yes**

Clause-7A :- **Whether Clause 7A shall be applicable** **Applicable**

Clause 8 :-	Completion Certificate and Completion Plans	Applicable
Clause-8A :-	Completion Plans to be Submitted by the Contractor	Applicable.
Clause-9 :-	Payment of Final Bill	Applicable.
Clause 9A :-	Payment of Contractor's Bills to Banks	Applicable.
Clause-10A:-	Materials to be provided by the Contractor	Applicable
Clause-10-B		
(i)	Secured Advance on Materials	No
(ii)	Whether Mobilization advance will be paid	No
Clause-10C:-		
	Payment on Account of Increase in Prices/ Wages due to Statutory Order(s)	Not applicable.
Clause-10 CA:-		
	Payment due to variation in prices of materials after receipt of tender	Not applicable.
Clause-10-CC:-		
	Payment due to Increase / Decrease in Prices/ Wages (excluding materials covered under clause 10 CA) after Receipt of Tender for Works	Not applicable
Clause 10 D :-Dismantled Material Govt. Property		
	The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc. as Government's property and such materials shall be disposed off to the best advantage of Government according to the instructions in writing issued by the Engineer-in-Charge.	
Clause-11:-	Work to be Executed in Accordance with Specifications, Drawings, Orders etc.	
	The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications of Central Public Works Department specified in Schedule 'F' or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Rates or any other printed publication referred to elsewhere in the contract. The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.	
Clause-12:-		
	Authority to decide deviation/extra items(as per CPWD norms)	DIG (Engr)
Clause -14: - Carrying out part work at risk & cost of contractor(Authority to decide)		DIG (Engr)
Clause-16:-	Competent Authority for deciding reduced rates.	DIG (Engr)
Clause17:	<u>Contractor Liable for Damages, defects during defect liability period</u>	

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grassland, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. Ten lacs and below except road work) after a certificate final or otherwise of its completion shall have been given by the Engineer in- Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months after the issue of the certificate final or

otherwise, of completion of work. Provided that in the case of road work, if in the opinion of the Engineer-in-Charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion.

In case of Maintenance and Operation works of E&M services, the security deposit deducted from contractors shall be refunded within Two months from the date of final payment or within Two months from the date of completion of the maintenance contract whichever is earlier.

Clause-18:- Tools & Plants etc.

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

Clause-19 :- Labour Laws to be complied by the contractor Applicable.

Clause-19A :- No labour below the age of Eighteen years shall be employed on the work. Applicable.

Clause-19C :- Applicable.

Clause -19D :- Applicable.

Clause -19K :- Employment of skilled/semi skilled workers

The contractor shall, at all stages of work, deploy skilled/semi skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute/Industrial Training Institute/ National Institute of construction Management and Research (NICMAR)/ National Academy of Construction, CIDC or any similar reputed and recognized Institute managed/ certified by State/Central Government. The number of such qualified tradesmen. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized Institute to Engineer in charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade, the contractor shall substitute such tradesmen within two days of written notice from Engineer in-Charge. Failure on the part of contractor to obtain approval of Engineer-in-Charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate specified in schedule 'F' per such tradesman per day. Decision of Engineer in Charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding. Provided always, that the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs. 5 crores. For work costing more than Rs. 10 Crores, and upto Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 20% of the unskilled workers engaged in the project in co-ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi skilled tradesmen. For works costing more than Rs. 50 Crores, the contractor shall arrange on site training as per National Skill Development Corporation (NSDC) norms for at least 30% of the unskilled worker engaged in the project in co-ordination with the CPWD Regional Training Institute & National Skill Development Corporation (NSDC) for certification at the level of skilled/semi skilled tradesmen. The cost of such training as stated above shall be born by the Government. The necessary space and workers shall be provided by the contractor and no claim what so ever shall be entertained.

Clause-19L :- Contribution of EPF & ESI Applicable.

Clause-20 :- Minimum wages act to be complied with. Applicable.

Clause 21 :- Work not to be sublet. Action in case of insolvency

The contract shall not be assigned or sublet without the written approval of the Engineer-in Charge. And if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of Government in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-Charge on behalf of the President of India shall have power to

adopt the course specified in Clause 3 hereof in the interest of Government and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

Clause 25 Settlement of Dispute by Conciliation and Arbitration

(i)	Conciliator	--	IG (Works)
(ii)	Arbitrator Appointing Authority	--	IG (Works)
(iii)	Place of Arbitration	--	Ranchi/New Delhi

Clause 28 Action where no Specifications are specified

In the case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers' specifications, if not available then as perstate/ District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

Clause 30 Water for Works

The contractor(s) shall make his/their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions.

(i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-Charge.

(ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.

(iii) **WATER CHARGES:-** If water is used from CRPF campus then 1% amount of tendered cost shall be levied from contractor.

(iv) **ELECTRICITY CHARGES:-** If electricity is provided by CRPF campus then charges shall be applied on contractor.

Clause 31 Hire of Plant & Machinery

The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work.

Clause 32,33,34 & 35

Applicable

Clause-32 Requirement of technical representative(s) and recovery rate

Sl. No.	Minimum qualification of technical representative	Minimum Experience	Designation of Technical Staff	Nos.	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32	
					Figure	Words
1.	Graduate Engineer	05 years experience of similar nature of works	Project Manager	1	<u>Rs. 45,000/- per month</u>	Rupees Forty Five Thousand per month
2.	Graduate or Diploma Engineer	2 or 5 years (respectively) experience of similar nature of works	Project planning/Quality /Billing Engineer	1+1	<u>Rs. 25,000/- per month</u>	Rupees Twenty Five Thousand per month

Assistant Engineers retired from Govt. Services who are holding Diploma will be treated at par with Graduate Engineers.

Clause 37 :- No engineer of gazetted rank or other gazetted officer employed in engineering or administrative duties in an engineering department of the Government of India shall work as a contractor or employee of a contractor for a period of one year after his retirement from government service without the previous permission of Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government of India as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

DIG (Engineer), Works Dte.
For and on behalf of the President of India

INTEGRITY PACT

To,

DIG(Engineer),
Works Branch, CRPF, Dte.
New Delhi.

Sub: Submission of Tender for the work of.....

Dear Sir, I/We acknowledge that CRPF is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by CRPF. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, CRPF shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/ bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of CRPF.

INTEGRITY AGREEMENT

This Integrity Agreement is made at..... on thisday of 20.....

BETWEEN

President of India represented through DIG GC CRPF SEMBO, RANCHI.

.....
(Name of Zone)

CRPF,, (Hereinafter referred as the
(Address of Office)

‘Principal/Owner’, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND
(Name and Address of the Individual/firm/Company)

through (Hereinafter referred to as the
(Details of duly authorized signatory)

“Bidder/Contractor” and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No) (hereinafter referred to as “Tender/Bid”) and intends to award, under laid down organizational procedure, contract for
(Name of work)

hereinafter referred to as the “Contract”.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “Integrity Pact” or “Pact”), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)

WITNESSES: 1(signature, name and address)

2 (signature, name and address)

Place:

Dated :

Instructions for online Bid submission

Instructions to the Bidders to submit the bids online through the Central Public Procurement Portal for e-Procurement at <https://eprocure.gov.in/eprocure/app>

- 1) Possession of valid Digital Signature Certificate (DSC) and enrolment/ registration of the contractors/bidders on the e-procurement /e-tender portal is a prerequisite for e-tendering.
- 2) Bidder should do the enrolment in the e-Procurement site using the “Click to Enrol” option available on the home page. Portal enrolment is generally free of charge. During enrolment/registration, the bidders should provide the correct/true information including valid eMail ID. All the correspondence shall be made directly with the contractors/bidders through eMail ID provided.
- 3) Bidder need to login to the site thro“ their user ID / password chosen during enrolment / registration.
- 4) Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by SIFY/TCS/n-Code/ e-Mudra or any Certifying Authority recognized by CCA India on e-Token/Smart Card, should be registered.
- 5) The DSC that is registered only should be used by the bidder and should ensure safety of the same.
- 6) Contractor/Bidder may go through the tenders published on the site and download the required tenderdocuments/ schedules for the tenders he/she is interested.
- 7) After downloading / getting the tender document/schedules, the Bidder should go through them carefully and then submit the documents as asked, otherwise bid will be rejected.
- 8) If there are any clarifications, this may be obtained online thro“ the tender site, or thro“ the contact details. Bidder should take into account the corrigendum published before submitting the bids online.
- 9) Bidder then logs in to the site through the secured log in by giving the user id/password chosen during enrolment/registration and then by giving the password of the e-Token/Smart Card to access DSC.
- 10) Bidder selects the tender which he/she is interested in by using the search option & then moves it to the „my tenders“ folder.
- 11) From my tender folder, he selects the tender to view all the details indicated.
- 12) It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender schedules carefully and upload the documents as asked; otherwise, the bid will be rejected.
- 13) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ schedule and generally, they can be in PDF/xls/rar/zip formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Each document to be uploaded through online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same can be uploaded, if permitted. Bidders Bid documents may be scanned with 100 dpi with 12 black and white option. However of the file size is less than 1 MB the transaction uploading time will be very fast.
- 14) If there are any clarifications, this may be obtained through the site, or during the pre-bid meeting if any. Bidder should take into account the corrigendum published from time to time before submitting the online bids.
- 15) The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
- 16) Bidder should submit the EMD as specified in the tender. The original should be Posted / couriered/given in person to the Tender Inviting Authority, within the bid submission due date & time for the tender. Scanned copy of the instrument should be uploaded as part of the offer.
- 17) While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.

- 18) The bidder has to select the payment option as offline to pay the EMD as applicable and enter details of the instruments.
- 19) The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable.
- 20) The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
- 21) The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid will be rejected.
- 22) Tenderers should submit price bid in format available Annexure in **CPP Portal** <http://eprocure.gov.in/eprocure/app> and don't change the name of downloaded Annexure. Only fill the area which is available to fill and validate by the given button in Annexure, save the file and upload the file on portal.
- 23) The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.
- 24) After the bid submission (i.e after Clicking "Freeze Bid Submission" in the portal), the acknowledgement number, given by the system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.
- 25) The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- 26) All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.
- 27) Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

ADDITIONAL TERMS AND CONDITIONS

- (i) PAYMENT:- (a) Works are required to be executed on credit basis only and payment will be released after submission of RA bill by the contractor and scrutiny by the department.
- (b) Payment in advance or immediately cannot be made.
- (c) The Payment action will be processed on production of the following documents:
 - (i) Bill in Triplicate.
 - (ii) A Copy of award of work.
 - (iii) A copy of Certificate issued by DIG GC CRPF, SEMBO, RANCHI in consultation with Engineer-in-charge that contracted work for the period for which payment has been claimed, has carried out by the contractor satisfactory.
 - (d) GST/TDS/GST-TDS/ Labour Cess and other taxes will be deducted from the Bill of Contractor by RPAO as per norms. EPF & ESIC shall be reimbursed by RPAO only on submission of proof of payment by contractor to concerned authorities.
 - (e) Contractor may claim RA Bills at interval of 30 days for the work done as measured and entered in measurement book. RA bill should be checked by Insp/SI (Civil) & Engineer-in-charge and countersigned by Estate Officer before release of payment. Security Deposit of 2.5% shall be retained from the Work Done in the RA Bill which will be paid after completion of Defect Liability Period.

