भारत सरकार

अधीक्षण अभियन्ता
इलाहाबाद
केन्द्रीय लोक निर्माण विभाग
प्रयागराज

e- NIT

ई–निविदा आमंत्रण सूचना
e-NIT No.: 17/EE/VD/2026-27

Name of work: Construction of Various Infrastructure at GC, CRPF, Chandauli.
(SH: Balance work of Bulk & Development services).

Estimated Cost: Rs. 11,87,94,085/-

C= I= O=	Nil	AE(P)(C)	EE(C)

के.लो.नि.वि.		CPWD

INDEX PAGE

Name of work	**Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services).***	
Sl. No.	**Description**	**Page No.**
1	Index	1
2	Press notice	2
3	**PART-A**	**3**
4	Information and instructions for contractors for e-tendering	4-5
5	Receipt if deposition of original EMD	6
6	C.P.W.D – 6 for e-Tendering	7-14
7	CPWD – 7	15-16
8	Acceptance	17
9	Form H, Form K & Form F	18-20
10	Proforma of Schedule F (General Rules & Directions)	21-27
11	List of testing equipment, list of machinery, Recovery rate & Mile stones of the contract (Table1, Table-2, Table-3 & Table-4)	28-31
12	Scope of work	32
13	Additional Conditions& Form of supplementary agreement	33-35
14	Office Memorandum	36-84
15	**PART-B**	**85**
16	Special Conditions	86-92
17	Material and Quality Assurance	93-95
18	Additional Conditions for Cement	96
19	Additional Conditions for Steel Reinforcement	97-110
20	Additional conditions for reinforced Cement Concrete	111-112
21	Special conditions for green building	113-114
22	List of Acceptable Materials	115
23	List of approved makes of materials (Civil works)	116-122
24	Guarantee Bonds & water supply and sanitary installation	123-125
25	Schedule of Quantity (Civil Work)	126-133
26	**PART-C**	**134**
27	Proforma of Schedule	135-139
28	List of mandatory machinery	140
29	Eligibility condition for Associate agency for execution of E&M part of Works.	141
30	Proposal For Associating Agency For E&M Works	142
31	Eligibility criteria for main contractor /associated agency for E.I. works:	143
32	Eligibility condition for Associate agency for execution of SITC of DG Set.	144-145
33	Memorandum of understanding (M.O.U) & Willingness certificate	146-148
34	All Terms & Additional conditions	149-167
35	Approved makes of materials for E& M	168-174
36	Schedule of Quantity (Electrical)	175-182

Certified that this NIT contains pages **1 to 182** (excluding covers).

सहायक अभियन्ता (यो.)(वै.)
अधीक्षण अभियन्ता,इलाहाबाद
के.लो.नि.वि., प्रयागराज।

सहायक अभियन्ता (यो.)(सि.)
अधीक्षण अभियन्ता,इलाहाबाद
के.लो.नि.वि., प्रयागराज।

अधीक्षण अभियन्ता,इलाहाबाद
के.लो.नि.वि., प्रयागराज।

C=
I= } Nil
O=

AE(P)(C)

EE(C)

CENTRAL PUBLIC WORKS DEPARTMENT
Notice Inviting e-Tender

The Executive Engineer, Varanasi, C.P.W.D., Varanasi invites on behalf of President of India online **percentage rate** bids from CPWD enlisted contractors of appropriate class in composite category for the following work: -

NIT No.- 17/EE/VD/2026-27

Name of Work: Construction of Various Infrastructure at GC, CRPF, Chandauli. ***(SH: Balance work of Bulk & Development services).***

Estimated Cost: Rs. 11,87,94,085/- (Civil– Rs. 10,98,27,061/- + E&M- Rs. 89,67,024/-),

Earnest Money: Rs. 21,87,941/-

Period of Completion: 12 months**.**

Last date & time of submission of online bid is **10.11.2026 up to 03:00 P.M**.

The bid forms and other details can be obtained from the website https://etender.cpwd.gov.in or www.cpwd.gov.in

C=
I= } Nil AE(P)(C) EE(C)
O=

PART-A

C=
I= } Nil AE(P)(C) EE(C)
O=

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE

The **Executive Engineer, Varanasi, CPWD, Varanasi** on behalf of the President of India invites online **percentage rate** bids from **CPWD enlisted contractors of appropriate class in composite category** for the following work:

NIT No.	**17/EE/VD/2026-27**
Name of work & location	**Construction of Various Infrastructure at GC, CRPF, Chandauli. (SH: Balance work of Bulk & Development services).**
Estimated Cost	Civil- Rs. 10,98,27,061/- Electrical:- Rs. 89,67,024/- **Total:- Rs. 11,87,94,085/-**
Earnest Money	**Rs. 21,87,941/-**
Period of Completion	12 months
Last date & time of submission of bid, EMD, e-tender, processing fee & another document as specified in the NIT	**Upto 03:00 PM on 10.11.2026**
Date and time of pre bid meeting	**30.10.2026 at 11:00 AM**
Time & date of opening of tender	**At 03:30 PM on 10.11.2026**

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. 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 can be seen and downloaded from website **https://etender.cpwd.gov.in/** free of cost.
4. But the bid can only be submitted after **depositing of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission and** *uploading the mandatory scanned documents such as Demand Draft or Pay order or Banker`s Cheque or Deposit at call Receipt or Fixed Deposit Receipts and Bank Guarantee of any Scheduled Bank towards EMD in favour of Executive Engineer* **as mentioned in NIT, receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/AE), CPWD** and other documents as specified.
5. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.

C=
I=
O= } Nil AE(P)(C) EE(C)

6. The intending bidder must have valid digital signature of appropriate class and category to submit the bid.

7. On opening date, the contractor can login and see the bid opening process. After opening of bids, he will receive the competitor bid sheets.

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

9. Contractor must ensure to quote percentage rate for the work. The column meant for quoting percentage rate in figures appears in pink colour and the moment rate is entered; it turns sky blue.

   If a tenderer does not quote any percentage above/below/at par on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

10. **List of Documents to be scanned and uploaded within the period of bid submission:**

    (i) Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee of any Commercial Bank against EMD.

    (ii) Enlistment Order of the Contractor in appropriate class of composite category.

    (iii) Certificate of Registration for GST.

    If the bidder has not obtained GST registration as applicable, then he shall scan and upload undertaking as per Form-H attached at page 18 along with bid documents.

    (iv) Copy of receipt for deposition of original EMD issued from division office of any Executive Engineer (including NIT issuing EE/AE) CPWD.

    (v) Certificate of ERP (Enterprise Resource Planning) training from CPWD Regional Training Institutes (along with Form 'K' attached at page 19).

    (vi) Undertaking On Structural Stability and Soundness of Already Completed Buildings and Infrastructure Projects. (along with Form 'F' attached at page 20).

    (vii) Photo copy of PAN Card.

    (viii) Valid Email ID and Mobile Number on your letter Pad.

    (ix) Copy of EPF and ESIC Registration.

C=
I=
O= } Nil AE(P)(C) EE(C)

RECEIPT OF DEPOSITION OF ORIGINAL EMD

(Receipt No. ……. / date ……)

Name of Work: **Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services).***

NIT No. :- **17/EE/VD/2026-27**

1. Estimated Cost : **Rs. 11,87,94,085/-**
2. Amount of Earnest Money Deposit : **Rs 21,87,941/-**

(In favour of Executive Engineer, Allahabad Central Division, CPWD, Allahabad)

Last date of submission of Bid : **10.11.2026 up to 03:00 P.M.**

---

1. Name of Contractor: ……..... #
2. Form of EMD ……..... #
3. Amount of Earnest Money Deposit ……..... #
4. Date of submission of EMD ……..... #

…….

Signature, Name and Designation of EMD
Receiving officer (EE/AE(P)/AAO) along with Officer stamp

* To be filled by EE inviting tender.
# To be filled by EMD receiving EE.

C=
I= } Nil AE(P)(C) EE(C)
O=

CPWD-6 FOR e-Tendering

Percentage rate bids are invited on behalf of President of India from CPWD enlisted contractors of appropriate class in composite category for the work of **"Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services).*****"** 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. The work is estimated to cost **Rs. 11,87,94,085/-** This estimate, however, is given merely as a rough guide.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. **CPWD 7** 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 time allowed for carrying out the work will be **12 months** from the date of start as defined in schedule 'F' 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.

4. **The site for the Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services)*** **is available.**

5. The architectural and structural drawings shall be made available in phased manner as per approved programme of completion submitted by the contractor after award of work.

   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 on website https://etender.cpwd.gov.in or www.cpwd.gov.in free of cost.

6. After submission of the bid the contractor can re-submit revised bid any number of times or withdraw it before last date and time of submission of bid as notified. No post-tender modification is allowed by the tenderers except through negotiations, if required in case, any tenderer does so, the tender will rejected and the tenderer will be debarred for future tendering in CPWD for two years by the concerned enlisting authority (in case of CPWD enlisted contractor) and by the concerned CE/SE (in case of non-enlisted contractor).

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. Earnest Money in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee of any Commercial Bank (drawn in favour of **Executive Engineer, Allahabad Central Division, CPWD, Allahabad)** shall be scanned and uploaded to the e-Tendering website by the bidder within the period of bid submission. **A part of earnest money (EM)** is acceptable in the form of bank guarantee also. In such case, **minimum** 50% of earnest money or Rs. 20 lacs, whichever is less, **shall** have to be deposited in shape prescribed

C= I= O=	Nil	AE(P)(C)	EE(C)

above, and balance **may be deposited** in shape of Bank Guarantee of any scheduled bank **having validity for six months or more from the last date of receipt of bids** which also is to be scanned and uploaded by the intending bidders. The original EMD should be deposited either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE/AE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by the tender inviting EE in the NIT.

9. A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or Rs. 20 lakhs, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee including e- Bank Guarantee of any Commercial bank having validity for a period of 90 days for single bid works and 180 days for two bid system or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.

   The earnest money given by all the tenderers except the lowest tenderer shall be refunded immediately after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier. However, in case of two/ three bid system, earnest money deposit of bidders unsuccessful during technical bid evaluation etc. should be returned within 30 days of declaration of result of technical bid evaluation.

   Copy of Enlistment Order and certificate of work experience and other documents as specified in the notice inviting e- tender shall be scanned and uploaded on the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in e- tender notice shall have to be submitted by the lowest bidder within a week physically in the office of tender opening authority.

10. The bid submitted shall be **opened at 03:30 PM on 10.11.2026.**

11. The bid submitted shall become invalid and e-Tender processing fee (if applicable) shall not be refunded if:

    (i) The bidder is found in eligible.

    (ii) The bidder does not deposit original EMD with division office of any Executive Engineer, CPWD.

    (iii) The bidder does not upload all the documents (including GST registration) as stipulated in the bid document & the copy of receipt for deposition of original EMD.

    (iv) If a tender quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

C=
I=
O= } Nil AE(P)(C) EE(C)

12. The contractor whose bid is accepted will be required to furnish **performance guarantee of (a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher). (b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered value** within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee of any Commercial Bank. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. **The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee.** The contractor whose bid is accepted will be also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including provident fund code no. if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work within the period specified in Schedule F.

13. Description of the work is as follows: **"Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services).***

    Intending Bidders are advised to 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 bidders shall be deemed to have full knowledge of the site whether he inspects it or not 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, water, electricity access, 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 bidder 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.

14. The competent 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.

15. 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.

C=
I=
O= } Nil AE(P)(C) EE(C)

16. 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.

17. The contractor shall not be permitted to bid for works in the CPWD Circle (Division in case of contractors of Horticulture/Nursery category) responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazette officer in the Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

18. 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 engagement in the contractor's service.

19. **The bid for the works shall remain open for acceptance for a period of Thirty (30) days from the date of opening of bids.**

    Further

    (i) If any bidders withdraw his tender within 7 days after the last date and time (24 hours basis) of submission of bids, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money absolutely irrespective of letter of acceptance for the work is issued or not.

    (ii) If any bidders withdraw his tender after expiry of 7 days after the last date and time (24 hours basis) of submission of bids, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of the said earnest money irrespective of letter of acceptance for the work is issued or not.

    (iii) Withdrawal of the tender, by the tenderer, shall only be made through e-tender portal any other method i.e. through letter / e-mail etc. shall not be considered. The tender inviting authority gets intimation through SMS and e-mail in this regard.

    (iv) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, the bidders shall not be allowed to participate in the rebidding process of the same work.

20. 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: -

C= I= O=	Nil	AE(P)(C)	EE(C)

(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** or other Standard C.P.W.D. Form as applicable.

21. For Composite Bids.

21.1.1 The Executive Engineer in charge of the major component will call bids for the composite work. The cost of bid document and Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.

21.1.2 The bid document will include following three components:

Part A:-CPWD-6, CPWD-7 including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2023 as amended/modified up to last date of submission of bid.

Part B:-General / specific conditions, specifications and schedule of quantities applicable to the work.

Part C:-Schedule A to F for minor component of the work (competent authority under clause 2 and clause 5 shall be same authority as mentioned in schedule A to F for major components), General/specific conditions, specifications, and list of drawings applicable to minor component(s) of the work.

21.1.3 The bidders must associate himself, with agencies as per NIT conditions.

21.1.4 The eligible bidders shall quote percentage rates for all items of major component as well as for all items of minor components of work.

21.1.5 After acceptance of the bid by competent authority, the EE in charge of the work shall issue letter of award on behalf of the President of India. After the work is awarded, the main contractor will have to enter into one agreement with EE in charge. EE will operate **Part A** and **Part B** of the agreement. EE & SM/DDH in charge of major component(s) shall operate Part C along with Part A of the agreement.

21.1.6 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.

21.1.7 Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works.

21.1.8 The main contractor has to associate agency(s) for minor component(s) conforming **to eligibility criteria as defined in the bid document** and has to submit detail of such agency(s) to Engineer-in-charge of minor component(s) within **prescribed time.** Name of the agency(s) to be associated shall be approved by Engineer-in-charge of minor component(s).

However, the composite category contractor shall also be eligible to carryout himself any or all of these E &M works without associating any specialized agency provided

C= I= O=	Nil	AE(P)(C)	EE(C)

a. He fulfills the prescribed eligibility criteria respectively for these work(s)

OR

b. He directly procures the equipment of approved make from manufacturer and get it installed from authorized agency / service provider of the manufacturer or specialized agency as per criteria mentioned in NIT. Agency will have to submit required declaration, MOU, willingness certificate etc. as required for each work in this respect.

21.1.9 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge of minor component. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.

21.1.10 The main contractor has to enter into agreement with contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to EE/DDH in charge of each minor component as well as to EE in charge of major component. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.

21.1.11 Running payment for the major component shall be made by EE of major discipline to the main contractor. Running payment for minor components shall be made by the Engineer-in-charge of the discipline of minor component directly to the main contractor.The EMB/CMB shall be maintained independently by Engineer-in-Charge of major and minor components.

21.1.12A. The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by Engineer-in-charge of major component after record of completion certificate of all other components.

21.1.12B. Final bill of whole work shall be finalized and paid by the EE of major component. Engineer(s) in charge of minor component(s) will prepare and pass the final bill for their component of work and pass on the same to the EE of major component for including in the final bill for composite contract.

22. The intending bidders are required to update their profile in CPWD e- tender portal and to upload their bids well in advance of last date of submission of tender. Any issue related to updating profile/uploading tender can be resolved through ERP helpline no. 18001803286 or e-mail id cpwd.support@techmahindra.com. The e- tendering bidders are also advised not to wait to raise any issues till the last date of submission of bid in their own interest.

23. The form of bank guarantee for Earnest money deposit / performance guarantee / security deposit /mobilization advance / refund of milestone withheld amount shall be as perform in GCC construction 2023, Page No. 100 (Annexure-B at Page- 13 to 14).

C=
I=
O= } Nil AE(P)(C) EE(C)

ANNEXURE-B

(Guarantee offered by Bank to CPWD in connection with the execution of contracts)
Form of Bank Guarantee for Earnest Money Deposit /Performance Guarantee/Security Deposit/Mobilization Advance

1. Whereas the Executive Engineer …… (name of division) …….., CPWD on behalf of the President of India (hereinafter called "The Government")has invited bids under ……(NIT number)……. dated …… for …… (name of work) …… The Government has further agreed to accept irrevocable Bank Guarantee for Rs. ……..…… (Rupees …… only) valid up to …… (date)*…… as Earnest Money Deposit from ……. (name and address of contractor)……. (hereinafter called "the contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.

OR**

Whereas the Executive Engineer …….. (name of division) ……., CPWD on behalf of the President of India (hereinafter called "The Government") has entered into an agreement bearing number……..... with …….....(name and address of the contractor)…….(hereinafter called "the Contractor") for execution of work …… (Name of work)……The Government has further agreed to accept an irrevocable Bank Guarantee for Rs. ……..…… (Rupees …… only) valid upto …….. (date)..…… as Performance Guarantee/Security Deposit/Mobilization Advance from the said Contractor for compliance of his obligations in accordance with the terms and conditions of the agreement.

2.We, ……(indicate the name of the bank) …… (herein after referred to as "the Bank"), here byundertake to pay to the Government an amount not exceeding Rs.……..Rupees…….only) on demand by the Government within 10 days of the demand.

3.We,……(indicate the name of the Bank) …..……, do here by undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. ……..(Rupees ……only)

4.We, ……(indicate the name of the Bank) ……, further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

C=
I=
O= } Nil AE(P)(C) EE(C)

5.We, …… (indicate the name of the Bank) ……, further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6.We, …… (indicate the name of the Bank) …….., further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.

7.This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.

8.We, ……. (indicate the name of the Bank) ……., undertake not to revoke this guarantee except with the consent of the Government in writing.

9.This Bank Guarantee shall be valid up to ……. unless extended on demand by the Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. ……(Rupees …….. only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date .....

Witnesses:

1. Signature……
   Name and address

2. Signature …….
Name and address

Authorized signatory
Name
Designation
Staff code no.
Bank seal

*Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.

**In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/security deposit/mobilization advance, as the case may be.

C=
I=
O=

Nil AE(P)(C) EE(C)

CPWD-7

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

(A)	Tender for the work of:	**"Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services).***

(i) To be uploaded by **3:00 PM** on **10.11.2026** www.**etender.cpwd.gov.in**

(ii) To be opened in presence of tenderers who may be present at **03:30** PM on **10.11.2026** in the office of **The Executive Engineer**, **Varanasi, C.P.W.D., Varanasi.**

TENDER

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 & 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 respect with the specifications, designs, drawing 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 respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for thirty (30) days from the due date of its opening and not to make any modification in its terms and conditions.

I/We have deposited EMD for the prescribed amount in the office of concerned Executive Engineer as per the bid document.

A copy of earnest money deposit receipt of prescribed amount deposited in the form of **insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed)** issued by **a Commercial Bank**, is scanned and uploaded **(strike out as the case may be).** 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

C= I= O=	Nil	AE(P)(C)	EE(C)

those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2a), b) & c) 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 CPWD 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 of the State.

Dated — Signature of Contractor

Witness: — Postal Address

Address:

Occupation:

**** To be filled in by the Executive Engineer***

C=
I=
O= } Nil — AE(P)(C) — EE(C)

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 ` ……...……(Rupees…….…… ……).

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

(a)

(b)

(c)

For & on behalf of President of India

Signature …….

Dated: Designation …….

C=
I=
O= } Nil AE(P)(C) EE(C)

FORM "H"

Undertaking regarding obtaining GST registration Certificate if already obtained by the bidder

If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking along with bid documents. "If work is awarded to me, I/we shall obtain GST registration Certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by CPWD or GST department in this regard."

NOTE: Affidavit to be furnished on a 'Non-Judicial' stamp paper worth Rs.100/-

Signature of Bidder(s) or an authorized Officer of the firm with stamp

Signature of Notary with seal

C=
I=
O=

Nil AE(P)(C) EE(C)

FORM "K"

UNDERTAKING REGARDING ERP Training in CPWD Department
(For CPWD Contractors)

To,

The Executive Engineer
Varanasi,
C.P.W.D., Varanasi.