(ii) **MEASUREMENT:** Entire work done at Site shall be recorded in measurement book duly signed by Contractor & Insp/SI (Civil) & AC(Engr). Measurements in measurement book shall be recorded jointly by contractor/authorized representative of contractor and Insp/SI Civil and 50% MB checked & signed by AC(Engr) before processing bill to Estate Officer for counter sign.

(iii) **COMPLETION CERTIFICATE:** Upon Completion of Work, Contractor shall intimate Estate Officer in writing of completion of work. If Estate Office is completely satisfied with the work, he shall issue Completion Certificate duly signed by Engineer-in-Charge (AC Engr) within 20 days of intimation of contractor. If Minor Defects Persists, Provisional Completion Certificate can be issued subject to rectification of defects brought out by Estate Officer. A suitable time frame for rectification of such defects shall also be intimated by Estate Officer in writing beyond which DIG Engineer Dte. Shall be empowered to rectify the defects through other agency at risk and cost of the contractor. This period shall not be less than 30 days and should not exceed 180 days in any case from the date of intimation of defects. Such defects list shall be made part of Provisional Completion certificate by Estate Officer.

(iv) **DISPUTE IN CONTRACT:** -In case of any ambiguity in the provisions of the Contract Agreement, Decision of Accepting Officer shall be Final & Binding on the Contractor.

(v) All materials required to be used on works shall be got approved from the Engineer-in-charge in advance. In case of doubt on any material, Engineer-in-charge has right to get the material tested from any Govt. approved labs/NABL and the charges for the same shall be borne by the contractor, upto the overall amount of Rs. 02 lakh in entire work. Beyond Rs. 02 lakh, the cost of such test shall be borne by the contractor if sample fails in the test & by CRPF if sample passes the test.

(vi) The quoted rate should be inclusive of all taxes, levies, works contract taxes, duties etc.

(vii) All items to be used in this work should be branded and ISI certified. In this case CPWD approved list of material for similar work may be followed. If any make is not specified, decision of Engineer-in-charge shall be final and binding.

(viii) Payment to contractor shall be released only after submission of purchase voucher of all new items.

(ix) **TERMINATION OF CONTRACT :-**

In case of violation/breach of any agreed terms and conditions of contract and persistently failure/negligence to observe and perform all or any of the acts, deeds, matters or things to be observed and performed by the Contractor. Tender Accepting Authority may cancel/Terminate this contract and the performance security deposit will be forfeited.

(x) **CONFLICT OF INTEREST**

The bids of any tenderer may be rejected if a conflict of interest between the bidder and CRPF is detected at any stage. Tender Accepting Authority reserves the right to accept or reject the tender without assigning any reason whatsoever.

(xi) Conditional tender is not acceptable and will be summarily rejected.

(xii) **DEFECT LIABILITY PERIOD:** - Defect liability period is 02 years, which will be reckoned from the date of final and complete handing/taking over of building/infrastructure. If any defects occurs/noticed during this period, then a notice in this regard will be issued to the contractor and it is the responsibility of contractor to rectify/repair the defects at his own cost. The work must be got started by the contractor within 15 days after receipt of the 1st notice. If the contractor is unable or unwilling to repair the defects, the competent authorities reserves full rights to forfeit the security deposit and may blacklisted/debarred the firm and rectify the defects at risk and cost of the contractor. Any amount on this account due to the department shall be recovered from the Contractor.

(xiii) Payment for execution of electrical works will be done only after inspection by the BOO/electrical engineer of State Electrical Department/any Govt. electrical engineer(serving) detailed by Estate Officer/Engineer-in-charge. A completion certificate is required to be submitted by the BOO/electrical engineer of State Electrical Department/any Govt. electrical engineer(serving). Any charges if occurs that will be borne by the contractor. No payment in this regard will be done by the CRPF.

(xvi) All credit obtained during dismantling shall be deposited with CRPF.

LIST OF MAKES

MATERIALS :Unless specific makes/manufacturers are specified in the tender documents all the materials to be procured by the contractor for incorporation in the work under this contract (with the exception of local materials like bricks, stone aggregate, stones, sand etc) shall be with ISI certifications mark.

SAMPLES OF MATERIALS: The contractor shall produce samples of all materials and shall obtain approval in writing from Engineer-in-charge before he places bulk order for the materials for incorporation in the work. The contractor shall not procure materials unless the samples are first got approved from the Engineer-in-charge .

TESTING :The contractor shall submit the manufacturer's test certificate in original alongwith the Test Sheet giving the result of each physical test as applicable and the chemical composition of the cement or authenticated copy thereof, duly signed by the manufacturer with each consignment clearly bringing out lot No. The Engineer-in-Charge shall record these details in the Cement Supply & Acceptance register

Following mandatory tests shall be carried out for cement procured by the Contractor:

- (i) Initial and final setting time
- (ii) Soundness test
- (iii) Compressive strength test at 3, 7 & 28 days as specified in relevant IS code.

CONCRETE

MATERIALS FOR CONCRETE:-

- I. **LIME**:Lime shall be eminently hydraulic lime (Class 'A') and shall conform to IS:712.
- II. **CEMENT**:Cement shall be stored in dry a place covered all round and no stacks shall be more than 15 bags high.
- III. **COARSE AGGREGATE**:Coarse aggregate shall be crushed stone aggregate and shall conform to standard specifications followed in the industry.

LIST OF APPROVED MANUFACTURERS AND MAKES

S/NO.	NAME OF PRODUCT	MAKES/BRANDS/MANUFACTURERS
1	ORDINARY PORTLAND CEMENT	J.K., ACC, GRASIM, GUJARAT AMBUJA, BIRLA (VIKRAM), ULTRA- TECH, J.P.REWA, VIKRAM, SHRI CEMENT, BIRLA JUTE, KHYBER& CEMENT CORPORATION OF INDIA.
2	REINFORCEMENT BARS	TATA STEEL (TISCON), SAIL (EQR/ SEQR), RINL, JINDAL (JSW NEOSTEEL/PANTHER)
3	EXPANSION JOINTS	J.SONGS, METCO, SANFIELD (INDIA) P LTD. Z-TECH (INDIA) PVT. LTD.
4	ADMIXTURES FOR CONCRETE	FOSROC, SIKA, MBT, ASIAN LABORATORIES DURA BUILD CARE, BASF, FEVICOL, CICO TECHNOLOGIES LTD
5	STRUCTURAL STEEL	TATA, SAIL, RINL. ISCO, SRMB
6	WELDING ELECTRODES	ESAB, ADVANI-ORLIKON, WELD ALLOY
7	WATER PROOFING	CICO, SWC, SIKA, INPRMO BY SOMCUM INDIA, PIDILITE, CHESEL BY OVERSEAS WATER PROOFING COMPOUND
8	SYNTHETIC ENAMEL PAINT	ICI (SUPER GLOCE), NEROLAC, BERGER (LUXOL), JENSONS AND NICHOLSON, ASIAN PAINTS (APCOLITE). CICO, MBT, FOSROC
9	ANTI CARBONATION PAINTS	CICO, MBT, FOSRO

10	THERMOPLASTIC PAINTS	CBM, CMS, RELIANCE THERMOPLAST
11	RMC	RMC, ACC, BIRLA, L&T AND OTHER REPUTED MANUFACTURE OF RMC SUBJECTED TO APPROVAL OF ENGINEER-IN-CHARGE
12	TMT FE 415/500	TISCON, ISCON, RINL, SAIL, JINDAL
13	WHITE CEMENT	BIRLA WHITE, J.K. WHITE OR EQUIVALENT.
14	PUTTY	BIRLA, J.K. PUTTY OR EQUIVALENT.
15	WASH BASIN AND WC PAN	PARRYWARE, HINDWARE, JOHNSON, CERA.
16	CLEAR GLASS	MODI GUARD, SAINT GOBAIN, AIS
17	G.I. PIPES	ATUL, B.S.T, TATA STEEL TUBES, JINDAL, PRAKASH SURYA, APL APOLLO, NVR GI PIPE FITTINGS.
18	G.I. FITTINGS	UNIK, KS, AMCO, AVR, NVR, RR
19	HUBLESS CENTRIFUGALLY CAST IRON SPUN PIPES & FITTINGS IS:151205	NECO, HEPCO
20	DI PIPES & FITTINGS	KESORAM, ELECTROSTEEL
21	CP BRASS FITTINGS	PARRYWARE, CONTINENTAL, JAQUAR &HINDWARE,CERA, JIDAL, TATA, OSWAL
22	BRASS STOP & BIB COCK	ZOLOTO, SANT, L&K, LEADER,JAINKO, KALSI PUMP PVT LTD,DHAWAN SANITARY (PRIMA), CERA
23	ALUMINIUM SECTIONS (ANODISING BY APPROVED ANODIZING FIRM)	HINDALCO, JINDAL, INDIAN ALUMINIUM CO. OR AS APPROVED BY ENGINEER-IN-CHARGE
24	STAINLESS STEEL KITCHEN SINK	AMC, DIAMOND, BLUE STAR, NEELKANTH, NIRALI, JAYNA,PRAYAG, JINDAL
25	PLASTIC W.C. SEAT COVER	PARRYWARE, HINDWARE, CERA
26	UPVC WINDOW	FENESTA, EWIN, REHAU
27	PVC TANKS	SINTEX, SUPREME, ASTREL-3 OR LAYERED MORE ISI MARKED OR AS APPROVED BY ENGINEER-IN-CHARGE.
28	MIRROR GLASS	ATUL, SAINT GOBAIN & MODI GUARD, HNG, GOLDEN FISH,CERA
29	CP WASTE & FLUSH PIPES	AS APPROVED BY ENGINEER-IN-CHARGE.
30	PVC FLUSHING CISTERN.	PARRYWARE, HINDWARE, JOHNSON, CERA, CORAL, SPEED FLO
31	TILE FIXER / ADHESIVE	AS APPROVED BY ENGINEER-IN-CHARGE.
32	VENEERED PARTICLE BOARD	NOVAPAN, KITPLY, ANCHOR, NATIONAL, ARCHIDPLY, CENTURY PLY
33	LAMINATED PARTICLE BOARD / LAMINTAES	NOVAPAN, KITPLY, NATIONAL, ARCHIDPLY, CENTURY PLY, ECOBOARD.
34	FLUSH DOOR SHUTTERS	DURO, ARCHIDPLY, KUTTY FLUSH DOOR, KITPLY INDUSTRIES (SWASTIK), CENTURY PLY.OR AS APPROVED BY ENGINEER-IN- CHARGE
35	FACTORY MADE PANELLED & WIRE GAUGE WOODEN DOOR/ WINDOW SHUTTERS	AS APPROVED BY ENGINEER-IN-CHARGE
36	STEEL WINDOWS / PRESSED STEEL FRAMES	AS APPROVED BY ENGINEER-IN-CHARGE.
37	M.S PIPE	TATA, JINDAL, BHUSHAN INDUSTRIES, PRAKASH STEEL TUBES, OR AS APPROVED BY ENGINEER-IN-CHARGE
38	PVC PIPE & FITTINGS	SUPREME, AKG, FINOLEX, PRINCE, KISAN, SFMC, DIPLAST, RAVINDRA. HEAVY DENSITY
39	ACRYLIC DISTEMPER	NEROLAC, BERGER (BISION ACRYLIC) ASIAN PAINTS