Subject: Submission of the bids for the work of **"Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services)*****"**

Sir,

Having examined the details given in the bid document for the above work, I/we hereby undertake that:

"That my/our self or my/our authorised representative has taken ERP (Enterprise Resource Planning) Training through the CPWD Regional Training Institutes at Delhi/ Mumbai/Chennai /and Kolkata, National CPWD Academy (NCA) Ghaziabad (Tick the place where Training has taken) as per OM No. DG/Enlist.Rules-2023/10 dated 22.4.2024.

Copy of certificate issued through LMS (Learning Management System) is enclosed.

Signature of Bidder(s) or an authorized

Officer of the firm with stamp

Date of Submission:

C=
I= } Nil AE(P)(C) EE(C)
O=

FORM "F"

UNDERTAKING ON STRUCTURAL STABILITY AND SOUNDNESS OF ALREADY COMPLETED BUILDINGS AND INFRASTRUCTURE PROJECTS.

I/we undertake and confirm that any building / infrastructure constructed by our firm /partnership firm/ company has not suffered any failure, making it unfit for intended use, either due to structural design and defects or due to use of sub-standard materials or execution of sub-standard work, poor workmanship or any other reason during the last 25 (twenty five) years.

I/we, further, undertake that if such information comes to the notice of CPWD, then Engineer-in-Charge shall be free to terminate the bid/agreement and to forfeit the entire amount of earnest money deposit, performance guarantee and security deposits.

I/we, also undertake that in addition to above, the Engineer-in-Charge shall be free to debar us forever from tendering in CPWD.

The decision of Engineer-in-Charge or any higher authority shall be final and binding.

Signature of notary
with seal

Signature of bidder or an authorized person
of the firm with stamp

Note: Affidavit to be furnished on a 'Non-judicial' stamp paper of Rs. 200/- (scanned copy of the notarized affidavit to be uploaded at the time of submission of bid).

C=
I= } Nil AE(P)(C) EE(C)
O=

PROFORMA OF SCHEDULES
(Major Component)

SCHEDULE 'A'

Schedule of quantities (as per PWD-3) Sheet Attached

SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any. **As attached in tender document**

SCHEDULE 'E'

Reference to General Conditions of contract – General Conditions of contract **2023 Construction Work** for CPWD amended up to last date of submission of bid.

Name of Work: Construction of Various Infrastructure at GC, CRPF, Chandauli. ***(SH: Balance work of Bulk & Development services)***		
Estimated cost of the work:	Civil work	Rs. 10,98,27,061/-
	Electrical work	Rs. 89,67,024/-
	Total-	**Rs. 11,87,94,085/-**
Earnest money		**Rs. 21,87,941/-** (To be returned after receiving performance guarantee)
Performance Guarantee	(a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher). (b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered value.	
Note: The performance guarantee shall be refunded at the expiry of 6 months after the record of final completion certificate, or after handing over of the buildings to the client / CRPF, whichever is earlier. (This is in supersession of GCC condition in this regard.)		
Security Deposit	2.5% of the tendered value of the work	
Note: The defect liability period shall be 01 year.		

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS:

Officer inviting tender	**Executive Engineer, Varanasi, C.P.W.D., Varanasi.**
Maximum percentage of quantity of items of work to be executed beyond which rates are to be determined in accordance with Clause 12.2 a), b) & c)	See below

C=
I=
O= } Nil AE(P)(C) EE(C)

Definitions:

2(v)	**Engineer-in-Charge**	
	For Civil items of work	**Executive Engineer, Varanasi, C.P.W.D., Varanasi.**
	For Electrical items of work	**Executive Engineer (E), Allahabad, C.P.W.D., Prayagraj.**
2(vii)	Accepting Authority	**Superintending Engineer, Allahabad, C.P.W.D., Prayagraj.**
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	15%
2(xi)	**Standard Schedule of Rates:**	
	Civil Items of Work:	**With correction factor on DSR 2023 on account of GST @ 0.973 (issued vide OM dated 08.08.2024 file No. 158/SE(TAS)/GST/2024/02-E dated 08.08.2024 & Cost Index of Chandauli at 99 on DSR-2023**
	E&M works	**As mentioned in electrical part.**
2(xii)	Department:	Central Public Works Department
9(ii)	Standard CPWD contract Form:	**CPWD GCC 2023 for Construction Work CPWD** form 7 as amended upto the previous date of submission of bid.
Clause 1	i) Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance. ii) Maximum allowable extension **with late fee @ 0.1% per day of Performance Guarantee amount beyond the period as provided in (i) above** iii) **Release of Performance Guarantee**	7 Days 3 Days The performance guarantee shall be refunded at the expiry of 6 months after the record of final completion certificate, or after handing over of the buildings to the client / CRPF, whichever is earlier. (This is in supersession of GCC condition in this regard).
Clause 2	Authority for fixing Compensation under Clause 2	**Superintending Engineer, Allahabad, C.P.W.D., Prayagraj or successor thereof**
Clause 5	Number of days from the date of issue of letter of acceptance for reckoning date of start	**10 days** or date of handing over of site whichever is later.
Milestone		As per Table 4 of the NIT
Time allowed for execution of work		**12 months**

C=
I= } Nil AE(P)(C) EE(C)
O=

Schedule of Handing over of site	**The site for the Construction of Various Infrastructure at GC, CRPF, Chandauli. (SH: Balance work of Bulk & Development services) is available.**

Authority to decide: -

(i) Authority to convey the decision of shifting of milestone and extension of time	**Engineer-in-Charge of major component of work or successor thereof.**
(ii) Authority to decide rescheduling of milestone and extension of time	**Superintending Engineer, CPWD, Allahabad or successor thereof**
(iii) Shifting of date of start in case of delay in handing over of site	**Superintending Engineer, CPWD, Allahabad or successor thereof**

SCHEDULE OF HANDING OVER OF SITE

Part	**Portion of site**	**Description**	**Time period for handing over reckoned from date of issue of letter of intent**
Part-A	Portion without any hindrance	All site	At the time of date of start
Part-B	Portions with encumbrances		
Part-C			

Clause 6	Clause applicable	Yes, Electronic Measurement Book (EMB)
Clause 7	Gross work to be done together with net payment/Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	**Rs. 90.00 Lacs**

C=
I= } Nil AE(P)(C) EE(C)
O=

Clause 7A	Whether Clause 7A shall be applicable	**Yes** (a) No running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whether applicable are submitted by the contractor to the Engineer-in-Charge. (b) The following documents shall also be part of the bill submitted by the contractor (these documents shall be owned by the contractor) before making payment: - 1. Details of person employed with date of their employment up to previous month. 2. Documents of payment made to the employees directly into their bank accounts up to previous month. 3. Documents of attendance through biometric attendance or other mode up to previous month. 4. Documents of deposition of EPF and ESI deductions in the employee's accounts up to previous month. 5. Any penalty imposed on the agency for delay in disbursing payment and deposition of EPF and ESI deductions in the employee's accounts up to previous month. 6. Any other document(s) required as per statutory requirements and/or as directed by Engineer-in-Charge. (c) In case, any of the documents submitted by the contractor is found false/forged at a later date, action for debarment of contractor will be taken by the SE/CE concerned.

Clause 8A	Authority to decide Compensation on account, if contractor fails to submit completion plans	**Superintending Engineer, Allahabad, C.P.W.D., Prayagraj or successor thereof**
Clause 10A	List of testing equipment to be provided by the contractor at site lab.	As per Table 1 of the NIT
Clause 10 B (ii)	Whether clause 10-B (ii) shall be applicable.	**Not Applicable**
Clause 10C		**Applicable**
Component of labour for operation of Clause 10C= 25%		
Clause 10CC		**Not Applicable**

C=
I=
O= } Nil AE(P)(C) EE(C)

Clause 11

Specification to be followed for execution of work:	**Civil work:** (i) CPWD Specification 2019 Volume -I & II with correction slips up to the previous date of the last date of submission of bids. (ii) CPWD Green Rating Manual 2021 with correction slips up to the previous date of the last date of submission of bids. (iii) CPWD hand book on safety, Health and Environment with correction slips up to the previous date of the last date of submission of bids. (iv) CPWD Manual on Accessible Built Environment 2019 with correction slips up to the previous date of the last date of submission of bids.	
	Electrical work : (i) CPWD General Specification 2023 (Part-I) Internal, (ii) CPWD General Specification 2023 for External (Part-II), (iii) CPWD General Specification Part III (Lift & Escalator) – 2003, (iv) CPWD General Specification Part VI Fire Alarm System – 2018 (v) CPWD General Specification Part V Wet Riser & Sprinkler System -2020 NOTE:- a) All above specifications shall be applicable with corrections slips up to the previous date of the last date of submission of bids. b) Wherever the CPWD Specification are not given, the works shall be executed as per the additional Specification and terms & conditions mentioned in the NIT. The direction of the Engineer-in-charge shall be followed in absence of the above two at Serial No a & b.	
	Building information model (BIM) is applicable and BIM professional to be deployed by contractor.	N.A.

Clause12		
Type of work	**Construction Work.**	
12.2	Deviation limit beyond which clause 12.2 (c) shall apply for building work.	100%
	i) Deviation limit beyond which clause 12.2 (c) shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items)	100%
	ii) Deviation limit for items mentioned in earth work subhead of DSR and related items.	100%

C=
I=
O= } Nil AE(P)(C) EE(C)

Clause 16	Competent Authority for Deciding reduced rates:	
	For Civil items of work	**Superintending Engineer, Allahabad, C.P.W.D., Prayagraj or successor thereof**
	For Electrical items of work	**Superintending Engineer, Allahabad, C.P.W.D., Prayagraj or successor thereof**
Clause 17	Contractor Liable for Damages, defects during defect liability Period	The defect liability period shall be 01 year.
Clause 18	List of mandatory machinery, tools & plants to be deployed by the contractor at site.	As per Table 2 of the NIT
Clause 19C, 19D, 19G & 19K	Authority to decide penalty for each default	**Executive Engineer, Varanasi, C.P.W.D., Varanasi or successor thereof**

Clause 25

Conciliator	**Additional Director General, Lucknow, CPWD**
Arbitrator Appointing Authority	**Superintending Engineer, Allahabad, C.P.W.D., Prayagraj or successor thereof**
Place/Seat of Arbitration	**Prayagraj**

Clause 32 Requirement of Technical Representative(s) and Recovery Rate

Sl. No. cost of work (Rs. in Crore)	Requirement of Technical staff		Minimum experience (Years)	Designation of Technical staff	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32	
	Qualification	Number (of Major + Minor Component)			Figures	Words
More than 10 to 20	Graduate Engineer	1	10 (and having experience of one similar nature of work)	Project Manager	Rs. 30,000/- per month	Rs. Thirty Thousand per month
	Graduate Engineer Or Diploma Engineer	1	5 Or 10 respectively	Project / Site Manager	Rs. 25,000/- per month	Rs. Twenty Five Thousand per month
	Graduate Engineer Or Diploma Engineer	1+1	2 Or 5 respectively	Project Planning/ Quality / billing Engineer	Rs. 15,000/- per month	Rs. Fifteen Thousand per month

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers**. Diploma holder with minimum 10 years relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.**

C=
I=
O= } Nil AE(P)(C) EE(C)

Clause 38			
i)	a)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2023 printed by CPWD	**D.S.R. 2023 as amended upto last date of submission of bid.**
ii)		**Variations permissible on theoretical quantities**	
	a)	Cement	**2% plus/minus**
	b)	Bitumen all works	**2.5% plus & only & nil on minus side.**
	c)	Steel reinforcement and structural steel Sections for diameter, section and category.	**2% plus/minus.**
	d)	All other materials	**Nil**

C=
I= } Nil AE(P)(C) EE(C)
O=

TABLE - 1

List of testing equipment to be provided by the contractor at site lab

A) Laboratory at site:

The contractor shall establish a testing lab at site and provide testing equipment and materials for the field tests mentioned in the list of mandatory tests given in CPWD specifications 2019 Vol. 1 & 2. Nothing extra shall be payable to him on this account. (***In case of delay in establishment of Lab at site, annon refundable recovery of Rs. 1000/- per day shall be made from Running account bill of the contractor for each delayed days).***

The representatives of the department shall be at liberty to inspect the testing facilities at site and conduct testing at random in consultation with Engineer in charge. The contractor shall provide all necessary facilities for the purpose. The laboratory shall be equipped, inter alia, with the following equipments:

a)	**Balances:**	**Numbers**
	i) 7 kg to 10 kg capacity, semi-self indicating type – accuracy 10 gm.	02 nos.
	ii) 500 gm capacity, semi-self indicating type – accuracy 1 gm.	01 no.
	iii) Pan Balance – 5 kg. capacity – accuracy 10 gm.	01 no.
b)	**Ovens-** Electrically operated, thermostatically controlled upto 110°C – sensitivity 1°C.	01 no.
c)	**Sieves:** as per IS: 460-1962	
	i) IS Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.	01 set
	ii) IS Sieves – 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 500 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.	01 set
d)	Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.	01 no.
e)	Equipment for slump test- Slump cone, steel plate, tamping rod, steel scale, scoop.	01 no.
f)	Equipment for concrete testing	
	i) Concrete cube moulds 15x15x15cm.	30 nos.
	ii) Pruning Rods 2Kg weight length 40cm and ramming face 25mm	01 no.
	iii) Extra Bottom plates for 15cm cube mould	06 nos.
	iv) Standard Vibration table for cubes	01 no.
g)	Dial gauges, 25 mm travel – 0.01 mm/division least count–	01 no.
h)	Automatic compression testing machine of 200 tonne capacity.	01 no.
i)	Graduated measuring cylinders 200 ml capacity	03 nos.
j)	Enamel trays (for efflorescence test for bricks).	
	i) 300 mm × 250 mm × 40 mm	02 nos.
	ii) Circular plates of 250 mm dia -	4 nos.
k)	Ultra Pulse Velocity Test equipment	01 nos.
l)	Construction water testing kits	02 nos.
m)	Any other equipment for site tests as outlined in BIS codes and as directed by the Engineer-in-charge.	---

Not less than 90% tests for material be performed at site lab with above stated equipment's, however at least 10% testing of materials shall be got done from external laboratories. However, for the tests to be carried out by the external laboratories, the contractor shall supply free of charge all the materials required for testing, including transportation. If the tests which were to be conducted in the site laboratory, are conducted in other laboratories for any the reasons the cost of such tests shall be borne by the contractor.

C=
I=
O= } Nil AE(P)(C) EE(C)

TABLE - 2

LIST OF MACHINERY, TOOLS & PLANTS TO BE DEPLOYED BY THE CONTRACTOR AT SITE

Sl. No.	Name of Equipment	Numbers (Minimum
1	Excavators (various sizes)	As per requirement
2	Tower Crane	As per requirement
3	Builder's hoist	02 nos.
	Equipment for Concrete work	
4	Fully automatic batching plant as per direction of Engineer-in-Charge	01 no.
5	Concrete pump	01 no.
6	Concrete transit mixer	02 nos.
7	Concrete mixer (electrical)	02 nos.
8	Needle vibrator (electrical)	05 nos.
9	Needle vibrator (petrol)	02 nos.
10	Surface and Plate vibrator	02 nos.
	Equipment for Building work	
11	Bar bending Machine	02 nos.
12	Bar cutting machine	02 nos.
13	Drilling machine	02 nos.
14	Welding machine i/c transformer	02 nos.
15	Cube testing machines automatic (Digital 200 MT)	As per requirement
16	Steel shuttering (Slab)	At least for one floor
17	Steel shuttering (Beams)	
18	Steel shuttering (Columns)	
19	M.S. pipes/telescopic props and other accessories.	As per requirement
20	Steel scaffolding system (cup lock type)	As per requirement
	Equipment for transportation	
21	Tippers	As per requirement
22	Trucks	As per requirement
	Pneumatic equipment	
23	Air compressors (diesel)	As per requirement
	Dewatering equipment	
24	Pump (diesel)	As per requirement
25	Pump (electric) (Desirable)	As per requirement
	Power equipment	
26	Diesel generator (to meet requirement at site for uninterrupted work)	01 no.
	Survey equipments	
27	Total Station	01 no.
28	Digital Vernier Callipers	02 nos.
29	Weighing Machine	02 nos.
30	Earth Compactor	02 nos.
31	Digital Laser light Instrument for checking vertical alignment	01 no.
32	Digital Laser light Instrument for checking horizontal alignment.	01 no.

Note: The above list is only indicative and not exhaustive and contractor shall deploy plant and machinery as per actual requirement of the work so that the progress of work is adequately maintained.

C=
I=
O= } Nil AE(P)(C) EE(C)

TABLE- 3

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

S.No.	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor	
		Excess beyond permissible variation	Less use beyond permissible variation
1.	Cement (OPC/PPC)	Nil	Not allowed. Substandard work will be rejected.
2.	Reinforcement Steel	Nil	
3.	Structural Steel	Nil	

C=
I= } Nil AE(P)(C) EE(C)
O=

TABLE - 4

Mile stones of the Contract

S. No	Description of mile stone	Time allowed from Date of start (in days/months.)	Amount to be with-held in case of non-achievement of milestone. (% of tender amount of civil portion)
1.	Achieve 25% of the accepted tendered value.	03 months	1%
2.	Achieve 50% of the accepted tendered value.	06 months	1%
3.	Achieve 75% of the accepted tendered value.	09 months	1%
4.	Complete Work.	12 Months	1%

C=
I=
O=

Nil

AE(P)(C)

EE(C)

SCOPE OF WORK

The broad scope of work shall include but not limited to the following operations/ activities / items related to the works:-

Civil:

1. Provision of 3600 mtr. long 4.0 mtr. wide Cement Concrete (Grade M30) Patrolling Road along the boundary wall with one side RCC drain covered with perforated RCC cover.
2. Provision of treated water supply line from STP water treated tank with 110 mm, 75 mm & 40 mm dia. HDPE pipe for irrigation of park area, green haze, grass & trees all round in the GC campus.
3. Rain Water Harvesting work taken for non-residential buildings (4 Nos. Bore).

Electrical work:

1. 320 KVA DG Set- 2 Nos.
2. LT Feeder Panels -4 Nos.
3. Manual changeover -2 Nos.
4. Aluminium Cables & DWC pipe for cable laying.
5. Earthing work.

ADDITIONAL CONDITIONS

The site for the "Construction of Various Infrastructure at GC, CRPF, Chandauli. ***(SH: Balance work of Bulk & Development services)*****." is available**.

(1) The agency is required to make temporary steel staircase for labour and material to execute the work of vertical extension of the building. The existing building space & staircase will not be allowed to execute the work of vertical extension of the building. Nothing extra will be paid on this account.

(2) Supplementary Agreement shall be drawn where it is not desirable to keep the complete contract open for renovation, minor items, execution of which is not immediately possible on account of:

(i) Certain pre-requisite(s) which is (are) not the responsibility of the contractor, or

(ii) Execution of maintenance/operation of equipment and installations for a specified period after completion of the construction/erection work.

The decision of Engineer-in-charge in this regard will be final and binding.

(3) The Form for supplementary Agreement is enclosed at **Annexure- 1.**

(4) The defect liability period under clause-17 will be 12 months for both Civil (major) and Electrical (minor) component.

(5) The successful bidder is required to do MoU for comprehensive AMC from O.E.M. for three years defect liability period of E&M equipments and services, which is required to be submitted to Engineer-in-charge of minor component before completion of work. Nothing extra will be paid on this account.

~~(6) The maintenance/comprehensive maintenance of HVAC, Addressable Fire Alarm System &Fire fighting System shall be got executed for the defect liability period of 3 years by Original Contractor through:~~

~~(i) OEM/Authorized service agents for High side HVAC and Addressable Fire Alarm System.~~

~~(ii) Specialized agencies for Fire fighting System and low side HVAC Works~~

~~(7) Lifts will be got comprehensively maintained by original contractor through the respective Lift manufacturer only for the defect liability period of 3 years.~~

~~(8) The following E&M specialized systems shall be maintained comprehensively by the Manufacturer/Authorized Service Agencies only for the defect liability period of 3 years, either by the original contractor himself directly or through specialized agencies:~~

~~(i) CCTV System~~

~~(ii) UPS System~~

~~(iii) Water Pump Automation System~~

ANNEXURE- 1

FORM OF SUPPLEMENTARY AGREEMENT

This Agreement made this day the ..... 20..... between .....hereinafter called the First Party which expression shall include his heirs, executors and administrators/their successors and assigns and the President of India, hereinafter called the Second Party, which expression shall include his successors and assigns, shown as under :

1. That this Agreement shall be called as Supplementary Agreement to the Agreement No. ..... relating to the Name of work ..... entered into by the parties to this Agreement.