		(TRACTOR ACRYLIC) IST QUALITY, DULUX WEATHER SHIELD, ICI
40	DRY DISTEMPER	BERGER (CASTLE), JENSON & NICHOLSEN (J&N)
41	STEEL PRIMER	ICI, NEROLAC, BERGER, ASIAN PAINTS. IST QUALITY
42	WOOD PRIMER	ICI, NEROLAC, BERGER, ASIAN PAINTS. IST QUALITY
43	MOSAIC TITLES / CHEQUERED TILES	HINDUSTAN, JONSON, NITCO, MODERN, NTC, A-1
44	A) CERAMIC WALL TILES (300 X450 MM) B) MATT FINISH FLOOR TILES	B) MATT FINISH FLOOR TILES. KAJARIA, NITCO, SOMANY, ORIENT 1ST QUALITY, JOHNSON, ASIAN
45	DASH / ANCHORING FASTENERS	HILTI / FISCHER
46	NUTS / BOLTS & SCREWS	GKW, ATUL
47	FLOAT VALVE	IVC, LEADER, PRAYAG, KALSI PUMP PVT LTD, DHAWAN SANITARY UDYOG (PRIMA) OR AS APPROVED BY ENGINEER-IN-CHARGE
48	CP FITTINGS/MIXER PILLAR TAP WASHERS	KINGSTON,,JAL, SEIKO, ESS, GEM, PARKO, TECHNO, GRAFFTI, ESSCO, JAQUAR, HINDWARE, PARRYWARE, CERA, PRAYAG, MARC OR AS APPROVED BY ENGINEER-IN-CHARGE
49	CP ACCESSORIES	KINGSTON,,JAL, SEIKO, ESS, GEM, PARKO, TECHNO, GRAFFTI, ESSCO, JAQUAR, HINDWARE, PARRYWARE, CERA, PRAYAG, MARC OR AS APPROVED BY ENGINEER-IN-CHARGE
50	C.I SLUICE VALVES & REFLEX VALVES	ANNAPURNA OR AS APPROVED BY ENGINEER-IN-CHARGE
51	GUN METAL GATE VALVES, GLOBES	LEADER, ZOLOTO, KILBURN, CIM VALVES, SANT, KIRLOSKER, L&T OR AS APPROVED BY ENGINEER-IN-CHARGE
52	STONE WARE PIPES & GULLY TRAPES	PERFECT, HIND OR ISI MARKED S.W PIPES OR AS APPROVED BY ENGINEER-IN-CHARGE
53	GLAZED FIRE CLAY KITCHEN SINK	PAMINI, SANFIRE, RKCP OR AS APPROVED BY ENGINEER-IN- CHARGE
54	VITRIFIED TILES	NITCO, JOHNSON, ASIAN, MARBITO, VARMORA, ORIENT BELL, KAJARIA, SOMANY
55	WATER METER	PRIMA (ISI), KRANTI, DASHMESH OR BIS MARKED PRODUCT
56	GROUNTING COMPOUND	ENDURA, PIDILITE OR AS APPROVED BY ENGINEER-IN-CHARGE
57	GLASS MOSAIC TILES	ITALIA, OPIO OR AS APPROVED BY ENGINEER-IN-CHARGE
58	PAVER BLOCKS & CURVE STONES	NITCO PREFEB, ULTRA KK, TERRAFIRMA, UNISTONE, UNITILE, NTC, ISI MARKED AS APPROVED BY ENGINEER-
59	GLASS MOSAIC TILES	ITALIA, OPIO OR AS APPROVED BY ENGINEER-IN-CHARGE
60	NON RETURN VALVE (CHECK VALVE)1/2" TO 1/4"	KALSI PUMP PVT. LTD, ZOLOTO, SAKARAL, UNIK OR BIS APPROVED PRODUCTS.
61	LINE FILTER VALVE 1/2" TO 2"	KALSI PUMP PVT. LTD OR BIS APPROVED PRODUCTS.
62	FERRULES 15 MM, 20MM & 25 MM	DHAWAN SANITARY UDYOG (PRIMA) OR BIS APPROVED PRODUCTS
63	STAINLESS STEEL STAIRCASE RAILING	JINDAL S S LTD, ICICH INDUS, ESSAL, DORMA OR AS APPROVED BY ENGINEER-IN-CHARGE
64	LOCKS/LATCH/FITTINGS	GODREJ, HARRISON, PLAZA, GOLDEN, YALE, DORMA
65	HYDRAULIC DOOR CLOSER / FLOOR	HARDWYN, GODREJ, GRACE, EVEREST, DORMA

	SPRING	
66	FIRE CHECK DOOR	NAVAIR, ROMAT, KUTTY DOOR
67	ANODISED ALUMINUM HARDWARE (HEAVY DUTY)	HARDIMA, EVERITE, SIGMA (ISI MARKED), DORMA
68	TEMPERED GLASS	MODI FLAT & SAINT GOBAIN, ASHAHI, GLAVERBEL
69	POLYSTER POWDER COATING SHADES	NEROLAC, BERGER, J&N
70	FRICTION STAY HINGES	EARL-BIHARI OR AS APPROVED BY ENGINEER-IN-CHARGE
71	NUTS, BOLTS AND SCREWS, STEEL	KUNDAN PRIYA ATUL OR AS APPROVED BY ENGINEER-IN-CHARGE
72	EPDM GASKET	HANU / ANAND OR AS APPROVED BY ENGINEER-IN-CHARGE
73	STRUCTURAL SILICON	DOW CORNING / WACKER
74	WEATHER SILICON	DOW CORNING / WACKER
75	COPPER TUBES / PIPES	RAJCO, MAX FLOW ABC
76	COPPER FITTINGS	YORKSHINE, IBP, BCONEX
77	MINERAL FIBRE FALSE CEILING	MONAD, ARM STRONG OR EQUIVALENT AS PER RELEVANT IS CODE
78	METALIC (GI) POWDER COATED FALSE CEILING TILE	MONAD, LUXALON, DAIKEN
79	U-PVC PIPE	FLOW GUARD, PRINCE, GREEN LINE OR BIS APPROVED PRODUCTS HEAVY DUTY
80	C-PVC PIPE AND FITTINGS	PEARL, ASTRAL, ASHIRVAD, AJAY INDL, PRINCE HEAVY DUTY
81	CEMENT BASED PAINT	M/S SNOWCEM INDIA LTD, ASIAN, BURGER, DELUXE
82	ALUMINUM SLIDING DOOR BOLT, TOWER BOLT HANDLE.	PILOT AND AODI. OR AS APPROVED BY ENGINEER-IN-CHARGE
83	VITREOUS CHINA SANITARY WARE	PARRYWARE, NEYCER, CERA, HINDWARE
84	CENTRIFUGALLY SAND CAST (SPUN) IRON PIPES	NECO OR ANY OTHER AND FITTINGS B.I.S MARKED PRODUCT, BABULAL BAJAJ IRON FOUNDRY MATHURA (HIF) OR BIS APPROVED PRODUCTS
85	CENTRIFUGALLY CAST (SPUN) PIPE	ELECTRO STEEL, KESORAM (CLASS LA)
86	APP SHEET	SALIMAR, DR FIXIT, SIKKA OR AS APPROVED BY ENGINEER-IN- CHARGE
87	PVC DOOR SHUTTER & FRAME	SYNTEX, RAJSHREE OR AS APPROVED BY ENGINEER-IN-CHARGE
88	PRE-COATED PROFILE SHEET	TATA, JSW OR EQUIVALENT
89	HDF LAMINATED BOARD	ACTION TESA, CENTURY OR AS APPROVED BY ENGINEER-IN- CHARGE
90	BITUMEN	HPL, COAL INDIA, IOCL OR AS APPROVED BY ENGINEER-IN- CHARGE
91	ACP SHEET	REYNOBOND, VIRGO ACP, ALEX PANELS, ALUDECOR OR AS APPROVED BY ENGINEER-IN-CHARGE
92	LED LIGHT FITTING & LUMINARIES FOR ROAD AND STREET LIGHTING (OUT DOOR)	WIPRO, C&S ELECTRIC, PHILIPS, CROMPTON, BAJAJ, OSRAM
93	LED LAMPS	WIPRO, PHILIPS, CROMPTON, BAJAJ, OSRAM, HAVELLS
94	SMART STREET LIGHTS AND CONTROL SYSTEM	ORIENT ELECTRIC LTD, OPULUS, HAVELLS
95	STREET LIGHT FITTING & ACCESSORIES - HPSC (70/ 150/ 250/ 400) HPMV (80/	POLYCAB, HAVELLS, C&S ELECTRIC, SURYA, WIPRO