2. That WHEREAS the First Party has substantially completed the execution of the work described in and covered by the Agreement No. ..... except the items mentioned in the Schedule annexed to this Agreement and whereas the items of the work mentioned in the Schedule annexed to this agreement cannot now be executed on account of non-completion of the sanitary work, electric installation and some other work; and whereas both the parties are desirous that the items mentioned in the Schedule annexed to this Agreement should be executed by the First Party after the completion of the sanitary work, electric installation and some other work, it is hereby further agreed as under :

   (a) That First Party shall and will execute the work covered by the items mentioned in the Schedule annexed to this Agreement at the rates and as per the terms and conditions of the original Agreement No. ..... Whatsoever called upon to do so by the Engineer-in-Charge, within a period of one year from the date hereof.

   (b) hat the First Party shall have absolutely no claim of whatsoever nature against the Second Party for doing the work mentioned in the Schedule annexed to this Agreement as required under clause (a) above, except that which he would be entitled to under the original Agreement No. .....

   (c) That the First Party shall have to execute all the items which the Engineer-in-charge consider necessary.

   (d) That the First Party shall start with the work of the remaining items mentioned in the Schedule annexed to this Agreement within ..... days from ..... on the receipt of a letter to the effect from the Engineer-in-Charge or from any date fixed in the said letter and shall complete the said work within the time fixed by the Engineer-in-Charge or as extended by him from time to time.

   (e) That on the due execution and completion of this Agreement by the parties, the bill of the First Party in relation to the work already done by him under the Original Agreement No. ..... shall be provisionally finalized by the Second Party and payment on account, if any amount due, shall be made to the First Party provided that the Second Party shall have a right to retain

C= I= O=	Nil	AE(P)(C)	EE(C)

such amount as is considered reasonable by him as a security for the execution of the work mentioned in the Schedule annexed to this Agreement and the Second Party shall have right to deal with the said amount of security as he thinks proper under the terms and conditions of the Original Agreement. Further, on the due execution and original completion of this Agreement, the First Party shall be entitled to claim back his security deposit relating to the work in question, subject to the right of the Second Party to retain such amount as he thinks reasonable as mentioned above soon after the maintenance period of three months or six months, as the case may be mentioned in clause of the Original Agreement, is over.

(f) That the final bill relating to the entire work under the two agreements shall be prepared after the completion of the entire work covered by Agreement No. ..... and this Agreement.

3. Except as modified by this Agreement the said Agreement No. ..... shall remain in full force and effect.

IN WITNESS WHEREOF THE ABOVE-MENTIONED PARTIES HAVE PUT THEIR SIGNATURE ON THIS DAY THE.....

C=
I=
O= } Nil AE(P)(C) EE(C)

OFFICE MEMORANDUM

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/01

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated: 10.11.2023

Sub: Modification in GCC Construction Works - 2023, Receipt and refund of EMDs online through e-gateway of SBI for e-tendering as pilot cases – reg.

The provision on earnest money deposit (EMD) through e-tendering is modified as under and shall only be applicable for C, E, I, N and Central Secretariat Divisions under ADG (Delhi) as pilot cases with immediate effect:-

Existing Provision	Modified Provision
CPWD-EPC CPWD-7/8 GOVERNMENT OF INDIA CENTRAL PUBLIC WORKS DEPARTMENT Percentage Rate Tender/Item Rate Tender & Contract for Works TENDER I/We have deposited EMD for the prescribed amount in the office of concerned Executive Engineer as per the bid document. A copy of earnest money deposit *receipt of prescribed amount deposited in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank, is scanned and uploaded (strike out as the case may be).).* If I/We, fail to	CPWD-EPC CPWD-7/8 GOVERNMENT OF INDIA CENTRAL PUBLIC WORKS DEPARTMENT Percentage Rate Tender/Item Rate Tender & Contract for Works TENDER I/We have deposited EMD **through online payment mode** for the prescribed amount as per the bid document. **In respect of portion of EMD prescribed in the shape of BG, the scanned copy of original Bank Guarantee including e-Bank Guarantee (as applicable) of any commercial bank having validity for a period of 90 days for single bid and 180 days for two bid systems or more from the last date of receipt of bids (strike out as the case may be), is to be uploaded.** If I/We, fail to.....

This is issued with the approval of DG CPWD.

10.11.2023
(वी. पी.साहू)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/ Construction e-file 9134857

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

10/11/2023
R.K. JAIN
(EE (Contact)

C=
I=
O= } Nil AE(P)(C) EE(C)

(1/2)

Central Public Works Department
Office Memorandum
No. DG/CON/Construction-2023/02
ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi **Dated: 14.11.2023**

Subject: Amendments in Clause 32, Schedule F of Clause 11 and 32 of GCC 2023 Construction Works.

The following amendments in Clause 32, Schedule F of Clause 11 and 32 are made in the GCC 2023 for Construction Works.

Existing Provision	Modified Provision
Clause 32 Employment of Technical Staff and employees	**Clause 32 Employment of Technical Staff and employees**
Contractors Superintendence, Supervision, Technical Staff & Employees	Contractors Superintendence, Supervision, Technical Staff & Employees
Sl. No. (i) and (iii)	No change
(iv) No Provision	**(iv) Building Information Model (BIM) professional shall be deployed by the contractor for the projects wherever required as mentioned in Schedule F.** **The BIM professional shall be available for the work as and when required by Engineer-in-Charge.** **The BIM professional will study 3D architectural models, architectural drawings generated from 3D models, service drawings and structural drawings.** **The BIM professional will interact with architects, planning & site engineers to get the clashes removed.** **The recovery shall be made from bill of contractor in case of non-deployment of BIM Professionals/technical staff as mentioned in Schedule 'F' of NIT without giving any notice in writing.** **The decision of Engineer-in-Charge in this respect is final and binding on the contractor.**

14/11/2023
R.K. JAIN
(EE (Contact)

C=
I= } Nil AE(P)(C) EE(C)
O=

SCHEDULE 'F' Clause 11 Specifications to be followed for execution of work …… No provision	SCHEDULE 'F' Clause 11 Specifications to be followed for execution of work …… i. **Building information model (BIM) is applicable and BIM professional to be deployed by contractor …… (NIT approving authority to write Yes or No)**
SCHEDULE 'F' Clause 32 Requirement of Technical Representative(s) and recovery Rate Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. Diploma holder with minimum 10 year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers. No Provision	SCHEDULE 'F' **Clause 32 Requirement of Technical Representative(s) and recovery Rate** **No Change.** **No Change.** **Minimum recovery for not deploying Building Information Model (BIM) professional shall be Rs. two lac per month or as mentioned above, whichever is higher.**

This issues with the approval of DG CPWD.

14.11.2023
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17 (1)/2023/Construction e-file 9162768

All CPWD and PWD officers for information and necessary action.
(Through CPWD website).

14/11/2023
R.K. JAIN
(EE (Contact)

C=
I= Nil AE(P)(C) EE(C)
O=

Central Public Works Department
Office Memorandum
No. DG/CON/Construction 2023/03
ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated 06.12.2023

Subject: Modifications in Clause 12 and Schedule F for Clause 12 of GCC 2023 for Construction Works

The following amendments are made in the GCC 2023 Construction Works.

Existing provision	Modified provision
CONDITIONS OF CONTRACT **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xv) (xvi) No provision (xvii) No provision	**CONDITIONS OF CONTRACT** **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xv) **No change** **(xvi) Extra items** are those items which are not available in the contract. a. **Non Schedule Extra Items** are those items which are not available in the Standard Schedule of Rates specified in Schedule F. b. **Scheduled Extra Items** are those items which are available in the Standard Schedule of Rates specified in Schedule F. **(xvii) Completion cost: The completion cost includes gross amount of work done, amount of extra items and deviations and escalation admissible as per agreement etc.**
Clause 12 Deviations/ Variations Extent and Pricing The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the	**Clause 12 Deviations/ Variations Extent and Pricing** No Change

06/12/2023
R.K. JAIN
(EE (Contact)

C=
I=
O= } Nil AE(P)(C) EE(C)

progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.	
The completion cost of any agreement for Maintenance works including works of upgradation, aesthetic, special repair, addition/ alteration should not exceed 1.25 times of Tendered amount. Any further deviation beyond this limit upto 1.5 times of tendered amount shall be approved by the authority mentioned in schedule 'F' with recorded reason and in exceptional case, ADG shall have full power to approve the deviation beyond 1.50 times of tendered amount with recorded reason and take suitable corrective action.	**Deleted**
No provision	**The completion cost shall, in no case, exceed 1.5 times the contract amount.** **Contractor will devise a system to keep a watch on quantum of work taken up vis-a-vis balance items required to complete defined scope of work and will give the alerts to Engineer-in-Charge before taking up extra items, deviations so that completion cost does not exceed above limit. Work executed beyond above limit will neither be recorded nor be paid.**

06/11/2023
R.K. JAIN
(EE (Contact)

C=
I=
O=
} Nil AE(P)(C) EE(C)

	Engineer-in-Charge will verify and confirm the alerts before assigning deviations and / or extra items to the contractor. If additional work(s) is required to complete defined scope of work beyond above limit then Engineer-in Charge may take up such work(s) separately. The contractor will not have any claims whatsoever on this account.
12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows : i. In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus ii. 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge	12.1 The time for completion of the works shall, in the event of any deviations **and extra items** resulting in additional cost over the **contract amount will** be extended, if requested by the contractor, as follows : i. In the proportion **to** the additional cost of work, bears to the original **contract amount** plus ii. 25% of the time calculated in (i) above.
12.2 Deviation, Extra Items and Pricing In the case of extra item(s) (items which are not available in the contract), the contractor may within fifteen days of the receipt of order or occurrence of the item(s), submit claim for market rate(s), supported with proper analysis of rate and manufacturer's specification for the work, invoices, vouchers, etc. (as applicable), failing which the rate(s) approved later by the Engineer-in-Charge shall be final and binding. Where the contractor submits claim for market rate(s) in the manner prescribed above, the Engineer-in-Charge shall, within 45 days of the receipt of the claims, after giving consideration to the analysis of	**12.2 Deviation, Extra Items and Pricing** **a) Non Schedule Extra Items** - The contractor may, within fifteen days of the receipt of order **to execute extra item** or occurrence of the item(s), submit **analysis of rate of extra item(s) based on the rates of materials available in basic rate of Standard Schedule of Rate mentioned in schedule F and market rates of the materials which are not available in standard schedule of rate mentioned in schedule F. For this purpose, the basic rate of materials available in Schedule of Rates mentioned in Schedule F will be enhanced or reduced by the applicable cost index, as the case**

06/11/2025
R.K. JAIN
(EE (Contact)

rates and other documents submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.	may be. **The rates of the materials which are not available in Standard Schedule of Rates, mentioned in Schedule F, shall be based on, tax paid bills for the material as defined in** manufacturer's specification. **Material rates from Standard Schedules of Rates shall be given priority in the analysis of rates.** **The rate of extra item will be:-** **i. Analyzed rates as above multiplied by (tender amount divided by estimated cost put to tender), if tendered amount is below the estimated amount put to tender.** **ii. Analyzed rate, if the tendered amount is above the estimated amount put to tender.** Failing which the rate(s) approved later by the Engineer-in-Charge shall be final and binding. Where the contractor submits **analysis of rate of extra items** in the manner prescribed above, the Engineer-in-Charge shall, within **60** days of the receipt of the **analysis of rate**, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rate(s) **of extra items.** The contractor shall be paid in accordance with the rates so determined. **However provisional rates on the basis of invoice will be allowed by the Engineer-in-Charge. Invoice shall be accepted only for materials not available in the Standard Schedule of Rates mentioned in Schedule F. The extra items rate shall be finalized only after submission of tax paid bills by**

R.K. JAIN 4/2015
(EE (Contact)

I= Nil AE(P)(C) EE(C)
O=

	the contractor to the Engineer-in-Charge as required above. The Engineer-in-Charge may apply the discount available in the market on the rate of materials taken from tax paid bills.
(b) No Provision	b) Scheduled Extra Items i. For percentage rate tenders, the extra item(s) shall be paid as per the Standard Schedule of Rates, mentioned in Schedule F, enhanced or reduced by the applicable cost index and further enhanced or reduced by percentage above/ below quoted by the contractor on estimated cost put to tender. ii. For item rate tenders, the extra item(s) shall be paid as per the said schedule rate enhanced or reduced by the applicable cost index and multiplied by (tender amount divided by estimated cost put to tender).
The rate(s) of extra items so determined by the Engineer-in-Charge shall be final and binding on the contractor, and shall not be arbitrable.	Deleted

06/14/2023
R.K. JAIN
(EE (Contact)

Deviation, deviated quantities, Pricing In the case of contract items which exceed the limit laid down in Schedule F, the contractor may within fifteen days of the receipt of order or occurrence of the excess, claim revision of the rates, supported with proper analysis of rate and invoices, vouchers, etc. (as applicable), for the quantity in excess of the above-mentioned limit. The Engineer-in-Charge shall within 45 days of receipt of the claims, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined. The rate(s) so determined by the Engineer-in-Charge shall be final and binding on the contractor, and shall not be arbitrable.	**c) Deviation, deviated quantities, Pricing** In the case of contract items which exceed the limit laid down in Schedule F, the contractor may within fifteen days of the receipt of order or occurrence of the excess, claim revision of the rates, supported with proper analysis of rates **and other documents, as per procedure described in para 12.2(a) or 12.2(b)** (as applicable), for the quantities in excess of the above-mentioned limit. The Engineer-in-Charge shall within ~~45~~ **60** days of receipt of the claims, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rates and the contractor shall be paid in accordance with the rates so determined. **In case, the contractor fails to submit his claim for revision of rates within 15 days of the receipt of order or occurrence of the excess, the Engineer-in-Charge shall determine the rate(s) of such items in accordance with para 12.2 (a) and 12.2 (b) without giving any notice to the contractor. The rates so determined by the Engineer-in-Charge shall be final and binding.** The rate(s) **of extra items and deviated items** so determined by the Engineer-in-Charge shall be final and binding on the contractor.
12.3 In the case of contract items which exceed the limit laid down in Schedule F, the Engineer-in-Charge shall after giving notice to the contractor within 30 days of submission of that bill by the contractor which contains such item(s), and after taking into consideration any reply received from the contractor within 15 days of the issue of such notice, reduce the rate for quantity in excess of the above-mentioned limit on the basis of market rates, within 30 days of the expiry	**Deleted**

06/11/2023
R.K. JAIN
(EE (Contact)

of the said period of 15 days, and the contractor shall be paid in accordance with the rates so determined. The rate(s) so determined by the Engineer-in-Charge shall be final and binding on the contractor, and shall not be arbitrable	
12.4 The cost of any operation necessarily ..... admissible for such operations.	**12.3** The cost of any operation necessarily ..... admissible for such operations.
12.4 No provision	**12.4 Cost index** **Latest available Cost index at the time of beginning of execution of extra item and deviation shall be used in sub-clauses 12.2 (a), 12.2 (b) and 12.2 (c) for calculation of rates of extra items.**
12.5 No provision	**12.5 Labour rates** **Labour rates will be based on latest available circulars issued by Central Govt. or State Govt. whichever are higher as well as applicable for the work.**
PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders) **SCHEDULE 'F'** **Clause 12** Authority to decide deviation upto 1.5 time of tendered amount	**PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders)** **SCHEDULE 'F'** **Clause 12** Deleted
12.2 & 12.3 Deviation Limit beyond which clauses12.2 & 12.3 shall apply for building work	12.2 **(c)** Deviation Limit beyond which clauses12.2 **(c)** shall apply for building work .....

26/12/2023
R.K. JAIN
(EE (Co...))

I= Nil AE(F)(C) EE(C)
O=

12.4 (i) Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items) ..... (ii) Deviation Limit for items mentioned in earth work subhead of DSR and related items	(i) Deviation Limit beyond which clauses 12.2 **(c)** shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items) ..... (ii) Deviation Limit for items mentioned in earth work subhead of DSR and related items .....

This OM is applicable for all NITs issued w.e.f. date of issue of this OM. This issues with the approval of DG CPWD.

06.12.2023

(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/Construction/2023 e-file no 9163323

All CPWD and PWD officers for information and necessary action.

(Through CPWD website.

06/12/2023

R.K. JAIN

(EE (Contact)

C=
I= } Nil AE(P)(C) EE(C)
O=

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/04

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated: 08.12.2023

Subject: Modifications in Conditions of Contract, Clause 5 and schedule F in clause 5 of GCC 2023 Construction Works

The following amendments are made in the GCC 2023 for Construction works.

Existing Provision	Modified Provision
CONDITIONS OF CONTRACT **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:- (i) to (xvii) (xviii) No provision	**CONDITIONS OF CONTRACT** **Definitions** 2. No change:- (i) to (xvii) No Change **(xviii) Concurrent delay: Concurrent delays are those delays occurring in the work concurrently in any combination or combination of all delay fall under different sub clauses 5.2, 5.3 and 5.5.**
Clause 5 Time and Extension for Delay The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site, notified by the Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited by the Engineer in Charge and shall be absolutely at the disposal of the Government without prejudice to any other right or remedyavailable in law.	**Clause 5 Time and Extension for Delay** The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site, notified by the Engineer-in-Charge, whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid **and such default continues even after time period specified in the notice in writing by the Engineer-in-Charge then** the performance guarantee shall be forfeited by the Engineer-in-Charge and shall be absolutely at the disposal of the Government without prejudice to

R.K. JAIN
(EE (Contact)

I= Nil AE(P)(C) EE(C)
O=

	any other right or remedy available in law. **The contract shall stand determined when such decision of forfeiture of the performance guarantee is issued to the contractor.**
5.1 As soon as possible but within 7 (seven) working days of award of work and in consideration of	5.1 **The contractor** as soon as possible but within 7 (seven) days of **issue of letter of** award of work **shall submit a time and progress chart to the Engineer-in-Charge. Such chart shall be made in due** consideration of
a. Schedule of handing over of site asspecified in the Schedule 'F' b. Schedule of issue of designs as specified in the Schedule 'F',	a. Schedule of handing over of site as specified in the Schedule 'F' b. Schedule of issue of design**(s) and drawing(s)** as specified in the Schedule 'F',
i. the Contractor shall submit a Time and Progress Chart for each mile stone. The Engineer-in-Charge may within 7 (seven) working days thereafter, if required modify, and communicate the program approved to the contractor failing which the program submitted by the contractor shall be deemed to be approved by the Engineer-in- Charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents.	i. The Contractor shall submit a Time and Progress Chart for each milestone. The Engineer-in-Charge may within 7 (seven) days **of receipt of such chart, make modifications thereafter,** if **any,** and communicate the approved **chart** to the contractor**,** failing which the **chart** submitted by the contractor shall be deemed to be approved by the Engineer-in- Charge. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents.
ii. In case of non-submission of construction programme by the contractor, the program approved by the Engineer-in-Charge shall be deemed to be final.	ii. In case of non-submission of **time and progress chart** by the contractor, the **chart prepared by the** Engineer-in- Charge shall be deemed to be final.