	125/ 250/ 400)	
96	SOLAR STREET LIGHT FITTINGS	JILCO, PHILLIPS, OSRAM
97	STREET LIGHT TIMERS	SINETRAC, INDO ASIAN, HAVELLS
98	CI PIPES & FITTINGS	JINDAL, TATA METALIKS, TATA KUBOTA
99	INTERLOCKING TILES/ PAVER BLOCKS	ISI MARKED GLOSSY FINISH
100	DECORATIVE PAINT (EXT & INT)	SNOWCEM, ASIAN, BERGER, DULUX
101	CHAIN LINK FENCING / BARBED WIRE / PUNCHED TAPECONCERTINA COIL / RAZOR BLADE TAPE FENCING	A-1 FENCE, ARMOSTRONG WIRES, MAIMOM ROGER
102	GALVALUME SHEET	TATA BLUE SCOPE /JSW/BHUSHAN/VARDHMAN
103	NON SKID/VITRIFIED/GLAZED TILES	1ST QUALITY OF JOHNSON TILES/ NITCO/ CERA/ KAJARIA.
104	CHROMIUM PLATED BATHROOM FITTINGS OF CP, CAST COPPER ALLOY FANCYTYPE BIB TAP, STOP VALVES AND PILLARTAP, SANITARY FITTINGS, SHOWER PNAEL	JAQUAR /KOHLER/ROCA/GROHE
105	VITREOUS CHINA WC / WHB / URINAL / SOAP DISH / URINAL PARTITION WALL / LABORATORY SINK	PARRYWARE /CERA/ JAQUAR
106	NON ASBESTOSFIBRE CEMENT BOARDAS PER IS 14862	ARMSTRONG / SAINT GOBAIN (GYPROC) / EVEREST /INDIA GYPSUM/
107	ACRYLIC EMULSION / WEATHER PROOFPAIN	ASIAN PAINTS (ROYAL) / BERGER (LUXOL SILK SPLENDER)/ ICI(DULUX VELVET TOUCH)
108	PLASTIC EMULSION PAINT	ACROCEM / DUROCEM / SUPER SNOWCEM / BERGER / ASIAN PAINT (GUTUCAM)
109	HOUSE WIRING CABLE (1100 VOLTS)/CABLE FOR SERVICE CONNECTION/CABLE FOR PANEL BARDWIRING	HAVELLS/ RR KABEL/ FINOLEX/RPG
110	PIANO SWITCHES/SOCKETS ETC.	ISI MARKED PRODUCTS OF LEGRAND/SCHNEIDER/PHILLIPS/ANCHOR (MODULAR TYPE)
111	PVC CASING CAPPING / CONDUIT	FINOLEX / MODI / PRESTO PLAST / PLAZA / KALINGA/RICHA
112	WIRING ACCESSORIES AND FITTINGS	ANCHOR/ HAVELLS/ LEGRAND/ KINJAL (ISIMARKED)/RICHA
113	MCBS, DBS, ISOLATOR	LEGRAND /SIEMENS/ SCHNIEDER/ ABB.
114	MCCB	ABB/ LEGRAND/ SCHNEIDER/ SIEMENS
115	LT UG /SERVICE CABLE	HAVELLS/FINOLEX/KEC
116	EXHAUST FAN/CEILING FAN	CROMPTON GREAVES/KHAITAN/BAJAJ/HAVELLS/ORIENT
117	HEATER WATER STORAGE TYPE ELECTRICGEYSER	CROMPTON GREAVES /BAJAJ/HAVELLS
118	FALSE CEILING	ARMSTRONG/ EVEREST/GYPROC
119	EPOXY PAINT	NEROLAC OR EQUIVALENT
120	CC KERB STONE	NITCO PREFAB, K.K. MANHOLE, TERRAFIRMA, UNISTONE.
121	MILD STEEL TUBES	TATA, SAIL, ISCO, SRMB
122	APP MEMBRANE	ASIAN PAINTS/FOSROC/SIKA/STP

123	GLOW STUD	TATA BP/3M India or Equivalent
124	S.S. Hinges(Fire Rated), Mechanism door closer, Dead Lock, Tower Bolt, S.S Handles	HAFELE, DORMA

- Raw material source to be approved by the Engineer-in-Charge.

Remarks:- Any change in the brands mentioned above and elsewhere shall be allowed only after approval of the Engineer-in-charge.

PARTICULAR SPECIFICATIONS

GENERAL

Work under this contract shall be carried out in accordance with Specifications, drawings, General Specifications and other provisions contained in CPWD Manuals and Specifications General Rules, specifications, special conditions and all preambles in the CPWD Schedule shall be deemed to be applicable to the work under this contract, unless specifically stated otherwise in these documents and in case of any conflicting provisions in CPWD schedule and in these tender documents, the provisions in these documents shall take precedence over the aforesaid provisions in the CPWD Schedule. The term "as specified" wherever appears in the tender documents and drawings, relates to relevant particular specifications and in its absence, general specifications. Where specifications for any item of work are not given in CPWD Schedule or in these particular specifications, specifications as given in relevant Indian Standard Code of Practice shall be followed. Unit rate quoted by the tenderer shall be deemed to include for any minor details/items of work and/or constructions which are obviously and fairly intended and which may not have been included in these documents but which are essential for the execution and entire completion of work. Decision of the Accepting Officer as to whether any minor detail of work and/or construction is obviously and fairly intended to be included in the contract or not, shall be final, conclusive and binding.

LOCAL MATERIALS:

Irrespective of actual distance involved, local materials such as stones, aggregates, sand, road metals etc shall conform to or superior to the specifications given here in after and to the samples kept in the office of Executing Officer. The tenderers are advised to inspect these samples. The tenderers shall be deemed to have inspected the samples and have full knowledge thereof whether they inspect them or not before quoting their tender.

SAMPLES OF MATERIALS: -

(a) Specific requirements regarding dimensions, strength, weight and finishes, as per IS, CPWD Specification and the particular specifications given hereinafter vis-à-vis actual properties check, tests carried out, reference to test certificates and markings, etc based on which samples of each materials are approved as Conforming to relevant specification shall be recorded in the sample approval register.

(b) The contractor shall produce samples of all materials and shall obtain approval in writing from Engineer-in-charge before he places bulk order for the materials for incorporation in the work. The contractor shall not procure materials unless the samples are first got approved from the Engineer-in-charge.

(c) Samples of approved materials shall be kept in custody of Engineer-in-Charge till completion of work.

RECORD OF MATERIALS

(a) The quantity of all the proprietary materials (including materials and quantity of which cannot be checked after incorporation in the works) shall be recorded in measurement books and signed by the Contractor, the Engineer-in-Charge and Insp/SI (Civil) as a check to ensure that the required quantity has been brought at site for incorporation in the work.

(b) Materials brought to site shall be stored as directed by the Engineer-in-Charge and shall be suitably marked for identification.

(c) The contractor shall procure all the materials (where specific makes/manufacturer's specified) directly from their manufacturers or from their authorised dealers only. The contractor shall ensure that the materials are brought to site in original sealed containers/packing bearing manufacturers marking except in the case of the requirement of material(s) being less than smallest packing.

(d) The contractor shall produce to Engr-in-charge original printed and machine numbered purchase vouchers/invoices including manufacturer's test certificate (where applicable) for all the materials mentioned. Copies of

orders placed on the manufacturer/authorised dealers shall also be provided by the contractor to Engr-in-Charge along with above documents. Whenever procured and brought to site of work for incorporation in the work, a Xerox copy of such vouchers/invoices shall be stamped (office stamp) and defaced in ink by the Engineer-in-Charge & Insp/SI (Civil) stating verified for materials purchased and brought to the site of work for incorporation in the subject work and signed with date before allowing payment for these materials through RA Bills.

STANDARD OF WORKMANSHIP

To determine the acceptable standard of workmanship and fittings, wiring etc, the Engr-in-charge shall order the contractor to execute certain typical portion of work (different trades) and services sufficiently in advance of other work. These shall be executed and completed under the close supervision of the **Engineer-in-charge and Insp/SI(Civil)**.

On approval by the **Engineer-in-charge** of such items, these items shall signed and/or suitably identified by the **Engineer-in-charge** and labelled as guiding samples. The record of such inspection and passing of each stage of these samples shall be recorded by **Engineer-in-charge** under his dated signatures. Work on such sample shall be progressed well ahead (minimum two stages ahead). Approved finishes/workmanship shall be followed in the work as a whole.

TESTING OF CEMENT

The Engr-in-charge shall also organize independent testing of random samples of cement (both physical and chemical properties) drawn from various lots for each consignment to cement brought out by the contractor before incorporation in the work from the National Test House, SEMT, Regional Research Laboratories, Government approved laboratories, as per IS: 3535 (Method of sampling Hydraulic cement), IS: 4031 (Method of physical test for Hydraulic Cement) and IS: 4032 (Method of chemical analysis of Hydraulic cement.)The cement shall conform to chemical requirements and physical requirements as specified in respective IS. The tests carried out as per provisions of IS codes specified herein before shall be the criteria for acceptance of cement by **Engr-in-Charge & Insp/SI(Civil)**. If samples from a lot/lots are not within the acceptance limits of Indian standard the lot/lots shall be rejected without any claims or compensation to the contractor for the lot/lots purchased. The contractor shall replace the lot/lots with the fresh one, which shall be tested again for acceptance. The cost of all tests carried out on cement before acceptance for incorporation in the work shall be borne by the contractor whether the results are acceptable or not.

STORAGE

Cement shall be stored over dry platform at least 20cm high in such a manner as to prevent deterioration due to moisture or intrusion of foreign matter. In case of store rooms, the stock should be at least 20cm above from floors and 60 cm away from walls in addition to precautions specified in Works Manuals. Inspections shall be carried out once a day by the Engineer-in-Charge&Insp/SI(Civil). It shall be ensured by the Engineer-in-Charge that tested and untested cement are segregated and stored separately with distinct identification. The cement godown shall be provided with two locks on each door. The key of one lock at each door shall remain with the Engineer-in-Charge or his representative and that of the other lock with the contractor's authorized representative at site of works so that cement is removed from the godown only according to daily requirement with the knowledge of both the parties.

DOCUMENTATION

The contractor shall submit original vouchers from the supplier for the total quantity of cement supplied under each consignment to be incorporated in the work. All consignments received at the work site shall be inspected by Engr-in-charge & Insp/SI(Civil)along with the relevant documents before acceptance. The original vouchers and the Test Certificates shall be defaced by the Engineer-in Charge & Insp/SI(Civil) and kept on record duly authenticated and with cross-reference to the control number in the cement Supply & Acceptance Register. The cement supply & Acceptance Register will be signed by Insp/SI(Civil), **Engineer-in-Charge and the Contractor**. The Accepting Officer may order a Board of Officers for random check of cement and verification of connected documents. The entire quantity of all types cement shall also be suitably recorded in the Measurement Book for record purpose not to be abstracted before incorporation in the work and shall be signed by the Engineer-in-Charge, Insp/SI(Civil) and the contractor.

SCHEDULING OF SUPPLY

Schedule of procurement of cement shall be finalized by the contractor with Engr-in-charge and shall be incorporated in the CPM chart so that procurement is in accordance with the progress contemplated in the CPM prepared. The complete

requirement of cement shall be worked out before making any RA Bill payment and procurement of cement by the contractor shall be completed sufficiently in advance of the execution of work.

SAND(Coarse & Fine)

Sand for all concrete work shall be M-sand and /or Badarpurriver sand (from near area or any other Sand) conforming to samples, complying with the requirement as specified in CPWD. Sand in the zone II grading may also be permitted provided mix design is done and the requisite strength of the concrete is achieved.

Note: Wherever M-sand has been specified in the tender documents, the Contractor shall be permitted to use Badarpur sand (from near area) at his own cost, if he so desire due to inadequate supply/non availability of M-Sand. No price adjustment shall be made on this account. Sample of sand shall however, be got approved from the **Engr-in-charge & Insp/SI(Civil)** before incorporation in the work. Other provisions in the respective clauses shall remain unchanged.

CONCRETE MIX

All mixes of concrete and mortar mentioned in this tender document shall be by volume except design mix concrete conforming to IS-456 for which all the ingredients are proportioned and mixed by weight.

WATER BOUND MACADAM (WBM)

WBM shall consist of consolidated thickness as per schedule of broken/crushed stone (granite, trap or basalt stone aggregate). Stone shall be hard and durable and shall be free from excess of flat and elongated, soft and disintegrated particles, dirt and other objectionable matter. Stone aggregate shall be grading 2 (63 to 45 mm size) as given under CPWD Specifications & Manuals. Screening shall be of red Bajri/Mooram. Unless otherwise specified, the laying, compacting and rolling etc shall be as specified in CPWD Works Manual & Specifications. Stone for WBM shall be laid out as specified in CPWD.

STEEL AND IRON WORK

General:- All items of steel which are required for the work under this contract shall be procured supplied and incorporated in the work by the contractor under his own arrangement.

Grades and Quality

Steel supplied by the contractor shall conform to the following grades and quality.

Structural steel

- (i) Structural steel wherever mentioned shall be conforming to Fe 550 Gdeconforming to IS-2062.
- (ii) General purpose steel wherever mentioned shall be conforming E-165(Fe-290) conforming to IS-2062.

Source of Procurement

(a) Structural Steel : The Contractor shall procure all the structural steel from the main manufacturers and shall be procured from any one of the following main producers :-

1. Rashtriya Ispat Nigam Ltd (RINL), Brand : "RINL"
2. Tata Iron & Steel Company, (TISCO or Tata Steel), Brand : "TATA"
3. Steel Authority of India Limited, (SAIL), Brand : "SAIL"
4. M/s Jai Balaji Industries Ltd, Brand : "JAI BALAJI"
5. M/s Shyam Steel Industries Ltd, Brand : "SHYAM TMT"
6. M/s SPS Steel Rolling Mills Ltd, Brand : "ELEGANT TMT"
7. M/s Steel Exchange India Ltd, Brand : "SIMHADRI TMT"
8. M/s Jindal Steels and Power, Ltd, Brand : "JINDAL"
9. M/s SRMB Srijan Ltd, Brand : "SRMB"
10. M/s Concast Steel & Power Ltd, Brand : "CONCAST MAXX"
11. M/s Adhunik Metaliks Ltd, Brand : "ADHUNIK MET +"
12. M/s Shri Bajrang Power & Ispat Ltd, Brand : "GOEL TMT"
13. M/s JSW Steel Ltd, Brand : "JSW TMT Plus"
14. M/s Electrosteel Steels Ltd., Brand : "ELECTROSTEEL"
16. M/s Shyam Metaliks & Energy Ltd, Brand : "SEL"
17. M/s Kamachi Sponge & Power Corporation Ltd., Brand : "KAMACHI"

18.M/s Electrotherm (india) Ltd Brand “ET TMT”

(b) The contractor shall within 15 days of placing of work order indicate the source for procurement of steel to Engineer-in-charge in writing.

(c) However, steel sections for railing, gates, fencing, guard bars, grills steel chowkats, hold fast etc, which do not constitute structural members, can be procured from main producers/secondary producer/BIS marked manufacturers or their authorized dealers at the option of contractor

(d) The contractor shall produce original vouchers from suppliers for the total quantity of steel purchased, under each consignment and be kept on record by Engineer-in-Charge and authenticated.

Testing and Test Certificate

(a) The contractor shall produce manufacturers test certificate in original along with the test sheet giving the result of each mechanical test as applicable and the chemical composition of the steel supplied as specified in relevant IS Codes, duly signed by the manufacturer of their authorized dealers with each consignment.

(b) The original test certificate shall be kept on record in the office of Engineer-in-Charge (AC Engr).

(c) Independent testing of structural steel by the Engineer-in-Charge shall be mandatory in case of procurement from secondary producers and testing charges shall be borne by the Contractor irrespective of the outcome of test results.

(d) In both the cases at sub para (c) and (d) above, the contractor at his cost shall provide all facilities required for the testing and cost consumed in tests shall be borne by the contractor.

Minimum frequency of testing for each source and each consignment

(a) Structural Steel: -

(i) Tensile test : One sample (3 specimen) for each test for every 25 tonnes or part thereof.

(ii) Bend test : One sample (3 specimen) for each test for every 10 tonnes or part thereof.

(b) Steel for concrete reinforcement: -

(i) Bar size less than 10mm : One sample (3 specimen) for each test for every 25 tonnes or part thereof.

(ii) Bar size 10mm to 16mm (inclusive): One sample (3 specimen) for each test for every 35 tonnes or part thereof

(iii) Bar size over 16mm: One sample (3 specimen) for each test for every 45 tonnes or part thereof.

(c) Bend test and tensile test for structural steel shall be carried as per IS-226 of 1975. For high strength deformed bar tensile, bend test and rebend test shall be done as per IS-1786 of 1985. For MS bars tensile and bend test shall be carried out as per IS 432 of 1982.

(d) Engineer-in-Charge has the right to get one more sample (3 specimen) tested if he is not satisfied with test result of the consignment.

(e) If the test results as per manufacturer's test certificate or of independent testing of random samples are not as per criteria laid down in the relevant BIS provisions, the entire consignment which is represented by the samples shall be rejected. Such rejected materials shall be removed and replaced by the contractor at his own cost forthwith.

(f) Cost of transportation of samples to the approved laboratory/test house and all testing charges shall be borne by the contractor.

Storage: - Steel supplied by the contractor shall be stored in accordance with the requirement of IS. Each grade and quality of steel shall be stored separately and have identification tags indicating the source, quality and grade.

Preservation and maintenance of steel :- The steel brought by the contractor shall be preserved to ensure that no rusting takes place till it is incorporated in the works.

Schedule of Supply :- The contractor shall procure the steel sections, timely as required in accordance with CPM Chart, agreed between Engr-in-charge and contractor. The contractor will forego his right to demand extension of time if the supply of steel got delayed due to his failure in placing order in time to the manufacturer/supplier.

Payment :- Payment shall be allowed after production of test certificate and original paid/purchase vouchers by the contractor.

Measurement

(a) The entire quantity of steel brought to site shall be recorded in measurement book as "NOT TO BE ABSTRACTED" indicating the reference to manufacturers, source of supply voucher number and test certificate before incorporation in the work and shall be signed both by the Engineer-in-Charge and the contractor. Proper documentation/record shall be maintained as per the instructions on the subject.

Normal waste and off cuts shall be stacked neatly which shall be the property of the Contractor. Contractor shall be allowed to remove such cut pieces after inspection and certifications by the Engineer-in-Charge.

Advance on account of payment made towards these cut pieces shall be recovered from advance on account of payment immediately falling due and before removal of such cut pieces from site.

Bending and fixing of bars for concrete reinforcement including mild steel wire for binding shall be carried out all as specified in CPWD. Binding wire for reinforcement shall be mild steel wire (annealed) of size not less than 0.9mm.

Steel supply/Acceptance form :- For each consignment of steel supply/acceptance form will be filled in and jointly signed by the department Rep.(Engineer-in-Charge/SI civil/Insp Civil) and contractor and accepted/rejected by **Engineer-in-Charge** before incorporation in the works.

Steel Reinforcement :- Reinforcement shall be fabricated, placed in position all as specified in CPWD specifications.

Guard Bars/Grills:

MS Guard bars/grills wherever applicable and as indicated shall be provided to wooden/steel windows/ventilators as per details shown on drawings/schedule. Steel Guard bars/ steel grills shall be painted with 2 coats of synthetic enamel paint over a coat of primer as specified here-in-after.

Hold Fast/Lugs: Flat iron hold fast/lugs shall be provided by welding as and where shown on drawings except those, to be provided to wooden chowkats, which shall be fixed with screws as per details shown on drawings. Hold fasts/lugs shall be embedded in PCC(1:3:6) bed blocks of size 220mmx220mmx75mm in one brick thick walls and 100mmx220mmx75mm in half brick thick walls..

FLOORING

General adopted for laying floors and pavements.

Floors shall be laid to levels and as directed by the Engineer-in-Charge.

Floor topping of cast-in-situ cement concrete shall be finished even and smooth using extracement as specified in CPWD specifications.

Pozzolana or pozzolana slag cement shall not be used for floor topping.

Floor finish over RCC slabs shall be laid all as specified.

Sub floor may not be laid in panels. The thickness of sub base concrete shall be as indicated in schedule.

CEMENT CONCRETE FLOORS :- PCC floors shall be provided as indicated in Schedule.

VITRIFIED TILES FLOORING

Where vitrified tiles specified on Schedules provide coloured vitrified tiles of size as specified in the schedule and shall be laid and jointed pointed with white cement paste & pigment. Tiles shall conform to IS – 15622-2006.

The tiles shall be first quality product procured from any of the manufacturers as listed in list of manufacturers

Laying jointing and finishing shall be all as per manufacturer's guidance/ instructions.

The colour of tiles shall be as decided by Estate Officer and Engineer-in-Charge.