01/14/2023
R.K. JAIN
(EE (Contact)

I= } Nil AE(P)(C) EE(C)
O= }

iii. The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract.	iii. The approval by the Engineer-in-Charge of such programme shall not relieve the contractor of any of the obligations under the contract.
iv. The contractor shall submit the Time and Progress Chart and progress report using the mutually agreed software or in other format decided by Engineer-in-Charge for the work done during previous month to the Engineer-in-charge on or before 5th day of each month failing which a recovery as per Schedule F to be decided by the NIT approving authority shall be made on per week or part basis in case of delay in submission of the monthly progress report	**iv.** The contractor shall submit the Time and Progress Chart **containing upto date progress of work** using the mutually agreed software or in **the** format decided by Engineer-in-Charge. **Such chart shall be submitted by the contractor on or before 5th day of each month failing which a recovery as mentioned in Schedule 'F' shall be made at the earliest from running account bill without any notice in this regard.**
v. **No provision**	**v. While recording the hindrances in the progress of the work, due consideration should be given to the cause of hindrance. The hindrances shall be segregated in following categories :** **a) delays due to reasons beyond the control of both parties (sub-clause 5.2)** **b) delays attributable to the Department and concurrent delays (sub-clause 5.3).** **c) delays solely attributable to the contractor (sub-clause 5.5)**
5.2 If the work(s) be delayed by:- i. force majeure, or ii. abnormally bad weather, or iii. serious loss or damage by fire, or iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or v. delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in	**5.2 Delays due to reasons beyond the control of both parties:** If the work(s) delayed by:- i. force majeure, or ii. abnormally bad weather, or iii. serious loss or damage by fire, or iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or v. delay on the part of other contractors or tradesmen engaged by Engineer-in- Charge in

R.K. JAIN
(EE (Contact)

I= AE(E)(C) EE(C)
O=

executing work not forming part of the Contract, or vi. any other cause like above which, in the reasoned opinion of the Engineer-in-Charge is beyond the Contractor's control	executing work not forming part of the Contract, or vi. any other cause like above which, in the reasoned opinion of the Engineer-in-Charge is beyond the Contractor's control.
Then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.	Then upon the happening of any such event causing delay, the contractor shall **within 03 (three) days** give **online** notice thereof **through ERP Portal** to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the work(s). **The contractor shall have no claim on account of any hindrance in case notice(s) are not given by the contractor through ERP portal.** **The Engineer-in-Charge, on receipt of such notice(s) after considering the factual ground situation, shall either acknowledge or reject the notice(s)** **In case of rejection, the reason(s) for rejection shall be communicated by Engineer-in-Charge to the agency.** **The decision of Engineer-in-Charge with regard to nature of event causing delay, its start date and end date, as has been finalized during acknowledgement of notice, shall be final and binding.** **The end date of such events shall be recorded by Engineer-in-Charge either during acknowledgment of notice or subsequent to acknowledgement if end date of hindrance is after the date of acknowledgement of notice.** **In absence of notice by the contractor, Engineer-in-Charge or his representative(s) may record the events causing delay within 05 (five)**

09/11/2023
R.K. JAIN
(EE (Contact)

	days of occurrence of hindrance on ERP portal provided further that not recording of events causing delay by the Engineer-in-Charge does not ipso facto entitle the contractor for any hindrance.
The contractor shall have no claim of damages for extension of time granted or rescheduling of milestone/s for events listed in sub clause 5.2.	**No change.**
5.3 In case the work is hindered in the opinion of the contractor, by the Department or for any reason / event, for which the Department is responsible, the authority as indicated in Schedule 'F' shall, if justified, give a fair and reasonable extension of time and reschedule the mile stones for completion of work.	**5.3 Delays attributable to the department** In case the work is hindered, in the opinion of the contractor, by the Department or for any reason / event, for which the Department is responsible, **then upon the happening of such event causing delay, the Contractor shall within 3 (three) days give online notice there of through ERP Portal to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the work.** **The contractor shall not be entitled for any hindrance in case notice(s) are not given by the contractor through ERP portal.** **The Engineer-in-Charge, on receipt of such notice(s) after considering the factual ground situation, shall either acknowledge or reject the notice(s).** **In case of rejection, the reason(s) for rejection shall be communicated by Engineer-in-Charge to the agency.** **The decision of Engineer-in-Charge with regard to nature of event causing delay, its start date and end date, as has been finalized during acknowledgement of notice, shall be final and binding.**

28/11/2023
R.K. JAIN
(EE (Contact)

	The end date of such events shall be recorded by Engineer-in-Charge either during acknowledgment of notice or subsequent to acknowledgement if end date of hindrance is after the date of acknowledgement of notice. **In absence of notice by the contractor, Engineer-in-Charge or his representative(s) may record the events causing delay within 05 (five) days of occurrence of hindrance on ERP portal provided further that not recording of events causing delay by the Engineer-in-Charge does not ipso facto entitle the contractor for any hindrance.**
Such extension of time or rescheduling of milestone/s shall be without prejudice to any other right or remedy of the parties in contract or in law, provided further that for concurrent delays under this sub clause and sub clause 5.2 to the extent the delay is covered under sub clause 5.2 the contractor shall be entitled to only extension of time and no damages.	Such extension of time or rescheduling of milestone**(s)** shall be without prejudice to any other right or remedy of the parties in contract or in law, provided further that for concurrent delay(s) under this sub clause and sub clause 5.2 to the extent the delay is covered under sub clause 5.2, the contractor shall be entitled to only extension of time and **shall have** no **claim of** damages.
5.4 Request for rescheduling of Mile stones or extension of time, to be eligible forconsideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed forms i.e. Form of application by the contractor for seeking rescheduling of milestones or Form of application by the contractor for seeking extension of time (Appendix - XVI) respectively to the authority as indicated in Schedule 'F'. The Contractor shall indicate in such a request the period by which rescheduling of milestone/s or extension of time is desired.	5.4 **Rescheduling of milestone(s) and 'extended date of completion'** The request for rescheduling of Milestone**(s) and** extension of time, shall be made by the Contractor **through ERP Portal once in a month on the basis of hindrances accepted by Engineer-in-Charge under sub-clause 5.2 and sub-clause 5.3.** The Contractor shall indicate in such a request **number of days** by which rescheduling of milestone**(s) and/**or extension of time is desired.
With every request for rescheduling of milestones, or if at any time the actual progress of work falls behind the approved programme by more than 10% of the stipulated period of completion of contract, the contractor shall produce a revised programme without causing any delay in execution	**Deleted**

R.K. JAIN
(EE (Contact)

I= } Nil
O= }

AE(P)(C) EE(C)

of the work. A recovery as specified in Schedule 'F' shall be made on per day basis in case of delay in submission of the revised programme.	
No provision	**The authority as indicated in Schedule 'F', after examining the request, shall give a fair and reasonable extension of time for completion of work and simultaneously reschedule the milestone(s), if required so. The authority shall consider all the hindrances accepted as per sub-clauses 5.2, 5.3 and 5.5.** **The authority shall decide rescheduling of milestone(s) and extension of time within 21 (Twenty One) days of the request submitted by the contractor through ERP portal. In event of no request by the contractor for rescheduling of milestone(s) and extension of time, the authority as indicated in Schedule F, after affording opportunity to the contractor, may give fair and reasonable extension of time based on hindrances accepted by Engineer-in-Charge and reschedule the milestone(s) once in a month. Such justified extension of time shall determine the 'extended date' of completion of work.**
5.4.1 In any such case the authority as indicated in Schedule 'F' may give a fair and reasonable extension of time for completion of work or reschedule the mile stones.	5.4.1 **Provided that the end date of any event causing delay shall not fall beyond the date of request for extension of time or rescheduling of milestone(s) by the contractor. In case end date of event falls beyond the date of submission of said request, then period for extension up to date of application shall be considered in the said request for events eligible for consideration and remaining period shall be applied in subsequent request of extension of time or rescheduling of milestone(s).**
E-in-C shall finalize/ reschedule a particular mile stone before taking an	**Engineer-in-Charge** shall finalize/ reschedule a particular mile stone

R.K. JAIN 28/11/2023
/EE /Cont...

I=
O=
Nil AE(P)(C) EE(C)

action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 21 days of the date of receipt of such request from the Contractor in prescribed form. In event of non-application by the contractor for extension of time E-in-C after affording opportunity to the contractor, may give, supported with a programme (as specified under 5.4 above), a fair and reasonable extension within a reasonable period of occurrence of the event.	before taking an action against subsequent mile stone. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 21 **(twenty one)** days of the date of receipt of such request from the Contractor **on ERP Portal.**
5.5 In case the work is delayed by any reasons, in the opinion of the Engineer- in-Charge, by the contractor for reasons beyond the events mentioned in clause 5.2 or clause 5.3 or clause 5.4 and beyond the justified extended date, without prejudice to right to take action under Clause 3, the Engineer-in-Charge may grant extension of time required for completion of work without rescheduling of milestones. The contractor shall be liable for levy of compensation for delay for such extension of time.	5.5 **Delays attributable solely to the contractor** **In case the work is delayed by reasons solely attributable to the contractor, then Engineer-in-Charge or his representative(s) may record the event causing delay within 05 (five) days of occurrence of delay in the ERP portal. Contractor shall take the notice of the same for necessary action. He may submit his version, if any within 05 (Five) days. Engineer-in-Charge, considering the version of the contractor, will take decision on such recording of the event and the decision of the Engineer-in-Charge shall be final and binding.** **The contractor shall be liable for levy of compensation for such delays (i.e. for the period beyond the justified extended date of completion as determined in sub clause 5.4 and this default of contractor shall be dealt in conjunction with clause 2 of the contract.** **In case the work is delayed, due to hindrances attributable solely to the contractor, beyond the justified extended date (as stated in sub clause 5.4), the authority indicated in Schedule 'F', without prejudice to provisions to take action under Clause 3, may grant extension of**

R.K. JAIN
(EE (Contact)

C=
I= } Nil AE(P)(C) EE(C)
O=

	time required for completion of work without rescheduling of milestone(s) and extend the date of completion.
PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect.& Hort. Works in case of Composite Tenders) **SCHEDULE 'F'** **Clause 5** **Authority to decide:**	**PROFORMA OF SCHEDULES (Separate Performa for Civil, Elect. & Hort. Works in case of Composite Tenders)** **SCHEDULE 'F'** **Clause 5**
i. Extension of time ..... (Engineer in Charge or Engineer in Charge of Major Component in case of Composite Contracts, as the case may be)	i. **Authority to convey the decision of shifting of milestone and** extension of time ..... (Engineer-in-Charge or Engineer-in-Charge of Major Component in case of Composite Contracts, as the case may be)
ii. Rescheduling of mile stones ..... (Superintending Engineer/ PM/CPM in Charge or Superintending Engineer/ PM/CPM in Charge of Major Component in case of Composite Contracts, as the case may be)	ii. **Authority to decide rescheduling of milestone and** extension of time ..... (SE/**SE&PD/ CE/ CE&ED).**
iii. Shifting of date of start in case of delay in handing over of site ..... (Superintending Engineer/ PM/CPM in Charge or Superintending Engineer in Charge of Major Component in case of Composite Contracts, as the case may be)	iii. Shifting of date of start in case of delay in handing over of site ..... (SE/**SE&PD/CE/ CE&ED).**

This OM is applicable for all NITs uploaded after date of issue of this OM.

This is issued with the approval of DG CPWD.

08.12.2023

(वी. पी.साहू)

अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/ Construction e-file 9161772

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

08/12/2023

R.K. JAIN

(Contact)

I= } Nil AE(P)(C) EE(C)
O= }

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/05

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 08.02.2024**

Subject: Modifications in Conditions of Contract and Clause 19 of GCC 2023 for Construction Works

The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
CONDITIONS OF CONTRACT **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-	**CONDITIONS OF CONTRACT** **Definitions** 2. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-
(i) to (xviii)	**(i) to (xviii) No change**
(xix) No provision	**(xix) Adolescent Person: A person who has completed his/her fourteenth year of age but has not completed his eighteenth year.**
(xx) No provision	**(xx) Hazardous works: Hazardous process/works are the works as defined in the clause (cb) of the Factory Act, 1948.**
Clause 19 Labour Laws to be complied by the Contractor The contractor shall comply with the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971. The contractor shall also obtain a valid licence under the said Act before the commencement of the work, and continue to have a valid licence until its completion. The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.	**Clause 19 Labour Laws to be complied by the Contractor** **No change** **No change** **No change**

C=
I= } Nil AE(P)(C) EE(C)
O=

The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986. The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996. Any failure to fulfil these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.	The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, **amended by Amendment Act No. 35 of 2016 and thereafter time to time.** **No change** **No change**
Clause 19A No labour below the age of eighteen years shall be employed on the work.	Clause 19A No **person** below the age of **fourteen** years shall be employed on the work. **However Adolescent Persons can be employed on non-hazardous works/process.**
C.P.W.D. Contractor's Labour Regulations **2. DEFINITIONS** i. (c) Who is an out worker, that is to say, person to whom any article or materials are ..... premises under the control and management of the principal employer. No person below the age of 18 years shall be employed to act as a workman.	**C.P.W.D. Contractor's Labour Regulations** **2. DEFINITIONS** i. (c) No change. No person below the age of **fourteen** years shall be employed **on the work. However Adolescent Persons can be employed on non-hazardous works/process.**

This issues with the approval of DG CPWD.

08.02.2024

(वी. पी.साहू)

अधीक्षण अभियंता(सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9169019

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

C=
I= } Nil AE(P)(C) EE(C)
O=

Central Public Works Department
Office Memorandum
No. DG/CON/Construction 2023/07
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI Dated: 01.03.2024

Subject: Modifications in Clause 7 of GCC 2023 for Construction Works

The following amendments is made in the GCC 2023 for Construction Works :

Existing provision	Modified provision
Clause 7 Payment on intermediate certificate to be regarded as Advances No payment shall be made for work, estimated to cost Rs. twenty lacs or less till after the whole of the work shall have been completed and certificate of completion given. ..... fixed for the same by the Engineer-in-Charge.	**Clause 7 Payment on intermediate certificate to be regarded as Advances** No change.
The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved.	The contractor shall not be paid any such interim payment if the gross work done together with net payment/ adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved.
No provision	**However, to expedite the progress of work, Engineer-in-Charge, on the request of contractor, may make interim payment(s) even before the net payment limit specified in schedule 'F' is achieved. In such case(s) no interest / compensation shall be recoverable from contractor.** **Such payment by Engineer-in-Charge shall not be construed as waiver of limit specified in schedule 'F' for subsequent interim payment(s).**

R.K. JAIN 01/03/2024
(EE (Contact)

C=
I=
O= } Nil AE(P)(C) EE(C)

Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, ... prescribed time limit.	**No Change**

This issues with the approval of DG CPWD.

01.03.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Const. e-file no. 9135972

To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)

01/03/2024
R.K. JAIN
(EE (Contact)

C=
I=
O=
} Nil AE(P)(C) EE(C)

Central Public Works Department
Office Memorandum
No. DG/CON/Construction 2023/06

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD 01.03.2024

NIRMAN BHAWAN, NEW DELHI Dated: ~~20.02.2024~~

Subject: Modifications in Conditions of Contract, Clause 19 and 20 of GCC 2023 for Construction Works

The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
CONDITIONS OF CONTRACT **Definitions** 9. **Signing of Contract:-** The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:- (i) to (iii) No Provision	**CONDITIONS OF CONTRACT** **Definitions** 9. **Signing of Contract:-** The successful tenderer, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of:- (i) to (iii) No change **In the event of successful tenderer being a firm/company, then the agreement shall be signed by all the partners or directors thereof individually. In the event of the absence of any partner/director, it shall be signed on his behalf by a person holding a power of attorney (duly notarized by notary public or board resolution in case of company) authorizing him to do so.**
Clause 19 B Payment of Wages (i) The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.	**Clause 19 B Payment of Wages** **(i)** The contractor shall pay to labour employed by him either directly or through subcontractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971 **and Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii) amended time to time.**

29/04/2024
R.K. JAIN
(EE (Contact

C=
I=
O= } Nil AE(P)(C) EE(C)

	Thus higher of the wages either notified by Govt. of India, Ministry of Labour and/or that notified by the local administration of the State Govt. both relevant to the place of work and the period of reckoning shall be paid by the contractor to the labourer .
(v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.	(v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, **Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii) and** ~~or~~ the modifications thereof or any other laws relating thereto and the rules made there under from time to time.
Clause 20 Minimum Wages Act to be Complied With The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.	**Clause 20 Minimum Wages Act to be Complied With** The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, **Gazette Notification 19.01.2017, S.O 188 (E) extra ordinary part 2 – sec. 3 (ii)** amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

This issues with the approval of DG CPWD.

01.03.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023 e-file no. 9163323

To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)

2 उपयुक्त
R.K. JAIN 1/2/2024

C=
I=
O=
} Nil AE(P)(C) EE(C)

Central Public Works Department
Office Memorandum
No. DG/CON/Construction 2023/08
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI Dated: 05.03.2024

Subject: Modifications in Clause 19 of GCC 2023 for Construction Works

The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 19 Labour Laws to be complied by the Contractor	**Clause 19 Labour Laws to be complied by the Contractor**
The contractor shall comply with the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971.	**No change**
The contractor shall also obtain a valid licence under the said Act before the commencement of the work, and continue to have a valid licence until its completion.	**No change**
The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.	**No change**
The contractor shall also abide by the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, amended by Amendment Act No. 35 of 2016 and thereafter time to time.	**No change.**
The contractor shall also comply with the provisions of the building and other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.	**No change**

05/03/2024
R.K. JAIN
(EE (Contact)

C=
I=
O= } Nil AE(P)(C) EE(C)

No provision	**The contractor shall also comply with the provisions of Sexual Harassment of Women at Workplace (Prevention Prohibition and Redressal) Act, 2013 and amendment thereafter time to time.**
Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.	Any failure to fulfil these requirements shall attract the penal provisions of **the relevant act and in** this contract
Clause 19 M **No Provision**	**Clause 19 M Sexual Harassment of Women at Workplace** **The contractor shall comply with all provision(s) and guideline(s) of Sexual Harassment of Women at Workplace (Prevention Prohibition and Redressal) Act, 2013 and amendment thereafter time to time or any other rules framed under any labour law affecting women worker(s).**

This issues with the approval of DG CPWD.

05.03.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023 e-file no. 9163323

To all the concerned officers of CPWD/PWD for information and necessary action please. (Through CPWD Website)

05/03/2024
R.K. JAIN
(EE (Contact)

1/2

Central Public Works Department

Office Memorandum

No. DG/CON/Construction 2023/09

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI Dated: 01.04.2024

Subject: Modifications in Clause 1, 8 and 41 of GCC 2023 for Construction Works

The following amendments are made in the GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 1 Performance Guarantee Sl. No. (i) to (iv)	**Clause 1 Performance Guarantee** Sl. No. (i) to (iv) **No Change**
(v) On substantial Completion of any work which has been completed to such an extent that the intended purpose of the work is met and ready to use, then a provisional Completion certificate shall be recorded by the Engineer-in-Charge. The provisional certificate shall have appended with a list of outstanding balance item of work that need to be completed in accordance with the provisions of the contract.	(v) **As per requirement of the client or otherwise specified in the contract, part completion certificate may be issued for the building(s)/ infrastructure project for the part(s) which have been completed in all respect and are ready for use. However, statutory approvals, Completion drawing of various services, wherever required, shall be obtained before handing over of building(s)/ part(s) of the project. Scope of the completed part(s) shall be mentioned in such part completion certificate.**
This provisional completion certificate shall be recorded by the concerned Engineer- incharge with the approval of Superintending Engineer /Project Manager / Chief Engineer/ Chief Project Manager, if required. After recording of the provisional Completion Certificate for the work by the competent authority, the 80 % of performance guarantee shall be returned to the contractor, without any interest.	The **part completion** certificate shall **include** outstanding balance work that need to be completed in accordance with the provisions of the contract. This **part** completion certificate shall be recorded by the **authority as per contract value of work.** After recording of the **part** Completion Certificate for the work by the competent authority, the **proportionate amount of** 80% of performance guarantee shall be returned to the contractor, without any interest.
However in case of contracts involving Maintenance of building and services /any other work after construction of same building and services/ other work, then 40% of performance guarantee shall be returned to the contractor, without any interest after recording the provisional Completion certificate.	However in case of contracts involving Maintenance of building and services /any other work after construction of same building and services/ other work, then **proportionate amount of** 40% of performance guarantee shall be returned to the contractor, without any interest after recording the **part** Completion certificate.