KOTA STONE SLAB FLOORING

Kota stone shall be hard, durable, regular in shape, of uniform colour and free from cracks, decay and weathering. It shall be set, jointed and pointed in neat cement slurry mixed with pigment to match with the colour of stone. The slabs used in one location shall be of uniform size and shall be laid over cement screed as indicated. Kota stone slabs shall be machine cut and true fine cut dressing on all sides up to full depth. All angles and edges shall be true, square, free from chipping and surface shall be true and plain. The joints of the tiles shall not be more than 1mm. Laying, polishing and finishing of kota stone shall be all as specified.

GLAZED CERAMIC TILE DADO

The ceramic dado shall be provided with ceramic tiles of size as specified in BOQ and shall be glazed quality colour and/or white as indicated in BOQ and conforming to relevant IS specifications.

The tiles shall be jointed and pointed with white or coloured cement to match with the colour of tiles. The tiles shall be laid over cement mortar screed as specified in BOQ.

GRANITE FLOORING /CILL

It shall be all as described on Schedule. Granite slab shall be machine cut, pre-polished, over cement screed 15mm thick in CM 1:6 over 25mm thick PCC 1:2:4 using 12.5mm aggregate over RCC slab or as per BOQ.

WHITE MARBLE TILE: 20mm thick makrana white marble tile shall be laid over cement screed CM 1:4, 15mm thick jointed with grey cement slurry mixed with pigment to match the shades of slab used as the boarder to kota slab flooring.

CERAMIC FLOOR/WALL TILES

Where Non-skid ceramic tiles specified on Schedules provide coloured non-skid ceramic tiles of size as specified in the schedule, as per Gde B II (a) shall be laid and jointed pointed with white cement paste & pigment. Tiles shall conform to IS – 15622-2006.

The tiles shall be first quality product procured from any of the manufacturers as listed in list of manufacturers here-in-below.

Laying jointing and finishing shall be all as per manufacturer's guidance/ instructions.

The colour of ceramic tiles shall be as decided by Estate Officer and Engineer-in-Charge.

PLASTERING AND POINTING

GENERAL

Cement: Refer to specifications and list as mentioned above.

Fine aggregate for plastering and pointing work shall be river sand conform to IS 1542-1992 and as specified in Clause 14.5 to 14.5.2 of SSR Part I. Sand shall be obtained from sources as approved by Engineer-in-Charge.

Particular attention of the contractor is invited to take note of local practices and the local availability of materials like bricks form work etc and cater for any extra quantities of mortar required for rendering smooth for extra dubbing required for touching up properly and for smooth and even surfaces.

This shall be deemed to have been included in the lump sum.

Plaster and skirting/dado shall be returned in jambs, soffits of lintels and windows cills etc.

All plastered surface shall be trowel led to a smooth and even surfaces, without using extracement.

Thickness of cement plaster mentioned hereinafter shall be finished thickness exclusive of dubbing. Dubbing may however be done in one operation with plaster.

Plaster on external surface shall be carried out upto 15cm below ground level or as per BOQ except where plinth protection/ramp etc are provided.

All corners, angles, junctions and riser shall be truly vertical or horizontal as the case may be and shall be carefully finished. Corners around jabs of openings and junction of walls shall be finished straight and square. 12mm wide groove at the junction of wall and RCC slabs to the entire thickness of wall plaster shall be provided. Also trowel groove shall be provided at junction of walls and RCC columns or any other dissimilar material e.g. wooden chowkhats etc.

Plastering shall be carried out all as specified in Schedule 'A'.

OIL EMULSION DISTEMPER

Distemper shall be applied as specified in BoQ. Preparation of surfaces and applications of distemping shall be all as per BOQ/CPWD specifications.

Preparation of surfaces and application of interior emulsion shall be done all as per manufacturer's instructions/ as specified in BOQ. The contractor shall give 05 years Guarantee for interior emulsion on stamp paper of value for Rs.100/-

CEMENT BASED PAINT

Cement based paint shall comply with IS 5410-1992, specification for cement paint colours required. The material shall be in powder form, free from lumps that are not friable and when mixed with required volume of water shall be suitable for use on porous surfaces of masonry, concrete, bricks and rough plaster work. Cement base painting shall be provided where indicated in BOQ and all as specified.

WHITE/COLOUR WASHING

Lime shall be fresh burnt lime (Class 'C'), white in colour conforming to IS-712, 1984. The samples of lime, blue, sodium chloride and gum shall be approved the Engineer-in-Charge before incorporation in work.

Workmanship shall be generally conforming to specification as described in Schedule.

SYNTHETIC ENAMEL PAINTING

The synthetic enamel paint shall be from any of the make/ brand listed in list of manufacturers.

Preparation of surfaces and application of synthetic enamel paint shall be done through the authorized applicator of approved manufacturer all as per manufacturer's instructions/ as specified in BOQ.

The colour scheme for building shall be got approved from Estate officer in consultation of Engineer-in-Charge and the contractor shall progress the application of paint only on receipt of approval from Engineer-in-Charge.

GENERAL NOTES FOR APPLYING PUTTY, DISTEMPER, ANTIFUNGAL AND ENAMEL PAINTING

These works shall be executed using modern technics and tools to maintain the required quality work. Following smart painting tools shall be used in site.

- (a) Hand held sander / long handle sander shall be used for plaster / putty work.
- (b) Multipurpose mixer shall be used for mixing putty to get a uniform mix.
- (c) Auto roller and Airless spray shall be used for painting.
- (d) Jet washer to be used for cleaning dirt and fungus etc from external walls.

WORKMANSHIP

All wood work required to be painted shall be smoothened sized and knotted and then applied with priming coat. Stopping and filling (filler coat) shall be done after priming coat and surface rubbed down to a level and smooth surface and thereafter under coat and finishing coat applied. Where painting to wood work is specified prepare surface and apply one priming coat of pink primer, one under coat and one finishing coat of synthetic enamel paint as specified in Schedule/BOQ.

GALVANIZED SHEET

Galvanized steel sheet, plain or corrugated shall comply with the requirement of IS 277- 2003, Specification for galvanized steel sheets, plain or corrugated. The thickness sheet shall be 0.63mm and Grade of coating shall be 275 or as per BOQ

Plain sheets shall be reasonably flat and free from twist. Corrugated sheet shall be free from twistor buckle and shall have uniform corrugation, true in depth and pitch, and parallel to the sides of the sheets. The tolerance on weight of an individual sheet shall be $\pm 10\%$ and tolerance on bundle of sheet shall be $\pm 5\%$.

GALVALUME SHEETING:-

Galvalume sheet shall be colour coated corrugated / plain sheeting as per requirement and as directed. The feed material is manufactured out of steel with minimum 550 MPa yield strength coated with hot-dip metallic zinc aluminum alloy coating zincalume AZ-150 or equivalent (as per AS 1397). AS150 Gms/sqm total on both sides of Zn (43.5%), Al (55%) & Si (1.5%) with Regular silicon modified (SMP) polyester paint or equivalent as per AS/NZS-2728-(category 3-4) of approved colour. The colour shall have a total coating thickness of 35 microns of approved paint system or equivalent comprising of 20 microns (nom) exterior coat on top surface and 5 microns (nom) reverse coat of back surface over 5 micron (nom) primer coat on both surfaces of approved colour shade.

The sheet shall have brand marking of the manufacturer on the back of the sheet at spacing not exceeding 1.5 m c/c confirming to genuinity of the material. The sheet shall be fastened with good quality fastener of suitable size as directed by Engineer –in-Charge/SI/Insp/Civil, galvanized water head, self-drilling, tapping screw as per AS 3566 class 4 (min) of approved make (Buildex, Corroshield or equivalent) and quality including EPDM/neoprene washer on each crest of sheets for connecting with purlins or as per design. All accessories shall be made from the same material which is used for main roofing/ wall cladding application .

INTERLOCKING PAVER BLOCK

Precast interlocking paver blocks shall be M 40/M-35 grade for 60/80mm thick and shall be laid over 30mm thick cushioning using 6mm and below aggregate or as per BOQ. The paver blocks shall be ISI marked having Glossy Finish. Paver blocks shall be sound and free from cracks or other defects. The tolerance in thickness shall be +3mm. Water absorption shall not be more than 6% by mass. Size, shape, pattern and colour shall be as approved Estate Officer in consultation with Engineer-in-Charge.

PRECAST PCC SOLID BLOCKS FOR MASONRY

SOLID PCC BLOCKS : PCC solid block masonry shall conform to the specifications as per IS 2185 -2005.

The blocks shall have a minimum average Compressive strength of 5 N/ Sq mm (Minimum strength of individual unit 4 N/ Sq mm) conforming to C-5 grade IS 2185 -2005 when tested for 28 days cube test. The

manufacture of Block, surface texture and finish, physical requirements of blocks, testing of PCC blocks, sampling etc shall be all as per IS 2185-2005 and proper record shall be maintained. The cost of blocks including transportation of block from work site to an approved laboratory for testing and cost of testing shall be borne by the contractor.

Notes:-

(i) Trial mix shall be carried out before casting the blocks to ensure that the required strength and block density is obtained as per IS.

(ii) Proper care shall be taken to protect the corners of PCC blocks. To achieve better consistency, contractor may use suitable plasticizers as approved by the Engineer-in-Charge without any price adjustment.

Masonry work shall be kept constantly moist for a minimum of 7 days. All concrete shall be mixed in mechanical mixer. The blocks shall be manufactured with vibratory moulding machines. However, contractor may use machine moulds of other standard manufacturers if approved by Engineer-in-Charge. Appropriate consistency of concrete shall be used to enable de-moulding of the blocks immediately after casting. The blocks shall have sufficiently rough surface to afford a good key to the plaster and joints. The hardened blocks shall be cured in a water tank in curing yard and shall be kept continuously moist for 14 days. The curing water tank/yard must therefore be of adequate capacity/size. Curing shall be done as per IS -2185.

After curing, the blocks shall be dried for a period of 4 weeks before being used in the work. The blocks shall be allowed to complete their initial shrinkage before they are laid in wall.

Chain Link Fencing:- Mild steel galvanized chain link fencing with mesh of size 50mm x 50mm nominal dia of wire 3.10mm fixed to fencing posts using suitable bolts and nuts.

HARD CORE

The materials for hard core shall be of broken granite stone to a gauge not exceeding 63mm and shall be free from dust and impurities.

Hard core shall be of stones/ boulders (Broken to gauge) not exceeding 63mm. Hard core shall be deposited spread and leveled in layers not exceeding 15cm thick and well watered, rammed to a true surface and compacted. The thickness of the hard core specified or as indicated in the drawings is the thickness after consolidation, where thickness had not indicated, it shall be 100 mm (consolidated thickness).