01/04/2024
R.K. JAIN
EE (Contract)

C=
I= Nil AE(P)(C) EE(C)
O=

(2/2)

Clause 8 Completion Certificate Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued.	**Clause 8 Completion Certificate** Within ten days of the completion of the work **or on part completion of one or more building(s) out of independent building in a project or infrastructure project, as per requirement of client or otherwise specified in schedule F,** the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and shall furnish the contractor with a **part or** final **completion** certificate **as the case may be,** indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates.
But no final certificate ..... sum actually realized by the sale thereof.	No change.
Clause 41 **Release of Security deposit after labour clearance** The Security Deposit ..... security deposit and refund the balance amount.	**Clause 41** **Release of Security deposit after labour clearance** No change.
No Provision	**In case, if part completion certificate of work is recorded then security deposit shall be released only after recording final completion certificate of the work and after completion of defect liability period whichever is later or specified otherwise in the contract.**

This issues with the approval of DG CPWD.

01.04.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9163323

All CPWD and PWD officers for information and necessary action.(Through CPWD website)

01/04/2024
R.K. JAIN
EE (Contract)

C=
I= Nil AE(P)(C) EE(C)
O=

के.लो.नि.वि.		CPWD

Central Public Works Department
Office Memorandum
No. DG/CON/Construction 2023/10
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD
NIRMAN BHAWAN, NEW DELHI **Dated:** 03-06-2024

Subject: Modifications in Clause 36 of GCC 2023 for Construction Works

The following amendment is made in the Clause 36 of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 36 If relative working in CPWD then the contractor not allowed to tender The contractor shall not be *permitted* to tender for works in the CPWD circle *(Division in case of contractors of Horticulture/Nursery categories)* responsible for award and execution of contracts in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the *Superintending Engineer* and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working *with him in any capacity* or are subsequently employed by him and who are near relatives to any *Gazetted* Officer in the *C.P.W.D. or in the Ministry of Housing and Urban Affairs.* Any breach of this condition by the contractor would render him liable to be *removed from the approved list of contractors of this Department. If however the contractor is registered in any other department, he shall be debarred from tendering in CPWD for any breach of this condition.*	**Clause 36 If relative working in CPWD then the contractor is not allowed to participate in the tendering process** The contractor **(enlisted or non-enlisted in CPWD)** shall not be **allowed** to **participate in the** tender for work(s) in the CPWD **Zone/**circle **/Division/Sub-Division** responsible for award and**/or** execution of contract**(s)** in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the **Chief Engineer** and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working or are subsequently employed by him and who are near relatives to any Officer **working** in the **CPWD**. Any breach of this condition by the contractor would render him liable to be **debarred for a period upto two years from tendering in CPWD as decided by the accepting authority mentioned in Schedule F and his decision will be excepted from clause 25.**
NOTE: By the term "near relatives" is meant wife, husband, parents and grandparents, children and grandchildren, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.	No change.

This issues with the approval of DG, CPWD.

03.06.2024
(V.P. Sahu)
Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Construction **e-file 9135972**

All CPWD and PWD officers for information and necessary action. (Through CPWD website)

R.K. JAIN
EE (Contract)

All CPWD and PWD officers for information and necessary action.(Through CPWD website)

R.K. JAIN
EE (Contract)

Central Public Works Department

Office Memorandum

No. DG/CON/Construction 2023/11

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI Dated: 03-06-2024

Subject: Additions in 'General Rules and Directions' of GCC 2023 for Construction Works

The following additions are made in GCC 2023 for Construction Works under 'General Rules and Directions':

Existing provision	Modified provision
General Rules and Directions Sl. No. 1 to 16	**General Rules and Directions** No Change
No Provision	**17. <u>Price Preference to SC/ST individual contractor for item rate/percentage rate tender</u>:** **Price preference in quoted item rate/percentage rate tender shall be applicable to the individual enlisted/non-enlisted SC/ST contractor as under:-** **i. For work(s) upto and equal to an estimated cost of Rs.2.70 lakh a price preference upto 5% (with reference to the lowest valid tender) may be allowed in favor of individual SC/ST enlisted/non-enlisted contractor. No earnest money is required in such case(s).** **ii. For work(s) beyond an estimated cost of Rs. 2.70 lakh and upto and equal to estimated cost of Rs. 6.20 lakh, the price preference upto 5% (with reference to the lowest valid tender) may be allowed in favour of individual enlisted SC/ST contractor. However, earnest money at a reduced rate of ½% may be accepted in such cases.** **iii. The price preference upto 5% (with reference to the lowest valid price bid) may be allowed in favour of individual SC/ST contractor. The above concession shall be allowed only after proper verification of the individual contractor's claim of belonging to SC/ST community.**
Schedule F **No Provision**	**Schedule F** **Price Preference to SC/ST individual contractor is valid upto ..... (date)**

This issues with the approval of DG CPWD.

03.06.2024

(V.P. Sahu)

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9163323

All CPWD and PWD officers for information and necessary action.(Through CPWD website)

R.K. JAIN 03/06/2024

EE (Contract)

C=
I= } Nil AE(P)(C) EE(C)
O=

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/12

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 09.10.2024**

Subject: Modifications in Clause 10A of GCC 2023 for Construction Works

The following amendment is made in the Clause 10A of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 10A Materials to be provided by the contractor The contractor shall ..... as specified in Schedule F.	**Clause 10A Materials to be provided by the contractor** **(i)** No Change
No Provision	**(ii) Maintenance of Material at Site (MAS) Register** **(a) MAS register of the key materials including Cement, Steel Bitumen, Paint, Primer, Distemper, Varnishes, Tile Adhesive, Admixture, Anti termite chemical Water proofing compound material and other items as required by Engineer-in-Charge, and shall be maintained as per proforma in Appendix-XX of GCC. All the entries in the MAS registers are made by the designated staff of the contractor and same is reviewed weekly by the authorized representative and fortnightly by the Engineer-in-Charge. However, contractor is responsible for maintenance and safe custody of MAS registers.**
(b) No provision	**(b)The self-attested copies of tax paid bill of all the materials entered in the MAS register shall be submitted by the contractor at the time of review by representative of Engineer-in-Charge. In case of any doubt, genuineness of the tax paid bills; it can be verified by the representative of the Engineer-in-Charge or the Engineer-in-Charge, however, onus of genuineness of tax paid bills rest with the contractor.**

09.10.24

R K SINGH
EE(Manual)

1/2

C=
I= } Nil AE(P)(C) EE(C)
O=

Appendix-XX

REGISTER OF MATERIAL AT SITE (MAS)

1. **Division/Sub-division** .....
2. **Name of Work** .....
3. **Name of Article/Item** .....
4. **Estimated Requirements** .....

S. No.	Date of Receipts (Details of Challans/ Bills, Specific location wherePlants and Materials received/ Vehicle No.	Received from/ issued to	Quantity Received	Date of issue	Specific location where Plants& Materials Displayed / Delivered / issued	Quantity issued	Balance Quantity	Signature of authorized representative of contractor	Signature of authorized representative of Engineer-in-Charge/ AE/EE/	Remarks
1	2	3	4	5	6	7	8		9	10

This issues with the approval of DG, CPWD.

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/ Construction/2024
e-file 9184028 (DFA//930138U)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

09.10.24
R K SINGH
EE(Manual)

I= } Nil AE(P)(C) EE(C)
O= }

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction-2023/13

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated: 29.10.2024

Subject: Modifications in Conditions of Contract, Clause 10A of GCC Construction Works 2023.

Following amendments are made in the GCC Construction Works 2023:-

Existing Provision	Modified Provision
Clause 10A: Materials to be provided by the Contractor (i) The contractor shall, ... thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor.	**No Change**
The contractor shall at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in schedule F.	**Field Laboratory:** The contractor shall at his own expense, setup a material testing lab equipped with the testing equipment as specified in schedule F at site for conducting routine field test.
No Provision	**External Laboratory: Letter for submitting sample(s) for testing of material shall be sent through e-mail to the Lab by authorized representative of Engineer-in-Charge or Engineer-in-Charge of the work along with name(s) of test(s) to be done on the material.** **The contractor shall collect the sample(s) from the site and submit it to the lab; make necessary payment for the testing charges. He will inform on the same day through email to authorized representative of Engineer-in-Charge and Engineer-in-Charge regarding submission of sample (s) and**

29.10.24
R K SINGH
EE(Manual)

I= } Nil AE(P)(C) EE(C)
O=

No Provision	**payment made to the lab. If he either fails to collect or submit the sample(s) to the lab within 03 days or in time as prescribed in the specifications, whichever is earlier, the Engineer-in-Charge shall collect and submit the sample(s) and make necessary payment for testing charges to the lab. In such case, Engineer-in-Charge shall make recovery on account of collection and submission of sample(s) to the lab and paid testing charges etc. from the next R/A bill / Final bill of the contractor. This action of Engineer-in-Charge shall be final and binding.** **If the contractor fails three times in collection and/or submitting sample(s) and/or fails to make payment for testing charges, the contractor shall be debarred from tendering in CPWD for a period of two years.**
Sl. no. (ii) (a) and (b)	**No change**

This OM is applicable for all NITs uploaded after date of issue of this OM.

This is issued with the approval of DG CPWD.

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2024/Construction e-file- 9184436 (DFA/9303295)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

R K SINGH
EE(Manual)

I= } Nil AE(P)(C) EE(C)
O=

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Construction 2023/14

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 03.01.2025**

Subject: Modifications in General Rules and Directions of GCC 2023 for Construction Works.

The following amendments are made in the General Rules and Directions of GCC 2023 for Construction Works:

Existing provision	Modified provision
Applicable for Item Rate Tender only (CPWD - 8) 4 The rates ..... rupee one. In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit sealed revised offer quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer. If the revised ..... their tenders. In case of any ..... be forfeited. In case all ..... lowest contractors. Contractor ..... of the work.	**Applicable for Item Rate Tender only (CPWD - 8)** 4 No change In case the lowest tendered amount (worked out on the basis of quoted rate of Individual items) of two or more contractors is same, then such lowest contractors may be asked to submit **revised price bid online using e-tender website,** quoting rate of each item of the schedule of quantity for all sub sections/sub heads as the case may be, **on the revised template which has been sent to them by the Tender Inviting Authority (TIA)**, but the revised quoted rate of each item of schedule of quantity for all sub sections/sub heads should not be higher than their respective original rate quoted already at the time of submission of tender. The lowest tender shall be decided on the basis of revised offer. No change
Applicable for Percentage Rate Tender only [CPWD- 7] 4B In case the lowest tendered amount (estimated cost ± amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/ below on estimated cost of tender including all sub sections/sub	**Applicable for Percentage Rate Tender only [CPWD- 7]** 4B In case the lowest tendered amount (estimated cost ± amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit **revised price bid online quoting** percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may

03.01.25
R K SINGH
EE(Manual)

I= } Nil AE(P)(C) EE(C)
O=

heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.	be **on the revised template which has been sent to them by the Tender Inviting Authority (TIA)**, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.
In case of any ..... be forfeited. If the revised ..... their tenders. In case all ..... process of the work.	No change

This issues with the approval of DG, CPWD.

31/1/25

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/ Construction/2024
e-file 9185053 (DFA/9307326)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

03.01.25
R K SINGH
EE(Manual)

C=
I=
O=
} Nil AE(P)(C) EE(C)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Construction 2023/15
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 31.01.2025**

Subject: Modifications in Clause 7A of GCC 2023 for Construction Works.

The following amendments are made in the Clause 7A of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 7A No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.	**Clause 7A** **(a)** No Running Account Bill/**Final Bill** shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge. **(b) The following documents shall also be part of the bill submitted by the contractor (these documents shall be owned by the contractor) before making payment:-** **1. Details of person employed with date of their employment up to previous month.** **2. Documents of payment made to the employees directly into their bank accounts up to previous month.** **3. Documents of attendance through biometric attendance or other mode up to previous month.** **4. Documents of deposition of EPF and ESI deductions in the employee's accounts up to previous month.** **5. Any penalty imposed on the agency for delay in disbursing payment and deposition of EPF and ESI deductions in the employee's accounts up to previous month.** **6. Any other document(s) required as per statutory requirements and/or as directed by Engineer-in-Charge.** **(c) In case, any of the documents submitted by the contractor is found false/forged at a later date, action for debarment of contractor will be taken by the SE/CE concerned.**

This issues with the approval of DG, CPWD.

31/1/25

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file 9184028 (DFA/9313089)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

31.1.25
R K SINGH
EE(Manual)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Construction 2023/16
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 10.02.2025**

Subject: Modifications in Clauses 7, 8, 9 and Schedule F of clause 8 of GCC 2023 for Construction Works.

The following amendments are made in the Clauses 7, 8, 9 and Schedule F of clause 8 of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 7 Existing provisions No provision	**Clause 7** No change **In case of correction / rejection / short documents, it will be mandatory for Engineer-in- Charge to give recorded reasons for correction / rejection / submission of additional documents within seven days after submission of running bill by the contractor.**
Clause 8 Completion Certificate (Issued vide OM No. DG/Construction-2023/09 dated 01.04.2024) Within ten days of the completion of the work or on part completion of one or more building(s) out of independent building in a project or infrastructure project, as per requirement of client or otherwise specified in schedule F, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and shall furnish the contractor with a part or final completion certificate as the case may be, indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates.	**Clause 8 Completion Certificate** Within ten days of the completion of the work or on part completion of one or more building(s) out of independent building in a project or infrastructure project, as per requirement of client or otherwise specified in schedule F, the contractor shall give notice of such completion to the Engineer-in-Charge and **the Engineer-in-Charge, within seven days of receipt of intimation of completion from contractor will inspect the work and satisfy himself about completion of part /full work, then intimate to the concerned authorities as mentioned in Schedule F for inspection and issuance of part / final completion certificate. The concerned authorities will inspect the work and issue part/final completion certificate within** thirty days of the receipt of such **intimation. T**he Engineer-in-Charge shall furnish **to** the contractor a part **/** final completion certificate as the case may be, indicating defects (a) to

10.2.25
R K SINGH
EE(Manual)

C=
I=
O= } Nil AE(P)(C) EE(C)

	be rectified by the contractor and/or (b) for which payment will be made at reduced rates.
But no final certificate ..... sum actually realized by the sale thereof.	**No change.**
Clause 9 Payment of Final Bill The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within the period of three months the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized Asstt. Engineer, complete with account of materials issued by the Department and dismantled materials. 10.2.25 R K SINGH EE(Manual)	**Clause 9 Payment of Final Bill** **i.** The final bill shall be submitted by the contractor **to the Engineer-in-Charge** in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final **completion** certificate furnished by the Engineer-in-Charge whichever is earlier. **At the time of submission of the final bill, receipt will be given by the O/o Engineer-in-Charge.** **ii. In case of correction / rejection / short documents, it will be mandatory for Engineer-in- Charge to give recorded reasons for correction / rejection / submission of additional documents within fifteen days after submission of final measurement and/or final bill by the contractor.** **iii. Final bill will be accepted with all pre-requisite documents such as sanctioned copies of extra items and deviation in quantities, escalation statements, recovery statement, theoretical statement, final completion certificate, final extension of time case, mandatory tests statement, dismantled materials account and other documents as mentioned in clause 7A etc.** **iv. An undertaking alongwith the final bill will be submitted by the contractor that "I / we hereby undertake that all the measurements/claims payable under this contract have been included in the final bill and will not submit any other bill/claims in future under this agreement thereafter".** **v.** No further claims shall be **entertained from** the contractor after submission of the final bill and these shall be deemed to have been waived **off** and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer in charge will, be made within the

C=
I=
O= } Nil AE(P)(C) EE(C)

If the final bill is submitted by the contractor within the period specified above and delay in payment of final bills is made by the department after prescribed time limit, a simple interest @ 5 % (five percent) per annum shall be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor is found to be in order.	period of three months. The period **of three months will be** reckoned from the date of receipt of the bill **in complete shape after necessary corrections / additional documents,** by the Engineer-in-Charge. **vi. In case of foreclosure / determination of contract, if the contractor fails to submit the EOT case, final measurement /bills within 30 days of foreclosure/ determination, the EOT case and final bill will be prepared and decided by the department. The final bill shall only be paid after withholding amount equivalent to maximum compensation to be levied on the contractor.** **vii.** If the final bill, **in complete shape,** is submitted by the contractor within the period specified above and delay in payment of final bill is made by the department after prescribed time limit, a simple interest @5% (five percent) per annum **may** be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor **contains all the documents as mentioned in para – (iii) & (iv) above.** .
Schedule F **Clause 8** No Provision	**Schedule F** **Clause 8** **Competent Authorities to inspect and issue part / final completion certificate .....** **(To be filled by NIT approving authority).**

This issues with the approval of DG, CPWD.

10.2.25

(दिनेश कुमार उज्जैनिया)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2025/Construction e-file 9190123 (DFA/9315615)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

10.2.25
R K SINGH
EE(Manual)

C=
I= } Nil AE(P)(C) EE(C)
O=

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/ Construction 2023/17

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 03.03.2025**

Subject: Modifications in Clause 14 of GCC 2023 for Construction Works 2023.

The following amendments are made in the Clause 14 of GCC 2023 for Construction Works 2023:

Existing provision	Modified provision
Clause 14 Carrying out part work at risk & cost of contractor If contractor: (iii) The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to : (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.	**Clause 14 Carrying out part work at risk & cost of contractor** If contractor: (iii) The Engineer- in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to : (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor. **The contractor, from whom a part work / part incomplete work of any item(s), has been taken out of his hands, shall not be allowed to participate in the tendering/quotation process of part work / part incomplete work of any item(s).**

This issues with the approval of DG, CPWD.

03.03.25

(आर. के. सिंह)

कार्यपालक अभियन्ता (एम.)

Issued from file No. CSQ/CM/17(1)/2023/Construction e-file-9184028 (DFA/9319526)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।

(केलोनिवि वेबसाईट के माध्यम से)

R K SINGH
EE(Manual)

C=
I=
O= } Nil AE(P)(C) EE(C)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Construction 2023/18
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **Dated: 16.06.2025**

Subject: Modifications in Clause 25.2(b) and 25.6 of GCC 2023 for Construction Works.

The following amendments are made in the Clause 25.2(b) and 25.6 of GCC 2023 for Construction Works:

Existing provision	Modified provision
Clause 25.2 **(b) Qualification of Arbitrators**: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer with experience in execution of public works engineering contracts, and he should have worked earlier at a level not lower than the Chief Engineer (equivalent to level of Joint Secretary to the Government of India). The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator. The age of Arbitrator at the time of appointment shall not exceed 75 years. An Arbitrator may be appointed notwithstanding the total number of active arbitration cases with him.	**Clause 25.2** **(b) Qualification of Arbitrators**: It is a term of this contract that each member of the Arbitral Tribunal shall be Graduate Engineer **(in Civil or Electrical or Mechanical Engineering)** with experience in execution of public works engineering contracts and he should have worked earlier at a level not lower than the SAG **(Level 14 of 7th CPC)** of the Government of India). The aforesaid educational qualification and work experience shall be mandatory for appointment as Arbitrator. The age of Arbitrator at the time of appointment shall not exceed **70 years**.
Clause 25.6 **Fee payable to Arbitrator(s):** The fee payable to the arbitral tribunal shall be as per CPWD OM No.2/2006/SE(TLC)/ CSQ/137 dated 19.11.2019 (or latest amendment), and shall be shared equally by both the parties.	**Clause 25.6** **Fee payable to Arbitrator(s) for arbitration cases, shall be as per the fee given in the fourth schedule of the Arbitration & Conciliation Act, 1996** (or latest amendment), and shall be shared equally by both the parties.

This issues with the approval of DG, CPWD.

(चन्द्र पाल) 16/06/2025
अधीक्षण अभियंता (सी. एंड एम.)

Issued from file No. CSQ/CM/17(1)/2025 / Construction e-file 9135700 (TLC File)
केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनिवि वेबसाईट के माध्यम से)

16.06.25
R K SINGH
EE(Manual)

C=
I=
O= } Nil AE(P)(C) EE(C)

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction-2023/19

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi Dated: 06.11.2025

Subject: Modification of Clause 19L of GCC-2023 for Construction Works.

The clause 19L in GCC-2023 for Construction Works is being modified:

Existing Provision	Modified Provision
Clause 19 L: Contribution of EPF and ESI The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in-charge to the contractor on actual basis. The verification of deployment labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order	**Clause 19 L: Contribution of EPF and ESI** **It will be mandatory for all the agencies to register with ESI and EPFO departments within 30 days of the award of the work unless exempted by the provisions of ESI and / or EPFO and as amended time to time.** The ESI and EPF contributions on the part of employer in respect of this contract shall be paid by the contractor. These contributions on the part of the employer paid by the contractor shall be reimbursed by the Engineer-in-charge to the contractor on actual basis. The verification of deploy**ed** labour will be done through biometric attendance system or any other suitable method by the Engineer in Charge. **The agency shall submit an affidavit on a stamp paper of Rs. 100 that the employees were engaged fully and exclusively on the work for which the claim is being made.** The applicable and eligible amount of EPF & ESI shall be reimbursed preferably within 7 days but not later than 30 days of submission of documentary proof of payment provided same are in order

This is issued with the approval of DG CPWD.

06.11.2025

(चन्द्र पाल)

अधीक्षण अभियंता (सी.एच.ए.)

Chander Pal SE (C&M)

Issued from file No. CSQ/CM/17(1)/2024/ Construction **e-file 9195855 (DFA/9350595)**

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

6/11/25

C=
I=
O= } Nil AE(P)(C) EE(C)

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/Construction 2023/20

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

VIDYUT BHAWAN, NEW DELHI Dated: 27.02.2026

Subject: Modifications in General Rules & Directions, Clause 1 and Schedule E of GCC 2023 Construction Works

The following modifications are made in the General Rules & Directions, Clause 1 and Schedule E of GCC 2023 Construction Works.

Existing provision	Modified provision
General Rules & Directions 11 (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee at specified percentage of the tendered amount as mentioned in Schedule 'E' and within the period specified in Schedule F.	**General Rules & Directions** 11 (i) The Contractor whose tender is accepted, will be required to furnish performance guarantee as mentioned in Schedule 'E' and within the period specified in Schedule F. .....
Clause 1 **Performance Guarantee** (i) The contractor shall submit an irrevocable Performance Guarantee at specified percentage of the tendered amount as mentioned in Schedule 'E', in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance.	**Clause 1** **Performance Guarantee** (i) The contractor shall submit an irrevocable Performance Guarantee as mentioned in Schedule 'E', in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance. .....
Sl. No. (ii) to (v)	No change
SCHEDULE 'E' Reference to General Conditions of contract Sl. No. (i)	**SCHEDULE 'E'** Reference to General Conditions of contract No change

27/2/26
EE(C)
D.P. Jindal
EE (Contract)

C=
I=
O=

Nil AE(P)(C) EE(C)

(ii) Performance Guarantee : 5% of tendered value.	(ii) Performance Guarantee : **(a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher).** **(b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.**
Sl. No. (iii)	No change

This issues with the approval of DG, CPWD.

27.02.2026

(चन्द्र [illegible]) अधी. अभि. (सी.एच.एम.)
अधीक्षण अभियंता (सी.[illegible])
Supdt. Engr. (C&M)

Issued from file No. CSQ/CM/17(1)/2026/Construction e-file 9212995 (DFA/ 9365660)

केलोनिवि तथा लोनिवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु। (केलोनिवि वेबसाईट के माध्यम से)

27/2/26
EE(C)
D.P. Jindal
EE (Contract)

C=
I= } Nil AE(P)(C) EE(C)
O=

केन्द्रीय लोक निर्माण विभाग

कार्यालय ज्ञापन

No. DG/CON/Construction 2023/21

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Vidyut Bhawan, New Delhi Dated: 18.08.2026

Sub: Modification in Clause 19K: Deployment of Skilled/Semi-Skilled Tradesmen for GCC 2023 Construction Works.

Following modification is made in Clause 19K: Deployment of Skilled/Semi-Skilled Tradesmen for GCC 2023 Construction Works.

Existing Provision	Modified Provision
Clause 19 K **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 shall not be less than 20% of total skilled/semi-skilled workers required in each trade at any stage of work. 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	**Clause 19 K** **Deployment of skilled/semi-skilled workers** The Contractor shall, at all stages of work, deploy skilled and semi-skilled tradesmen who are **duly** qualified and **hold** certificates in **their respective** trade**s**, from **the** CPWD Training Institute, **or from awarding bodies recognized under the aegis of National Council for Vocational Education and Training (NCVET), Ministry of Skill Development and Entrepreneurship (MSDE)**, or any institute recognized/certified by the State or Central Government **for this purpose**. The number of such qualified tradesmen shall not be less than 20% of the total skilled/semi-skilled workers required in each trade at any stage of work. The Contractor shall submit, **for approval of the Engineer-in-Charge, the** number of man-days required for each trade, **the** proposed scheduling, and the list of qualified tradesmen along with requisite certificates issued by any of the above recognized institutes. **To make up any shortfall below the prescribed minimum limit of 20% of skilled/semi-skilled tradesman, the Contractor shall arrange skilling of**

L. S. [illegible]-2026
AE (C-II)

18/8/2026
EE (Contract)

C=
I= } Nil AE(P)(C) EE(C)
O=

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 work 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 coordination 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.	**workers at site under the Recognition of Prior Learning (RPL) program, conducted by awarding bodies recognized under NCVET or any institute recognized/certified by the State or Central Government for this purpose. The cost of such recognition/training, including the infrastructure required at site, shall be borne by the Contractor. The tradesmen undergoing training shall be paid their wages by the contractor for period during the training, and no reimbursement in this respect shall be made by the Government.** This provision shall not be applicable for works with **an** estimated cost put to tender **of** less than ₹5 Crore **in case of construction works and less than ₹50 Lakh in case of maintenance works**. **In the event, the contractor fails to provide the mandatory training to the tradesmen, a penalty of ₹1,000 per day per tradesman falling short of the required 20% target shall be imposed on the Contractor. Decision of Engineer in Charge shall be final and binding in this regard.**

This issues with the approval of DG CPWD.

18.08.26

(चन्द्र पाल)
अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2026/ Construction e-file 9196031 (DFA/ 9388060)

के.लो.नि.वि. तथा लो.नि.वि. दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु (के.लो.नि.वि.वेबसाईट के माध्यम से)।

18/8/2026
EE (Contract)

L. S. Meena 18-8-2026
AE (C-II)

C=
I= } Nil AE(P)(C) EE(C)
O=

P A R T - B

(Civil Works)

SPECIAL, ADDITIONAL CONDITIONS, PARTICULAR SPECIFICATION

C=
I= } Nil AE(P)(C) EE(C)
O=

SPECIAL CONDITIONS

1.0 GENERAL

1.1 The Contractors are advised to inspect and examine the site and its surroundings and satisfy themselves with the nature of site, the means of access to the site, the constraints of space for stacking material / machinery, labour etc. constraints put by local regulations, if any, weather conditions at site, general ground / subsoil conditions etc. or any other circumstances which may affect or influence their tenders. The Contractor shall carry out survey of the work area, at his own cost, setting out the layout and fixing of alignment of the building as per architectural and Structural drawings in consultation with the Engineer-in-Charge and proceed further ensuring full structural continuity and integrated and monolithic construction. Any discrepancy between the architectural drawings and actual layout at site shall be brought to the notice of the Engineer-in-charge. It shall be responsibility of the Contractor to ensure correct setting out of alignment using total station instrument. Nothing extra shall be payable on this account. No claims, whatsoever, shall be entertained later for any errors found, on plea that the information supplied by the Department in the tender is insufficient or is at variance with the actual site condition.

1.2 The work site is located **at GC, CRPF, Chakiya, Chandauli.**

1.3 Pre-coated M.S. Profile sheet Barricading upto the 6.00 metre height and safety fall net shall be provided by the agency, wherever, required all around the stock of materials and work places as per direction of Engineer-in-charge. Nothing extra shall be paid on this account. The Pre-coated MS profile sheet sample is to be got approved from Engineer-in-Charge.

1.4 The contractor should provide curtain barricades up to the full height of building, if required, and directed by Engineer-in-charge and nothing extra shall be paid on this account.

1.5 The Contractor shall, if required by him, before submission of the tender, inspect the drawings in the Office of the Engineer-in-charge. The Department shall not bear any responsibility for the lack of knowledge and the consequences, thereof to the Contractor. The information and data shown in the drawings and mentioned in the tender documents have been furnished, in good faith, for general information and guidance only. The Engineer-in-Charge, in no case, shall be held responsible for the accuracy thereof and/or interpretations or conclusions drawn there from by the Contractor and all consequences shall be borne by the Contractor. No claim, whatsoever, shall be entertained from the Contractor, if the data or information furnished in tender document is different or actual working drawings are at variance with the drawings available for inspection or attached to the tender documents. It is presumed that the Contractor shall satisfy himself for all possible contingencies, incidental charges, wastages, bottlenecks etc. likely during execution of work and acts of coordination, which may be required between different agencies. Nothing extra shall be payable on this account.

1.6 The contractor(s) shall give to the local body, police, and other authorities all necessary notices etc. that may be required by law and obtain all requisite licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be levied on account of these operations in executing the contract. He shall ensure that there is no damage to adjoining property. If any such untoward happens he shall be entirely responsible for any consequences

besides making good any damages to the adjoining property whether public or private. He shall supply and maintain lights either for illumination or for cautioning the public at night.

1.6.1 The contractor shall be responsible for the watch and ward / guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.

1.6.2 Wherever any reference to any Indian Standards occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued thereto or revisions thereof, if any, up to the date of receipt of tenders.

1.6.3 The Contractor shall carry out his work so as not to interfere with or hinder the progress of the work being performed by other Contractors or by the Engineer-in-Charge. As far as possible, he shall arrange his work and place, so as not to interfere with the operations of other Contractors or shall arrange his work with that of the others, in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of Engineer in charge.

1.6.4 The Contractor shall indemnify the Department against all claims in respect of patent rights, royalties, design, trademarks of name or other protected rights, damages to adjacent buildings, roads, or members of public, in course of execution of work or any other reasons whatsoever, and shall himself defend all actions arising from such claims and shall indemnify the Department in all respect from such actions, costs and expenses. Nothing extra shall be payable on this account.

1.6.5 The Contractor shall take all precautions to abide by the environmental related restrictions imposed by any statutory body having jurisdiction in the Uttar Pradesh as well as prevent any pollution of streams, ravines, river bed and waterways. All waste or superfluous materials shall be transported by the Contractor, and disposed of at designated places only.

1.7 The work shall generally be carried out in accordance with the "CPWD Specifications 2019 Vol. I & II" with up-to-date correction slips, additional/Particular Specifications, Architectural/ Structural drawings and as per instructions of Engineer-in-Charge.

1.8 The contractor shall make his own arrangements for water and for obtaining electric connections if required and make necessary payments directly to the BHU Authority/State Govt. departments concerned.

1.9 Site test register & MAS Registers to be maintained by contractor:

All test registers and MAS registers issued by the engineer-in-charge shall be maintained by the contractor which will be reviewed by the officers of CPWD at regular intervals. Frequency of tests will be governed by the CPWD specifications 2019 Volume I & II with upto date correction slips.

C= I= O=	Nil	AE(P)(C)	EE(C)

1.10 SECURITY AND TRAFFIC ARRANGEMENTS

In the event of any restrictions being imposed by the Security agency of BHU, CPWD, Traffic Authority or any other authority having jurisdiction in the area on the working or movement of labour /material, the contractor shall strictly follow such restrictions and nothing extra shall be payable to the contractor on such accounts. The contractor shall construct suitable godowns, yard at the site of work for storing all other materials so as to be safe against damage by sun, rain, damages, fire, theft etc. at his own cost and also employ necessary watch and ward establishment for the purpose at his cost.

1.11 Royalty at the prevalent rates shall be paid by the Contractor or the RMC supplier as per the terms of supply between them on all materials such as boulders, metals, sand and bajri etc. collected by him for the execution of the work, directly to the revenue authority of the state government concerned. Nothing extra shall be payable on this account.

1.12 The contractor will take reasonable precautions to prevent his workman and employees from removing and damaging any flora (tree/plant/vegetation) from the project area.

1.13 PRESERVATION AND CONSERVATION MEASURES

(i) Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services, if any, encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense.

(ii) All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest discovered on project location during excavation/construction shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation.

1.14 Specialized Agencies for specialized works: Contractor has to engage specialized agencies for specialized items of works such as only those specialized agencies/firms who have work experience and submit work experience certificate issued by competent authority for satisfactorily completion of similar works as per following criteria during last seven years are eligible for execution of specialized works and shall be approved-

a) Three works each costing not less than 40% of estimated cost for concerned similar work item.

Or

b) Two works each costing not less than 60% of estimated cost for concerned similar work item.

Or

c) One work costing not less than 80% of estimated cost for concerned similar work item.

The various specialized items of works under this agreement in respect of civil construction are as below:

1. Water proofing treatment work.
2. Special foundations including all types of piles.
3. Post construction Anti-termite chemical treatment.
4. Water Treatment Plants
5. Special foundations including all types of piles

C= I= O=	Nil	AE(P)(C)	EE(C)

Aapproval of the specialized agencies for each specialized work shall be obtained from the Engineer-in-Charge within one month of date of start of the work. Even if, such specialized items of work shall be executed by the specialized agencies at later date the work shall be deemed to be executed by the tenderer for all purposes and the responsibility of the quality of items of works executed etc. shall continue to be that of the tenderer only.

It is expressly agreed that the Contractor shall, at all times, be responsible and liable for all its obligations under this Contract notwithstanding anything contained in the contracts with its Sub-contractors or any other contract that may be entered into by the Contractor, and no default under any such contract shall excuse the Contractor from its obligations or liability hereunder.

1.15 SUBMISSION AND DOCUMENTATION

The Contractor shall render all help and assistance in documenting the total sequences of this project by way of photography, slides, audio / video recording etc. Nothing extra shall be payable to Contractor on this account. The original films shall be the property of the Department. No copy shall be prepared without the prior approval of the Engineer- in – Charge.

(i) The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc. under various labour laws and other regulations applicable to the works, at his site office. He should also keep at site at least one set of BIS Codes and other relevant codes at site and produce the same if asked for by Engineer-In-Charge. In case of non -compliance, these codes will be purchased from the Market and actual cost of purchase will be recovered from the next RA Bill of the Contractor.

(ii) The Contractor shall make available four (04) sets of completed Building Drawings, "As Built Drawings" along with literatures, manuals, warranty certificates etc. of various installed fittings, fixtures and equipment for the completed projects. This shall be the prerequisite for payment of final bill.

(iii) The Contractor shall make available three (03) sets of all drawings of internal and external services i.e. Water Supply, Sanitary line and Drainage lines. This shall be the prerequisite for payment of final bill. These drawings shall have the following information:

(iv) Run off for all piping and their diameters including soil, waste pipes and vertical stacks.

(v) Ground and invert level of all drainage pipes together with locations of all manholes and connections, up to outfall.

(vi) Run off for all water supply lines with diameters location of control valves, access panels etc.

(vii) The contractor shall make available four (04) sets of **electronic Measurement Books** (EMBs) having measurement of all the permanent standing in a building.

1.16 Preserve and Protect Landscape during Construction

(a) The contractor shall ensure that no trees, existing or otherwise, shall be harmed and damage to roots should be prevented during trenching, placing backfill, driving or parking heavy equipment, dumping of trash, oil, paint, and other materials detrimental to plant health. These activities should be restricted to the areas outside of the canopy of the tree, or, from a safe distance from the tree/plant by means of barricading. Trees will not be used for support; their trunks shall not be damaged by cutting and carving or by nailing posters, advertisements or other material. Lighting of fires or carrying out heat or gas emitting construction activity within the ground, covered by canopy of the tree is not to be permitted.

C= I= O=	Nil	AE(P)(C)	EE(C)

(b) The contractor shall take steps to protect trees or saplings identified for preservation within the construction site using tree guards of approved specification.

(c) Contractor should limit all construction activity within the specified area as per the Construction Management Plan (CMP) approved by Engineer in Charge.

(d) The contractor shall avoid cut and fill in the root zones, through delineating and fencing the drip line (the spread limit of a canopy projected on the ground) of all the trees or group of trees. Separate the zones of movement of heavy equipment, parking, or excessive foot traffic from the fenced plant protection zones.

(e) The contractor shall ensure that maintenance activities during construction period shall be performed as needed to ensure that the vegetation remains healthy.

1.17 Contractor shall be required to develop and implement a waste management plan, quantifying material diversion goals. He shall establish goals for diversion from disposal in landfills and incinerators and adopt a construction waste management plan to achieve these goals. A project-wide policy of nothing leaves the Site should be followed, in such a case when strictly followed, care would automatically be taken in ordering and timing of materials such that excess doesn't become waste. The Contractor is ingenuity is especially called towards meeting this prerequisite/ credit (as per IGBC LEED India, New Construction v1.0 & GRIHA, MNRE). Consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation. Designate a specific area(s) on the construction site for segregated or commingled collection of recyclable material, and track recycling efforts throughout the construction process. Identify construction haulers and recyclers to handle the designated materials. The diversion may include donation of materials to charitable organizations and salvage of materials on-site.

1.17.1 Contractor shall collect all construction waste generated on site. Segregate these wastes based on their utility and examine means of sending such waste to manufacturing units which use them as raw material or other site which require it for specific purpose. Typical construction debris could be broken bricks, steel bars, broken tiles, spilled concrete and mortar etc.

1.17.2 The contractor shall comply with the safety procedures, norms and guidelines (as applicable) as outlined in the document Part 7 Constructional practices and safety of National Building code 2005 of India, Bureau of Indian Standards. A copy of all pertinent regulations and notices concerning accidents, injury and first-aid shall be prominently exhibited at the work site. Depending upon the scope & nature of work, a person qualified in first-aid shall be available at work site to render and direct first-aid to causalities. A telephone may be provided to first-aid assistant with telephone numbers of the hospitals displayed. Complete reports of all accidents and action taken thereon shall be forwarded to the competent authorities.

1.17.3 The storage of material shall be as per standard good practices as specified in Part 7, Section 2 in Storage, Stacking and Handling practices, NBC 2005 and shall be to the satisfaction of the Engineer in Charge to ensure minimum wastage and to prevent any misuse, damage, inconvenience or accident. Watch and ward of the Contractor is materials shall be his own responsibility. There should be a proper planning of the layout for stacking and storage of different materials, components and equipment's with proper access and proper maneuverability of the vehicles carrying the materials. While planning the layout, the requirements of various materials, components and equipment's at different stages of construction shall be considered.

C= I= O=	Nil	AE(P)(C)	EE(C)

1.17.4 The contractor shall provide for adequate number of garbage bins around the construction site and the workers facilities and will be responsible for the proper utilization of these bins for any solid waste generated during the construction. The contractor shall ensure that the site and the workers facilities are kept litter free. Separate bins should be provided for plastic, glass, metal, biological and paper waste and labeled in both Hindi and English with suitable symbols.

1.17.5 The Contractor shall remove from site all rubbish and debris generated by the Works and keep Works clean and tidy throughout the Contract Period. All the serviceable and non-serviceable (melba) material shall be segregated and stored separately. The malba obtained during construction shall be collected in well-formed heaps at properly selected places, keeping in a view safe condition for workmen in the area. Materials which are likely to cause dust nuisance or undue environmental pollution in any other way, shall be removed from the site at the earliest and till then they shall be suitable covered. Glass & steel should be dumped or buried separately to prevent injury. The work of removal of debris should be carried out during day. In case of poor visibility artificial light may be provided.