FORM WORK- As per CPWD Specifications.

GENERAL

(a) The work under these specifications consists of furnishing all labour, equipments and materials required for form work including all supporting structure for all works of cast in situ concrete as required by drawing and specification of contract.

(b) The contractor shall submit Form and Centering layout to SI/Insp Civil for checking and final approval by Engineer-in-charge and Estate officer. The complete final approval of the plan will be obtained by the contractor before such work is started on ground. The procedure of erection and removal of forms will be decided at this stage itself. These approvals shall not relieve the contractor of any responsibility for correct and complete performance of all works included in the contract. The design and engineering of the formwork as well as its construction shall be the responsibility of the contractor.

ELECTRIFICATION

General-The scope of work consists of providing internal electric wiring to the buildings and connected other works as described in BOQ and as specified/Shown on drawings.

The general layout of wiring points and fittings are as directed by the Engineer in charge.

All electrical fittings and wiring must run clear of door, windows and openings No diagonal run shall be allowed. These must always be parallel or perpendicular to the ground.

The specification and general rules/conditions laid down in the CPWD Schedule(E&M) and CPWD Specifications will be generally applicable to the whole work unless otherwise specified hereinafter.

The work shall be carried out in strict compliance with the latest edition of Indian Electricity Act the Indian Electricity Rules and IEE Regulations and the latest edition of IS732. It shall be of high standard and approved construction used in a modern electrical work both as regards design and workmanship. Complete work shall be suitable in every respect of type of voltage specified and shall be to the satisfaction of Engineer-in-Charge.

WORKMANSHIP

The work under internal electrification work shall be carried out only by licensed wireman under the supervision of shall produce (for inspection) license of electrician/wireman if ordered by the Engineer-in-Charge.

Passing of cables through walls floors etc shall be protected.

SAMPLES

Before starting the work, the contractor shall produce samples of all materials including accessories and get approved by the Engineer-in-Charge. Samples that are approved will be retained by Engineer-in-Charge until the work is completed and accepted. The contractor will not be allowed to commence the work before the samples are produced and approved. The contractor shall ensure that the materials used in the work are identical with approved samples and are uniform through out. All materials shall be in accordance with latest edition of the IS/BS specification and shall be of the best indigenous make approved by the Engineer-in-charge.

MATERIALS :All materials shall be in accordance with latest edition of the relevant IS/BS specification and shall be of indigenous make approved by **Engineer-in-Charge**.

CABLES: Cables shall be single core PVC insulated and PVC sheathed/unsheathed(all as described in BOQ). All cables shall be 1100 volts grade for point wiring and shall be of such size as to be capable to carrying the maximum current which will normally flow through them without the respective rating being exceeded as laid down in IEE Regulations.

Cables shall be delivered a site in makers wrappers etc, with the seal intact and shall not be installed unless approved by **Engineer-in-charge**. If cables of size as specified in BOQ as per relevant IS are not available, cables of equivalent size with identical current carrying capacity and with multi-stands shall be got approved from accepting office before incorporation works without extra cost to Govt.

MS PRESSED STEEL TERMINAL BOXES

Mild steel pressed terminal boxes shall be made out of 2 thick MS sheet of suitable size. The boxes shall be embedded in the walls with cement mortar (1:2) clear depth of the box shall be not less than 60mm and this shall be increased suitability to accommodate mounting of fan regulators. The box shall be painted with one coat of red oxide primer.

LAMINATED SHEET

Laminated sheet shall be 3mm thick fixed in MS pressed steel terminal boxes by cadmium plated iron screws

CIRCUITS

Separate circuits shall be provided for lighting and power wiring.
Lighting sub circuits shall not be loaded with more than 8 light points.

CONDUIT AND CONDUIT ACCESSORIES: All conduits, conduit fittings and accessories shall be rigid PVC conduit and fittings conforming to IS-9537 Part III of 1983 of (Medium grade).

CEILING ROSES: Ceiling roses shall be ISI marked.

SOCKET OUTLETS: These shall be ISI marked.

MINIATURE CIRCUIT BREAKERS AND DISTRIBUTION BOARDS

MCB shall be of approved make and shall be obtained from any one of the manufacturers listed above.

The unused portion of DBs are to be blocked by the blank piece.

FAN REGULATOR: Fixing of fan regulator and hanging ceiling. All ceiling fans and regulators shall be earthed effectively by means of 2mm bare GI iron conductors. Cost of this earthing to fans and regulators shall be deemed to be included in the rate for point wiring for fans.

EARTHING : Earthing shall be carried out as specified in BOQ. Earthing shall be with earth plate electrode as mentioned in BOQ buried directly in ground (earth pit) not less than 2.25m deep below ground level connected to galvanized earth top edge of the plate not less than 1.5m below ground level connected to earth strip as mentioned in BOQ by means of bolt nut and washers of galvanized iron or steel, and protected by GI pipe light grade of suitable size. Excavation and earth work shall be in soft/loose soil. All surplus soil to be removed to a distance not exceeding 50m. Cement concrete for PCC chamber, cover slab, reinforcement etc shall be as per BOQ. The unit rate of relevant item of BOQ including the cost of earth work, PCC Chamber, RCC cover, testing etc complete.

LED LIGHT FITTING: These shall be all as specified in BOQ and shall be obtained from any of the manufacturer listed here in after and shall be fixed to walls/roofs etc with proper size of clamps/screws and connecting cables etc complete.

PAINTING: Unless otherwise specified all exposed surface of steel works like terminal boxes LT panel board MS clamps etc shall be painted with 2 coats of synthetic enamel paint over a coat of red-oxide primer. Metallic suspenders of tube light fittings shall be black painted.

SYSTEM OF WIRING: Wiring shall be carried out with PVC insulated cable and shall run as far as possible on walls, ceilings so as to be easily accessible and capable of being inspected. Power wiring shall be kept apart at minimum distance of 2 run unless they are enclosed in earthed metal conduit suitably marked to indicate the risk of dangerous shock due to voltage in the conductor.

CONCEALED WIRING: Provide concealed wiring all as described in BOQ. PVC conduit shall be rigid PVC conforming to relevant IS. The make of PVC conduit as mentioned above. PVC conduit shall be adequate size to draw required for cables.

TESTING

On completion of the work, the entire electrical installation including energy meter shall be tested by the contractor for the necessary following tests in the presence of and to the satisfaction of Engineer-in-Charge :-

- (a) Continuity
- (b) Insulation resistance
- (c) Any other test prescribed by the Engineer-in-Charge

All testing equipment/apparatus, material, labour etc. required for above tests shall be provided by the contractor at his own expenses through his sources, works for which test results do not conform to standard will be redone by the contractor at his own expenses.

RECORD DRAWINGS: On completion of work, wiring diagram showing the internal electrification

(including high frequency supply) and layout of the buildings shall be prepared by the contractor at his own expenses through his sources and submitted to Engineer-in-Charge in triplicate.

SUB MAIN WIRING

CABLES:- Cables shall be single core PVC insulated and PVC sheathed/unsheathed (all as described in BOQ) with multi stranded copper conductor conforming to specifications. All cables shall be 1100 volts grade for point wiring and shall be of such size as to be capable of carrying the maximum current which will normally flow through them without the respective rating being exceeded as laid down in IEE Regulations. Cables shall be delivered at site in makers wrappers etc, with the seal intact and shall not be installed unless approved by the Engineer-in-charge.

CONDUIT WIRING: Provide PVC conduit wiring all as described in BOQ. PVC conduit shall be rigid medium grade PVC conforming to relevant IS. The make of PVC conduit shall be as specified in here-in-after. PVC conduit shall be of adequate size to draw required No of cables.

System of wiring: Wiring shall be carried out with PVC insulated cable and shall run as far as possible on walls, ceiling so as to be easily accessible and capable of being inspected. Power wiring shall be kept apart at minimum distance of 2mm unless they are enclosed in earthed metal conduits suitably marked to indicate the risk of dangerous shock due to voltage in conductor.

DISMANTLING/ DEMOLITION/ TAKING DOWN: The work of dismantling/ demolition/ taking down shall be done carefully and in a workman like manner. Any damage done by contractor or his workmen to existing sanitary fittings/ water supply fittings/ electrical fittings etc in the building while working shall be made good by him at his own expense. All the materials retrieved from demolition/ dismantling/ taking down shall become the Government property except those listed in Credit Schedule. The rates inserted by the CPWD or quoted by the contractor (whichever is more) shall be deemed to include removal or disposal of all waste materials from site of work and site shall be left clean and tidy to the entire satisfaction of Engineer-in-Charge.

SITE CLEARANCE

The contractor shall from time to time, clear away all debris and excess materials accumulated at the site. After the fixtures, etc have been fixed, contractor shall clean-up the same and remove all paints, stains and other foreign matter or discoloration leaving the same in a ready to use condition. On completion of all works, contractor shall demolish all stores, remove all surplus materials and leave the site in a broom clean condition.

TECHNICAL SPECIFICATION FOR FIRE CHECK DOOR -120 (One Hundred Twenty) minute Fire rated doors system with door frame & shutter and all necessary fittings, duly tested for - Integrity, Insulation and Stability Criteria as per the IS: 3614 Part 2 and BS: 476 part 22 at National Test House, Govt of India laboratory and/or with Central Building Research Institute, Govt of India undertaking with standard heating conditions as specified in IS:3614 Part II 1992 and BS: 476 part 20 & 22 1987 to achieve the required integrity, insulation and stability (i.e. to restrict the heat radiation, temperature rise on the non fire side to the maximum of 140° C above the ambient temperature on the exposed surface of the shutter. The fire doors are tested with NCBN technology ("Non Combustible by Nature").

Specification of SMC Panel Tank

Supplying and placing of position of SMC panel tanks (ISI Marked) for water storage as confirming with IS 14399: 1996 and material to be confirming as per IS 4249:1967 for fire retardant, required capacity of suitable size including fixing and assembling / erecting the tank complete as per direction of engineer in-charge.

The tanks to be leak proof after installation and having following specifications (Make in India): -

Standard Non – Insulated SMC Panels Hot pressed moulded UV stabilised made from Sheet Moulding Compounds (SMC) composing of glass fiber and formulation of selected resin.

Make:Sovisy, Devi Polymer, PIPECO, Binani

The sizes of panel should be:

ROOF PANELS: 1000 X 1000 MM

SIDE PANELS: 500 X 1000 MM, 1000 X 1000 MM, 1000 X 2000 MM.

Bottom Panels: Convex shape 1000 x 1000 mm

Drain Panel: 1000 x 1000 mm at bottom for complete drain of water Manhole Panel dia. 600mm lockable lid of hot pressed moulded made from SMC.

Non-Toxic PVC foam sealant gasket sealant tape: 3 mm thick with high level of resistance to ageing and superior recovery from compression (**Make:** Nor seal by Saint Gobain, Made in USA)

Fasteners utilized for the panel joints of 8.8 grade Steel HDG Bolts nuts M12X 40mm.

External reinforcement C channel at every 1-meter except in the corner of steel with anti-corrosive paint and it is tie with top external tie rods. (If tank height is more than 1 meter)

Internal roof supports should be of FRP/GRP 5 mm thick hollow square section. Air-vent dia. 100mm with mosquito proof mesh insect proof.

Aluminum body water level indicator with clear tube type and brass nozzle (For Tank height more than 1 Meter) Internal FRP ladder with wall mounting arrangement inside (For Tank height more than 1 Meter).

External G.I. ladder with complete fixing arrangement outside.

Company should be ISO certified,

Company should have food grade test from approved NABL lab

NSF and WRAS test required from approved NABL lab to make a SMC product 100% hot pressed mould compressed.

SETUP OF FIELD SAMPLE TEST LABORATORY:-Contractor will setup a laboratory at site for testing of sample i.e. cube testing, Sand test, gravel testing, cement testing, sieve analysis, CBR test, Compressive strength machine, Los angles abrasion, Slump test, Silt test of sand etc.

Schedule- "A"

Sl. No.	Description of items	Qty	Unit
	SH:- 1- Underground Sump and Pump Room		
1	EARTH WORK		
1.1	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.		
1.1.1	All kinds of soil	840	cum
1.2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	210.00	cum
2	CONCRETE WORK		
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :		
2.1.1	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	7.00	cum
2.1.2	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	50.00	cum
3	REINFORCED CEMENT CONCRETE		
3.1	Centering and shuttering including strutting, propping etc. and removal of form for		
3.1.1	Foundations, footings, bases of columns, etc. for mass concrete	35.00	sqm
3.1.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	610	sqm
3.1.3	Suspended floors, roofs, landings, balconies and access platform	195.00	sqm
3.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.		
3.2.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	36900.00	Kg
3.3	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the following grades of concrete. (Cement content as per design mix shall be deemed to have been considered while quoting the rate. Nothing extra shall be payable on this account).		
3.3.1	All works upto plinth level		
3.3.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	205	cum
4	MASONARY WORK		
4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :		
4.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	10	cum
5	FINISHING		
5.1	12 mm cement plaster of mix :		
5.1.1	1:6 (1 cement: 6 coarse sand)	45	sqm
5.2	15 mm cement plaster on rough side of single or half brick wall of mix:		
5.2.1	1:6 (1 cement: 6 coarse sand)	45	sqm
5.3	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.		
5.3.1	12 mm cement plaster	205	sqm
5.4	6 mm cement plaster of mix :		
5.4.1	1:3 (1 cement : 3 fine sand)	215	sqm
6	WATER SUPPLY		
6.1	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc. Internal work - Exposed on wall		
6.1.1	20 mm dia nominal bore	120.00	metre
6.1.2	25 mm dia nominal bore	200.00	metre
6.2	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
6.2.1	20 mm nominal bore	24.00	each
6.2.2	25 mm nominal bore	24.00	each

6.3	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :		
6.3.1	20 mm nominal bore	16	each
6.3.2	25 mm nominal bore	16.00	each
6.4	Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523 :		
6.4.1	Up to 600 mm dia	5.00	quintal
6.5	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :		
6.5.1	100 mm dia C.I. Double Flanged Pipe	320.00	metre
6.6	Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :		
6.6.1	100 mm dia Ductile Iron Double Flanged	30.00	metre
7	WATER PROOFING		
7.1	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for underground structures as directed by Engineer-in-Charge and consisting of : (i) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. (ii) 2nd layer of 25 mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions. (iii) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8 cum/sqm thoroughly embedded in the 2nd layer.		
7.1.1	Using rough kota stone.	400.00	sqm
7.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement: 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :		
7.2.1	Using rough Kota stone	235.00	sqm
7.3	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: (a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in- charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in- charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. (d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test."All above operations to be done in order and as directed and specified by the Engineer-in-Charge :		
7.3.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	195.00	sqm
8	SH:- Fire Check Door		
8.1	Providing and fixing fire resistant door frame of section 50 x 60 mm on horizontal side & 35 x 60 mm on vertical sides having built in rebate made out of 1.6 mm thick GI sheet (Zinc coating not	895.00	metre

	less than 120gm/ m ²) suitable for mounting 120 min Fire Rated Glazed Door Shutters. The frame shall be filled with Mineral wool Insulation having density min 96Kg/m ³ . The frame will have a provision of G.I. Anchor fasteners 14 nos(5 each on vertical style & 4 on horizontal style of size M10 x 80) suitable for fixing in the opening along with Factory made Template for SS Ball Bearing Hinges of Size 100x89x3mm for fixing of fire rated glazed shutter . The frame shall be finished with an approved fire resistant primer or Powder coating of not less than 30 micron in desired shade as per the directions of Engineer - in- charge . (Rate be quoted including cost of SS ball bearing hinges).		
8.2	Providing and fixing 60 mm thick glazed fire resistant door shutters of 120 min Fire Rating confirming to IS:3614 (Part II) or EN1634-1:1999, tested and certified as per laboratory approved by Engineer-in-charge, with suitable mounting on door frame, consisting of vertical styles, top rail & side rail 60 mm x 60 mm wide and bottom rail of 110 mm x 60 mm made out of 1.6mm thick G.I. sheet (zinc coating not less than 120gm/m ²) duly filled mineral wool insulation having density min 96 kg/ m ³ and fixing with necessary stainless steel ball bearing hinges of size 100x89x3mm of approved make, including applying a coat of approved fire resistant primer or powder coating not less than 30 micron etc all complete as per direction of Engineer-in-charge (Rate be quoted including cost of paneling).	560.00	sqm
8.3	Providing and fixing non load bearing fixed frame for fire resistant glazed Partition for 120 minutes Fire Rating, made out of a profile of dimension 60mm x 70 mm of 1.6 mm thick galvanised steel sheet as per test evidence suitable for fixing fire rated glass for 120 minutes of both integrity & radiation control (EW120) & minimum 20 minutes of insulation (EI20).The profile has to be fixed to the supporting construction by means of anchor fasteners of size M10 x 80, every 150 mm from the edges and every 500 mm (approx) c/c. Linear measurement of frame shall be measured for payment. The frame shall be filled with mineral wool insulation of density min 96kg/ m ³ . and finished with a approved fire resistant primer or Powder coating of not less than 30 micron in desired shade as per NBC 2016, IS 16231 (Part 3):2016 and directions of Engineer - in- charge.	1020.00	metre
8.5	Providing and fixing glazing in fire resistant door shutters, fixed panels & partitions etc., with G.I. beading made out of 1.6 mm thick G.I. sheet (zinc coating not less than 120 gm/m ²) of size 20 x 33 mm screwed with M4 x 38 mm SS screws at distance 75 mm from the edges and 150 mm c/c , including applying a coat of approved fire resistant primer/ powder coating of not less than 30 micron on G.I. beading, & special ceramic tape of 5 x 20 mm size etc complete in all respect as per NBC 2016, IS 16231 (Part 3):2016 and as per direction of Engineer-in-charge with glass of required thickness having 120 minutes of fire resistance both integrity & radiation control (EW120) and minimum 20 minutes of insulation (EI20). The manufacturer have to give test report/certification of fire glass and the glass should have the stamp showing the value of E, EW & EI. The glass shall be tested in approved NABL accredited lab or by any other accreditation body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 for testing and calibration scopes shall be eligible. The maximum glazing size shall not be more than 1100x2200 mm (w x h) or 2.42 sqm.	468.00	sqm
8.6	Supply & fixing of SS Ball bearing hinges of size 100x75x3 mm complete with SS screw of BB1953 Becker Fire Solution/3090F DORMA/8011008 GEZE Make (5 Nos. per panel) (Required for all doors) as per the directions of Engineer-in-Charge.	1380.00	each
8.7	Supply & fixing of door closers of BLC-0408 Becker Fire Solution/TS-83 DORMA/TS 200 GEZE Make (Required for all fire doors except shaft door) as per the direction of Engineer-in-Charge.	276.00	each
8.8	Supply & fixing of stainless steel 304 grade 300 mm long tower bolt of BFBS1930 Becker fire solution/9114306 DORMA/8157007 GEZE Make with necessary screws as required in Double Leaf Doors only as per the direction of Engineer-in-Charge.	276.00	each
8.9	Supply & fixing of slim body Mortice Sash Lock with SS Lever handle of Becker Fire Solution/DORMA 952 Series/GEZE Make (Required for service room location such as AHU, Electrical rooms etc.) as per the direction of Engineer-in-Charge.	138.00	each
9	SH:- SMC Panel Water Tank		
9.1	Supplying and installation of SMC panel Tank made out of Hot press moulded sheet moulding compound (SMC) panels of size 1 mx 1m, 1mx2m, 1mx5m. The panels shall have frustum shape of pyramed for extra strength and 90 degree flanged predrilled for bolting. Special sealant having excellent UV resistance as well as suitable for potable water shall be provided. Necessary grouting and base platform made out of MS channels shall be provided as per approved drawing of sintex BAPL Ltd. (Note:- Total 07 nos of SMC tanks (total capacity of 1.2 lakh litres) will be erected at 07 different block. Tank storage capacity of each tank shall be decided by Engineer-in-charge.However changes can be made as per requirement by Engineer-in-charge and same shall be abide by the contractor.)	120000.00	Litre

NOTE:- Fire NOC and all other statutory certificates shall be got certified from local bodies by the contractor. All the work shall be executed following the fire safety norms so that NOC can be obtained. Amount of Rs 30 lacs shall be withheld from the final payment apart from performance security and will be released only after all the approvals have been submitted by the contractor

to the department. Lowest Contractor (L-1) will be decided on overall lowest rates basis. (All items to be used in this work should be branded and ISI certified or CPWD approved list of material may be followed. If any make is not specified, decision of Engineer-in-charge shall be final.)

DIG(Engr), Works Dte
For and on behalf of the President of India