1.17.6 The contractor shall ensure that a flush out of all internal spaces is conducted prior to handover. This shall comprise an opening of all doors and windows for 14 days to vent out any toxic fumes due to paints, varnishes, polishes, etc.

1.18 CONSTRUCTION WASTE

(a) Contractor shall ensure that wastage of construction material is within 3%.

(b) All construction debris generated during construction shall be carefully segregated and stored in a demarcated waste yard. Clear, identifiable areas shall be provided for each waste type. Employ measures to segregate the waste on site into inert, chemical, or hazardous wastes.

(c) All construction debris shall be used for road preparation, back filling, etc, as per the instructions of the Engineer in Charge, with necessary activities of sorting, crushing, etc.

(d) No construction debris shall be taken away from the site, without the prior approval of the Engineer in Charge.

(e) The contractor shall recycle the unused chemical/hazardous wastes such as oil, paint, batteries, and asbestos.

(f) When construction debris is taken out of the site, after prior permissions from the Engineer in Charge, then the contractor shall ensure the safe disposal of all wastes and will only dispose of any such construction waste in approved dumping sites.

1.19 Contractor shall prepare design and submit shop drawings for approval, wherever required as per the detail /typical detail provided and detailed layout drawings for all related civil & electrical services, duly supported with design as required by engineer in charge.

1.20 The work shall be carried out in accordance with the architectural drawings and structural drawings, to be issued from time to time by the Engineer-in-charge. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work and satisfy himself that the information available thereof is complete and unambiguous.

1.21 The contractor shall leave recesses, holes openings etc. as may be required for the electric, air-conditioning, lift, fire fighting and other related works (for which inserts, sleeves, brackets,

conduits base pinion, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work & brick work, if required and nothing extra shall be payable on this account.

1.22 In case of existing services (sewer line, water supply line etc.) at the site, removal/ shifting of the same will be done by contractor/ agency and payment will be done accordingly.

1.23 OFFICE INFRASTRUCTURE.:

The Agency shall construct site office (semi-permanent structure) for CPWD officers and staff, which should be equipped with all necessary equipments required for functioning the office work.

MATERIAL AND QUALITY ASSURANCE

1. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.

2. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.

3. The contractor shall submit shop drawings of staging and shuttering arrangement, aluminum & glazing work, fire doors and fittings, plumbing work and other works as desired by Engineer In Charge for his approval before execution. The contractor shall also submit bar bending schedule for approval of Engineer-in- charge before execution.

4. Frequency and type of tests of various Materials/items/ article shall be conducted as per specifications and relevant BIS-Codes. The test results confirm to the specification/codes.

Test Laboratories:

A) Laboratory at site: Please refer Table 1

B) Other Laboratories:

B1 The contractor shall arrange carrying out all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including charges for testing for all materials except cement for which separate condition is provided in tender document.

B2 All expenditure to be incurred for testing of samples e.g., packaging, sealing, transportation, loading, unloading etc. including testing charges shall be borne by the contractor.

C) Sampling of Materials*:*

C1 Sample of building materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.

C= I= O=	Nil	AE(P)(C)	EE(C)

C2 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.

C3 BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done.

C4 The contractor shall procure all the materials in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.

C5 All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.

C6 The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.

C7 The Stone aggregate/stone, sand shall be brought from any quarries subjected to the said materials confirm CPWD specifications.

5 The day to day receipt and issue accounts of different grade/brand of cement shall be maintained separately in the standard Performa by the Jr. Engineer/Assistant Engineer -in-Charge of work and which shall be duly signed by the contractor or his authorized representative.

6 The contractor shall render all help and assistance in documenting the total sequence of this project by way of photography, slides, audio-video recording etc. Nothing extra shall be payable to the contractor on this account. However, cost of photographs, slides, audio/videography etc. shall be borne by the department.

7 The contractor shall be fully responsible for the safe custody of materials brought by him or issued to him even though the materials are under double lock key system.

8 Separate cement registers showing the receipt of the OPC and PPC shall be maintained at site. The contractor shall construct separate godowns for storage of OPC & PPC at site and nothing extra on this account shall be payable.

9 Cement issued shall be for consumption at site only. No cement for factory made items and those not manufactured at site shall be issued.

10 In case there is any discrepancy in frequency of testing as given in the list of mandatory test and that in the individual sub-head of work as per CPWD specification 2019 Vol. 1 & 2 the higher of the two frequencies of testing shall be adopted.

11 Regarding testing of electrical materials, the testing of material shall be conducted in Govt. Laboratory/ Govt. colleges/ IITs, NIT or from the laboratory approved by the competent authority. The charges of testing of materials in approved laboratory shall be borne by the agency.

12 Agency shall submit minimum “Quality assurance” Plan within 45 days after award of work which shall be consisting of:

C= I= O=	Nil	AE(P)(C)	EE(C)

Lot size, number of required tests and frequency of testing, while deciding these criteria CPWD specifications and provisions of BIS code and Standard Practices may be referred. Volume of work, practical, difficulties and site conditions etc. maybe also be kept in view. The lot size, number of tests and frequencies of testing can be altered or modified by the Engineer-in-charge from the prescribed limits.

D) Maintenance of Registers*:*

(i) All the register of tests to be carried out at construction site or in outside laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge in the same manner as being issued to CPWD field staff.

(ii) The test registers to be issued to the contractor are:

a) Materials at site account register.
b) Cement register.
c) Master test registers.
d) Cube test register.
e) Paint register.
f) Inspection registers.
g) Drawing register.

(iii) All the entries in the register will be made by the designated engineering staff of the contractor and same should be regularly reviewed by JE/AE/EE.

(iv) Contractor shall be responsible for safe custody of all the test registers.

(v) Submission of copy of all test registers, material at site register along with each alternate running account bill and final bill shall be mandatory. These registers should be duly checked by AE(P) in division office.

(vi) All Material received at site shall be entered in MAS Register and copy of supply order, MTC and bill-invoice(self-attested by the agency)shall be maintained in order. The MAS registers shall be maintained by a qualified staff of agency which may be inspected by Engineer- in-charge or his/her designee at any time. The daily report of receipt of material shall be sent to Engineer-in- charge or his/her designee.

(vii) All the registers of tests carried out at Construction site or in outside laboratories shall be maintained by the agency. Which may be inspected by Engineer-in- charge of his/her designee at any point of time.

(viii) **THIRD PARTY QUALITY ASSURANCE (TPQA):-**In order to achieve a high standard of quality, it shall be required to go for Third Party Quality Assurance. For this purpose, a separate agency shall be appointed by the department/Client who will carry out independent testing of materials and checking and ensuring overall quality procedures. The contractor shall be required to fully cooperate with agency and facilitate them in taking samples, transportation and examination of various activities including documentation at no extra time and cost to the owner. In case of any adverse findings by the agency, the contractor shall do the needful rectifications at no extra time and cost to the department. The Engineer-in-charge shall be at liberty for getting quality assurance work done through agencies like IIT/NIT or any other agency approved agency by the competent authority of the department. The successful tenderer shall include the provisions of Quality Assurance while framing the proposed methodology for tests. All arrangements for transporting and getting them tested shall be made by the agency.

C= I= O=	Nil	AE(P)(C)	EE(C)

ADDITIONAL CONDITIONS FOR CEMENT

1. The contractor shall procure Portland Pozzolana Cement conforming to IS: 1489 (Part-I) as required in the work, from reputed manufacturers of cement, as per make list attached with the tender. The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer, fully or partially.

   Supply of cement shall be made in 50 kg. Bags bearing manufacturer's name and ISI marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of the relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not confirm to the relevant BIS code the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so.

2. The cement shall be brought at site in bulk supply of approximately 5 tonnes or as decided by the Engineer-in-Charge.

   The cement godown of the adequate capacity shall be constructed by the contractor at site of work for which no extra payment shall be made.

3. Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer-in-charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.

4. The cement shall be got tested by the Engineer-in-Charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to test laboratories. The testing charges shall be borne by the contractor.

5. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate show prescribed shall be made. In case of excess consumption, no adjustment needs to made.

6. The cement brought to site and the cement remaining unused after completion of the work shall not be removed from site without the written permission of the Engineer-in-Charge.

7. The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-in-Charge. If he does not do show within three days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor.

8. The contractor may use OPC in place of PPC only after written permission of Engineer-in-Charge. In such case, no extra payment shall be made in any form to the contractor by the Department.

C=
I=
O= } Nil AE(P)(C) EE(C)

ADDITIONAL CONDITIONS FOR STEEL REINFORCEMENT

1. The Contractor shall procure **corrosion resistant steel bars** (Low Alloy Steel) of various grades from the Steel Manufacturers mentioned in preferred make list for civil works or their authorized dealers/ authorized distributors/channel partners.

   1.1 For reinforced cement concrete, the reinforcement bars shall consist of the grades as specified in the GFC drawings conforming to IS 1786 : 2008 (Indian Standard specification for high strength deformed steel bars and wires for concrete reinforcement) as per amendment 3, para 4.2 note 3(Indian standard specification for high strength deformed steel bars and wires for concrete reinforcement) as presently applicable and any further amendments issued during & upto the period of execution/completion. The primary producers of such Low Alloy Steel reinforcement TMT/CRS bars shall be as per approved list given in the "Preferred makes of the materials" incorporated in this tender document.

   1.2 The contractor shall obtain manufacturer's certificate stating the process of manufacture, chemical composition and test sheet giving result of each mechanical test applicable to the material purchased and submit it to the Engineer-in-Charge. Each test certificate shall indicate the number of the cast to which it applies, corresponding to the number or identification mark to be found on the material.

2. The contractor shall have to obtain vouchers and furnish test certificates to the Engineer-in-charge in respect of all supplies of steel brought by him to the site of work.

3. Samples shall also be taken and got tested by the Engineer-in-charge as per the provisions in this regard in the relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para 1.1 and 1.2 above, the same shall stand rejected and it shall be removed from the site of work by the contractor at his cost within a week time of written orders from the Engineer-in-charge to do so.

4. The steel reinforcement shall be brought to the site in bulk supply of 5 tonnes or more or as directed by the Engineer-in-charge.

5. The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent distortion & corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.

6. For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

Size of bar	**For consignment below 100 tonnes**	**For consignment over 100 tonnes**
Under 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16 mm dia bars	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16 mm dia bars	One sample for each 45 tonnes or part thereof	One sample for each 50tonnes or part thereof

C=
I=
O= } Nil AE(P)(C) EE(C)

7. The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor.

8. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in the contract or as directed by the Engineer-in-charge. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by the conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.

9. The steel brought to the site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.

10. Steel bars brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use. The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of the test shall be borne by the contractor.

11. If the quantity of steel actually used in the work is found to be more than the theoretical quantity of steel including authorized variation, nothing extra shall be payable to the contractor on this account. In the event of it being discovered that after the completion of the work the quantity of steel used is less than the quantity ascertained as herein before provided (allowing variation on the minus side as stipulated in clause 38). The cost of quantity of steel so less used shall be recovered from the contractor at rate as specified in schedule 'F'. Decision of the Engineer-in-Charge in regard to theoretical quantity of steel which should have been actually used and recovery of the rate specified shall be final and binding on the contractor.

    If the derived actual weight is found more than the standard weight then the standard weight as worked out in para 10 above shall be taken for payment. In such case nothing extra shall be paid for the difference between the derived actual weight and the standard weight.

12. In case the contractor brings surplus quantity of steel the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Engineer-in-Charge.

13. Reinforcement including authorized spacer bars and lappages shall be measured in length of different diameters, as actually (not more than as specified in the drawing) used in the work, nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.

14. The standard sectional weights referred to as in Table 5.4 under para 5.3.4 in CPWD specifications for works 2019 Vol. 1 will be considered for conversion of length of various sizes of MS bars, Tor steel bars and TMT/CRS bars into standard weight.

15. Records of actual sectional weight shall also be kept dia-wise & lot-wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer-in-Charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by

C= I= O=	Nil	AE(P)(C)	EE(C)

conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as derived actual weight.

16. Mixing of different type of steel/different grades of steel shall not be allowed in the same structural members as main reinforcement to satisfy clause 26.1 of IS:456.

17. Tolerances on Nominal Mass (individual sample) shall be as under:-

Sl. No.	Nominal size mm	Tolerances on the Nominal Mass, percentage
1	Upto and including 10	-8%
2	Over 10 upto& including 16	-6%
3	Over 16	-4%

As a matter of policy only BAR SET-1 (Low Alloy Steel) are to be used for the work. If, BAR SET-1 (Low alloy steel) are not available/ or have delayed delivery in few instances, considering the practical situation and to take care of such instances, the Engineer-in-Charge may allow use of TMT bars of various grades as specified in the NIT from the list of approved makes, given elsewhere in the NIT.

Necessary cost adjustment for not using BAR SET-1 (Low Alloy Steel) shall be made, based on the actual invoices given by the contractor/ prevailing market rates. The decision of Engineer-in-Charge with respect to any such recovery shall be final and binding on the contractor (Annexure A, Page- 100 to 110).

Annexure - A

भारतसरकार
केंद्रीय लोकनिर्माणविभाग
तकनीकीअनुप्रयोग एवंमानक एकाई
कमरा सं0 418 ए–विंग, निर्माणभवन, नईदिल्ली।
टैलीफैक्स–011–23062339 ईमेल–delsetascsq.cpwd@nic.in

E-9156762

No. CSQ/SE(TAS)/Steel/2024/ 262-ED Dated: 14/08/2024

OFFICE MEMORANDUM

Subject:- Guidelines for use of TMT steel /Low Alloy Steel reinforcement Bars in CPWD worksand enlistment of the steel manufactures in respect of TMT steel /Low Alloy Steel reinforcement Bars in CPWD.

1. The Ministry of Steel, through notification dated 12.05.2016 and order dated 9.8.2016, abolished classification of steel producers as Integrated steel producers, primary steel producers, secondary steel producers, main producers, major producers or others as well as on the basis of process route of steel manufacturing in India.
2. The Ministry of Steel, vide Circular No. 4(13)/2016-SD(I) dated 14.12.2016, reiterated their Notification dated 12.05.2016. They further issued an order dated
09.08.2016, asking the users to ascertain the quality of the steel products, to be procured, as per relevant BIS standards.
3. Para 27.2 of Works Manual 2014 was modified through OM No. DG/MAN/382 dated 06.02.2019. In this OM, under the heading "Special Condition of Steel reinforcement bars", eligibility criteria and other technical parameters were set for steel manufactures. In the eligibility criteria, incorporation details of the company, various licences, certifications, in house testing facility at plant, and refining technologies used for manufacturing of steel and TMT bars (like BF-BOF route, COREX-BOF Route, DRI-EAF route) were cited. Those manufacturers, who met the aforesaid eligibility criteria, could be included in the preferred make list of Notice Inviting Tenders (NITs) of CPWD works.
4. However, CPWD Works Manual 2014 was replaced by CPWD Works Manual 2019 and came into force with effect from 07.03.2019. In CPWD Works manual 2019, para 4.10.1 deals with use of steel and cement in works and states that "*Special conditions shall be incorporated by the NIT approving authority keeping in view the guidelines issued by the Directorate from time to time in this regard which are available on CPWD website*".
5. Since no Criteria /guidelines were available for approval of TMT bars manufacturer after release of the CPWD works manual 2019, an Office Memorandum No. CE(CSQ /SE(TAS) /EE(TAD) /Steel/ 2019/ 497-H dated 27.12.2019 was issued. This OM specified that (i) only ISI marked TMT bars of various grades shall be procured for use in CPWD works, (ii) SDG/ADG shall approve the steel manufacturers based on eligibility criteria and other technical parameters as per OM No. DG/MAN/382 dated 06.02.2019
6. The OM 497-H dated 27.12.2019 was withdrawn and modified guidelines for use of reinforcement bars in structures was issued vide OM No. 50-H dated 17.02.2021. The use of corrosion resistant steel (CRS) reinforcement bars in structures was also mandated vide OM No. 50-H dated 17.02.2021. Further,

contd..(2)

C=
I= } Nil AE(P)(C) EE(C)
O=

clarification regarding corrosion resistant steel was issued vide OM No. 257-H dated 23.06.2022.

7. The single bench of Hon'ble High Court at Calcutta in the case of SRMB Srijan Private Limited & others V/s Union Of India & Others (W.P.A 9990 of 2020) SRMB Srijan Private Limited & others Vs. Union of India & others With (W.P.A 24267 of 2019) has quashed the modified Clause 27.2 of the CPWD Works Manual of 2014,para 4.10.1 of the CPWD Works Manual of 2019, and consequential Memorandums issued by the CPWD and directed to implement the Notification of the Ministry of Steel, Government of India dated May 12, 2016, the Order dated August 9, 2016 and the reminders of the said Ministry dated December 14, 2016 and February 7, 2017.
8. Subsequently an appeal was filed in Division Bench (DB) of Hon'ble High court at Calcutta by CPWD. In the said case, Hon'ble High court at Calcutta, passed the judgment dated 15.04.2024. The operative part of this judgement reads as "*Accordingly we find no grounds to interfere with the order passed by the Learned single bench except with regard to the direction issued in paragraph 53 of the impugned order whereby the modified clause 27.2 of the CPWD Works Manual has been quashed and instead of quashing the said modified clause 27.2 we direct the CPWD to appropriately amend their Works Manual to be in consonance with the notification issued by the Ministry of Steel, Govt. of India as done by the notifications referred to above.*"
9. In compliance of the above directions of the Hon'ble High Court at Calcutta, an Expert Committee was constituted by DG CPWD vide OM No. CSQ/SE(TAS)/EE(TAD)/Steel/2024/190-H dated 10.06.2024 for deciding the criteria for the selection of steel manufacturers for CPWD works. The expert committee has conveyed their final recommendation {enclosed as annexure I(d)} vide Minutes of Meeting dated 24th July 2024 and the same has been accepted by DG, CPWD. The brief of these recommendations are as follows:

Steel Bars shall be classified as:

a) Bar Set I, if it complies with the requirements given in the latest version of IS 1786, and additional requirement (e.g. Chemical Composition Requirement for Manganese and Copper, Tempered Martensite (TM) Ring Requirement, Marking Requirement and compliance of the provisions of ISO 9001:2015 and ISO 14001:2004) mentioned in the recommendations.

And

(b) Bar Set II, if it complies with the requirements given in the latest version of IS 1786.

The committee has also recommended use of above mentioned Steel Bar sets considering the importance of quality in construction of public structures in different projects of CPWD, on the basis of (a) earth quake zones, (b) environment conditions (coastline and exposure condition), (c) Structure category, and (d) heights of buildings and structures.

C=
I= } Nil AE(P)(C) EE(C)
O=

10. Accordingly, it is decided that the reinforcement steel bars produced by plants of SAIL, RINL, TATA, JSW & JSPL which are in wider use in CPWD may be continued to be used as preferred make in the NIT in respect of Bar Set-I mentioned in para no. 9 above and Annexure-1(c). Further, it has also been decided that DG, CPWD may enlist more manufacturer plants for TMT steel/Low Alloy Steel reinforcement Bars on the basis of selection criteria recommended by the Expert Committee. These enlisted manufacturers plants for particular bar set may also be considered for stipulation as preferred make in the NIT depending upon their use.
11. The procedure for enlistment of the steel manufactures in respect of TMT steel /Low Alloy Steel reinforcement Bars in CPWD works is also enclosed herewith as Annexure-I and I (a) to I (f)

This issues with the approval of DG, CPWD.

Encl: As above

(Dinesh Kumar Ujjainia)
Superintending Engineer (TAS)

Copy to (Through CPWD Website):

The SDG (Chennai) / SDG (Chandigarh) / SDG (Kolkata) / SDG (Mumbai) for information please.

C=
I= } Nil AE(P)(C) EE(C)
O=

Annexure- I(c)

Testing requirement for individual reinforcement bar diameter of Particular Grade of steel:

Tests required for Fe 415D, Fe500D, Fe550D grade of steel and Low alloy steel reinforcement bars:

A. **FOR BAR SET- I**

1. Tests as per IS 1786 (latest version) and specified therein

1.1 Chemical Properties

Ladle analysis of steel for above grades for maximum percentage of constituents

i. Carbon (C), (ii) Sulphur (S) and (iii)Phosphorous (P) and (iv) Nitrogen and Carbon Equivalent

1.2 Physical Properties

(i) 0.2 percent proof stress / yield stress, minimum, N/mm2.

(ii) Ratio of Tensile Strength (Ts) to Actual Yield Strength (or 0.2 % of yield stress (Ys)) of the test piece N/mm2.

(iii) Elongation, percent, Minimum, on gauge length $5.65\sqrt{A}$, where *A* is the cross-sectional area of the test piece.

(iv) Total elongation at maximum force, percentage, minimum on gauge length $5.65\sqrt{A}$, where A is the cross-sectional area of the test piece.

(v) Bend test and re-bend test.

(vi) The mean area of ribs (in mm2) per unit length (in mm) above the coreof the bar, projected on a plane normal to the axisof the bar.

(vii) Pull-out testing in accordance with IS 2770 (Part 1)

2. **Additional requirement**

2.1 Permissible limit for Manganese and Copper as follows:

Constituent	Permissible Limit (% of cast metal quantity)		
	Fe 415 D	Fe 500 D	Fe 550 D
Manganese (Mn)			
Maximum	1.60	1.60	1.60
Copper (Cu)			
Maximum	0.80	0.80	0.80
Minimum	0.20	0.20	0.20

Notes:

The above composition shall be obtained as per latest version of IS 228

1. Manganese using Periodate Spectrophotometric Method **(Part 12)**, and
2. Copper using Thiosulphate Iodide Method (**Part 15**) or Spectrophotometric (Diethyl Dithiocarbonate) Method **(Part 21)**

2.2 Tempered Martensite Ring Test as per Annexure-I (d).

2.3 The process of manufacturing steel shall comply with the provisions of ISO9001: 2015 and ISO14001: 2004.

(B)FOR BAR SET-II

1. The test requirements given in para 1.1 and 1.2 above.

Annexure-I(d)

1. CRITERIA FOR CLASSIFICATION OF BARS

The steel bars manufactured in India shall be classified as specified hereunder for the purposes of their use in works of CPWD.

1.1 Process of Classification

Steel Bars shall be classified as *Bar Set I* and *Bar Set II*. The bars shall be placed under one of these categories based on *Type Test* (the test performed to select the bars) performed as specified hereunder. These tests to be performed are those specified in the latest version of **IS 1786** published by the Bureau of Indian Standards, and the additional tests mentioned in Para **2** of this document.

The *Type Test* shall be performed at any one of the National Test Houses, IITs, NITs, and NCCBM, subject to:

(a)The test samples being collected from the manufacturing facility by the representative engineer of CPWD,

(b) The availability of the required test facility at the said laboratory, and

(c) The test being witnessed by representative engineer of CPWD.

1.2 Classification of Steel Bars

The bar shall be classified as:

(1) *Bar Set I*, if it complies with the requirements given in the latest version of **IS: 1786**, and those given in Para **2** of this document, and

(2) *Bar Set II*, if it complies with the requirements given in the latest version of **IS 1786**.

2. ADDITIONAL REQUIREMENTS

Four additional requirements as specified hereunder.

2.1 Chemical Composition Requirement

The permissible limits of additional elements shall be as per **Table 1**.

Table 1: Permissible limits of additional elements

Constituent	Permissible Limit (% of cast metal quantity)		
	Fe 415 D	Fe 500 D	Fe 550 D
Manganese (Mn)			
Maximum	1.60	1.60	1.60
Copper (Cu)			
Maximum	0.80	0.80	0.80
Minimum	0.20	0.20	0.20

Notes:

The above composition shall be obtained as per latest version of **IS 228**:

(1) Manganese using Periodate Spectrophotometric Method (**Part 12**), and

(2) Copper using Thiosulphate Iodide Method (**Part 15**) or Spectrophotometric (Diethyl Dithiocarbonate) Method (**Part 21**).

2.2 TM Ring Requirement

The following two requirements shall be met with:

(1) Does the *Tempered Martensite(TM) Ring* satisfy the visual analysis as per **Step 1** of **Table 2**; and

(2) The thickness of the TM Ring obtained as per **Step 2** of **Table 2** shall be between 0.07f and 0.15f, where f is the *original nominal diameter* of the bar.

(a) Test Procedure

The following is the procedure:

(1) The test setup to capture the *Cross-Sectional Phase Distribution (CSPD)* of the TMT bars shall be as shown in **Figure 1**.

(2) Steel bars may be cut using handsaw or an abrasive cutter with continuous supply of coolant to limit the temperature of steel, and thereby avoid any transition or changes in *Tempered Martensite(TM)* and *Ferrite-Pearlite (FP)* phases (**Figure 2**). The sharp edges of cut bars should be smoothened using

silicon carbide abrasive sheets. A metal polishing machine can be used to achieve effective smoothening.

(3) The smoothened steel specimen shall be moulded in cold setting epoxy with good surface finish. Setting time of epoxy is about 10-15 minutes.

(4) The moulded specimen surface shall be course polished using abrasive sheets of 80, 150, 220, 320, and 600 grit sizes in sequence. Specimens shall be micro-etched using Nital (5% Nitric acid in alcohol) to capture the CSPD.

(b) Measurements

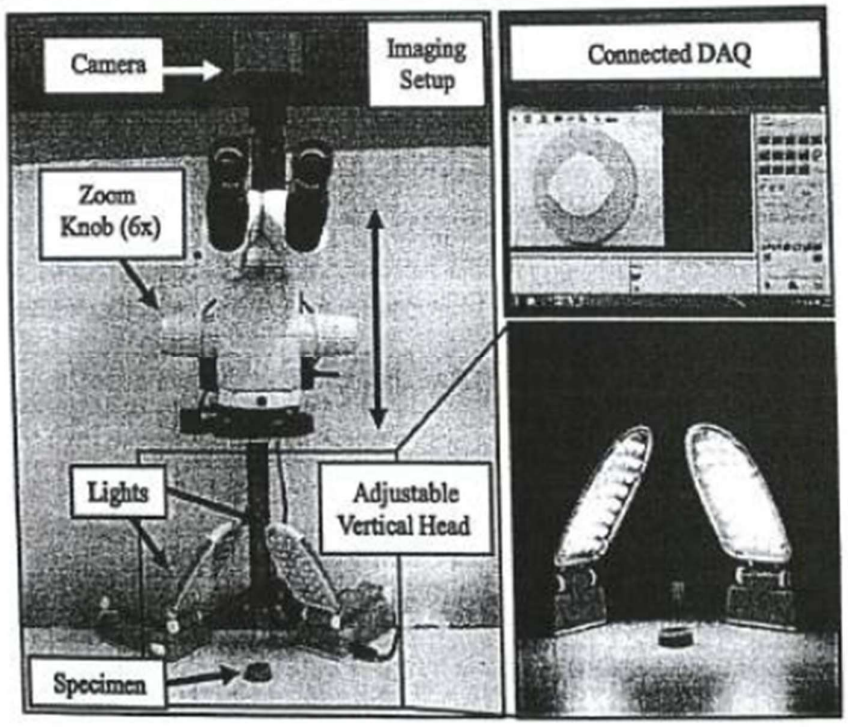
The procedure for obtaining the *CSPD* of the TM Ring along the perimeter shall be as per **Table 2**.

2.3 Marking Requirement

All bars shall have marks introduced during rolling, which indicate the *name of manufacturer* or *brand name*, and *grade of steel*.

2.4 Manufacturing Process Requirement

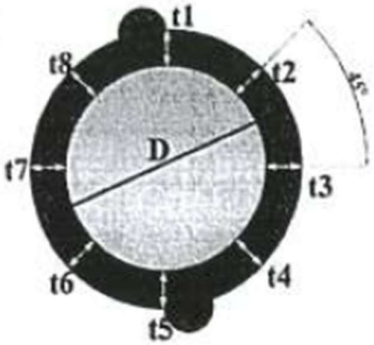
The process of manufacturing steel shall comply with the provisions of ISO 9001:2015 and ISO 14001:2004.



(a)

I= NII AE(P)(C) EE(C)
O= ∫

Table 2: Method of obtaining CSPD of TM Ring

Step 1: Visual Analysis of etched Cross-Section				
	A	B	C	D
	Acceptable	*Not acceptable*	*Not acceptable*	*Not acceptable*
1.	Is a dark grey peripheral region and light grey core seen as in Case A?			Yes/No
2.	Does the dark grey peripheral region form a continuous outer ring?			Yes/No
Step 2: Dimension Analysis of TM-Ring thickness				
3.	Diameter D*(mm)* of the steel bar			
4.	**Geometry** 		t_1	
			t_2	
			t_3	
			t_4	
			t_5	
			t_6	
			t_7	
			t_8	
			Measured t_{min} *(mm)*	
			Measured t_{max} *(mm)*	
5.	Is the measured $t_{min} \geq 0.07$ f ?		Yes / No	
	Is the measured $t_{max} < 0.15$ f ?		Yes / No	

C=
I=
O=

Nil

AE(P)(C)

EE(C)

3. GUIDELINES FOR USE OF STEEL BARS IN DIFFERENT PROJECTS

Considering the importance of quality in construction of public structures, the basis for use of bars in different projects of CPWD shall be as given in **Table 3**.

Table 3: Use of *Bar Sets I* and *II* in CPWD Projects

S.No.	Consideration	Bar Set I	Bar Set II
1.	**Earthquake Zones**	All zones	Only *Earthquake Zone II*
2.	**Environment Conditions**		
	(a) Coastline	All conditions	Beyond *10 km* from the coastline of India
	(b) Exposure Conditions	All exposure conditions as per **IS 456** (latest version)	Only *Mild* and *Moderate* Exposure Conditions as per **IS 456** (latest version)
3.	**Structure Category**	All categories	*OnlyNormal Buildings* as per **Table 4** and standalone *Normal Structures* as per **Table 5**.
4.	**Heights of Buildings and Structures**	All heights	Only structures up to 12 m height excluding *staircase headroom* and *liftmachine rooms*

Table 4: List of *Normal Buildings*

Residential or Non-Residential Buildings with occupancy less than 100 persons, *excluding*:

(1) Educational buildings,
(2) Buildings of strategic importance,
(3) Buildings and structures identified by Government of India and State Governments to be critical for governance or Disaster Management,
(4) Hospital buildings,
(5) Buildings that house the control or operations of utilities (for example, water, power, and sewage disposal), and lifeline (for example, communication and transportation facilities) structures,
(6) Buildings related to defense and space applications,
(7) Buildings identified by Government of India, State Governments and UT Administrations to be of *Special Importance*, and
(8) Any other building identified with the approval of DG, CPWD.

C=
I=
O=

Nil AE(P)(C) EE(C)

Table:5 List of Standalone Normal Structures

Water Tanks and Water Sumps up to 50,000 liters, and Pump Rooms of area less than 20 m2
Septic Tanks, Sewage Treatment Plants, and Effluent Treatment Plants up to 10,000 liters/day
Bridges and Culverts of spans up to 6 m
Earth Retaining Structures up to 4 m
Compound Walls, Entry Gates, and Small Reception Rooms
Storm Water Drains
Cable Trenches
Parking Structures of single storey
Security Cabins and Sentry Post
Any other structure identified with the approval of Technical Sanctioning Authority of CPWD

C=
I=
O=
} Nil AE(P)(C) EE(C)

ADDITIONAL CONDITIONS FOR REINFORCED CEMENT CONCRETE

1.0 RCC WORK:

The work shall be done as per CPWD specifications.

2.0 DESIGN MIX CONCRETE:

The contractor shall be required to submit two separate design mix of concrete with and without using admixture/plasticizers, separately. The decision of the engineer-in-charge to specify the design mix of concrete based on above shall be final.

2.1.1 Admixtures shall not be used without approval of Engineer-in-charge. Wherever required, admixtures of approved quality shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The contractor shall not be paid anything extra for admixture required for achieving desired workability without any change in specified water cement ratio for RCC/CC work.

2.1.2 The concrete mix design/laboratory tests with and without admixture shall be got done by contractor at his own cost and will be carried out by the contractor through one of the following laboratory/Test houses:

(i) IIT(BHU) Varanasi, MNNIT Allahabad, IIT Kanpur.

(ii) Approved Lab/Govt. Engineering Institutions as directed by the Engineer-in-charge.

The various ingredients for mix design / laboratory tests shall be sent to the test houses through the Engineer-in-Charge and the samples of such aggregate & cement shall be preserved at site by the department.

2.1.3 The contractor shall submit the mix design report from any of above approved laboratory for approval of Engineer-in-Charge within 30 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the mix design is approved by the Engineer-in-charge.

2.1.4 In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the Engineer-in-Charge.

2.2 APPROVAL OF DESIGN MIX

The mix design for a specified grade of concrete shall be done for a target mean compressive strength Tck=Fck+1.65 s.

Where Fck = Characteristic compressive strength of 28 days

s = Standard deviation which depends on degree of quality control

The degree of quality control for this work is “good” for which the standard deviation (s) obtained for different grades of concrete shall be as below:

Grade of Concrete	For “Good” quality of control
M 25	4.00
M 30	5.00
M 35	5.00
M 40	5.00

C=
I=
O= } Nil AE(P)(C) EE(C)

Of the six specimen of each set three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days

2.3 All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the contractor.

2.4 The batching plant shall conform to IS: 4925. It shall have the facilities of presetting the quantity to be weighed with automatic cutoff when the same is achieved. Concreting at places may have to be resorted to through concrete pump for which nothing extra shall be paid.

2.5 WORK STRENGTH TEST

The collection of test specimen, testing and standards of acceptance shall be in accordance with IS:456/CPWD Specifications.

3.0 PRE-CAST RCC WORK

3.1 Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks, flats etc. And forming of notches and holes. Each unit shall be cast in one operation. A sample of the unit shall be got approved from Engineer-in-Charge before taking up the work.

3.2 Pre-cast units shall be clearly marked to indicate the top of member and its locations.

3.3 Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.

4.0 WATER PROOFING TREATMENT

4.1 The contractor shall associate himself with the specialized firm, to be approved by the Engineer-in-charge in writing, for water proofing treatment for basement/lower ground floor, underground tank and on roofs. Guarantee in the prescribed proforma attached with tender document shall be given by the specialized firm, for a period of 10 years from the date after the maintenance period prescribed in the contract, which shall be counter signed by the contractor as token of overall responsibility. In addition, 10% (ten percent) of the cost of water proofing items shall be retained as guarantee to watch the performance of the work done. However, half of this retained amount will be released after five years, if the performance of the work done is found satisfactory. If however any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of intimation. In case it is not attended to, the same will be got done by another agency at the risk and cost of the contractor. This guarantee deposit can however be released in full if a bank guarantee of equivalent amount for 10 years is produced and deposited with the department by the contractor.

1. SPECIAL CONDITIONS FOR GREEN BUILDING

1.1 Pre-construction Stage

1. Construction Vehicles, Equipment and Machinery

(i) All vehicles, equipment and machinery to be procured for construction shall conform to the relevant Bureau of India Standard (BIS) norms.

(ii) Emission from the vehicles must conform to environmental norms.

(iii) Dust produced from the vehicular movement and other site activities is to be mitigated by sprinkling of water.

(iv) Noise limits for construction equipment's shall not exceed 75 dB(A), measured at one meter from the edge of the equipment in free area, as specified in the Environment Protection Act,1986, schedule VI part E, as amended on 9th May,1993. The maximum noise levels near the construction site should be limited to 65 dB (A) Leq (5 min) in project area.

2.2 Construction Stage

Construction Wastes Disposal

(i) The pre-identified dump locations will be a part of solid waste management plan to be prepared by the Contractor in consultation with Engineer -in-charge.

(ii) Contractor shall get approved the location of disposal site prior to commencement of the excavation on any section of the project location.

(iii) Contractor shall ensure that any spoils of material will not be disposed off in any municipality solid waste collection bins.

2.3 Procurement of Construction Materials

(i) All vehicles delivering construction materials to the site shall be covered to avoid spillage of materials and maintain cleanliness of the roads.

(ii) Wheel Tyres of all vehicles used by of the contractor, or any of his sub contractor or materials supplies shall be cleaned and washed clear of all dust/mud before leaving the project premises. This shall be done by routing the vehicles through tyre washing tracks.

C= I= O=	Nil	AE(P)(C)	EE(C)

(iii) Contractor shall arrange for regular water sprinkling at least twice a day (i.e. morning and evening) for dust suppression of the construction sites and unpaved roads used by his construction vehicles.

2.4 Water Pollution

(i) The Contractor shall take all precautionary measures to prevent the wastewater during construction to accumulate anywhere.

(ii) The wastewater arising from the project is to be disposed off in the manner that is acceptable to the Engineer -in-charge.

2.5 Air and Noise Pollution

Contractor shall use dust screens and sprinkle water around the construction site to arrest spreading of dust in the air and surrounding areas.

(i) Contractor shall ensure that all vehicles, equipment and machinery used for construction are regularly maintained and confirm that emission levels comply with environmental emission standards/norms.

(ii) For controlling the noise from Vehicles, Plants and Equipment's, the Contractor shall confirm the following:

(iii) All vehicles and equipment used in construction will be fitted with exhaust silencers.

(iv) Servicing of all construction vehicles and machinery will be done regularly and during routine servicing operations, the effectiveness of exhaust silencers will be checked and if found defective will be replaced.

(v) Noise emission from compactors (rollers) front loaders, concrete mixers, cranes (movable), vibrators and saws should be less than 75 dB(A).

(vi) As per the standards/guidelines forcontrol of Noise Pollution from Stationary Diesel Generator (DG) sets, noise emission i n dB(A) from DG Set (15-500 KVA) should be less than 94+10 log 10 (KVA). The standards also suggest construction of acoustic enclosure around the DG Set and provision of proper exhaust muffler with insertion loss of minimum 25 dB(A) as mandatory.

C=
I= } Nil AE(P)(C) EE(C)
O=

LIST OF ACCEPTABLE MATERIALS

Note:

1. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material or engaging any of the specialized agencies. The Contractor shall make a detailed submittal with catalogues and highlighted proposed specifications, as well as full details of the works proposed to be executed by the specialized agency, as specified.

2. Wherever applicable, the Engineer-in-charge may approve any material equivalent to that specified in the tender subject to proof being offered by the Contractor for equivalence to his satisfaction.

3. Unless otherwise specified, the brand / make of the material as specified in the item nomenclature, in the particular specifications and in the list of approved materials attached in the tender, shall be used in the work.

C=
I=
O= } Nil AE(P)(C) EE(C)

LIST OF PREFERRED MAKES OF MATERIALS (CIVIL WORKS)

1. Preferred makes of materials to be used in the work is given below and Contractor shall procure the material mentioned in the list from any one of the preferred makes only. The Engineer in charge reserves the right to select any of the makes/brands indicated in the list of approved brand/make or approve an equivalent make/brand exclusive of the list. The tenderers shall quote his rates on the basis of the price for the best quality product of the brand/make stipulated for the item of work in the schedule of quantity/specification/list of preferred brand/ make. In case of non-availability of these makes or any other valid reason, the Engineer-in-charge may allow use of alternative BIS marked materials/makes in the work. Non-BIS marked materials may be permitted by the Engineer-in-charge only when BIS marked materials are not manufactured.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material or engaging any of the specialized agencies. The Contractor shall make a detailed submittal with catalogues and highlighted proposed specifications, as well as full details of the works proposed to be executed by the specialized agency, as specified.
3. Wherever applicable, the Engineer-in-charge may approve any material equivalent to that specified in the tender subject to proof being offered by the Contractor for equivalence to his satisfaction
4. Unless otherwise specified, the brand / make of the material as specified in the item nomenclature, in the particular specifications and in the list of approved materials attached in the tender, shall be used in the work.

Sl. No.	Material description	Approved Manufacturer / Brand Name
	RCC Work	
1	Ordinary Portland Cement/ Portland Pozzolana Cement	ACC, Ultratech, Ambuja Cement, J.K. Cement
2	White Cement	Birla White, J.K. White
3	Reinforcement Steel	SAIL, Tata Steel Ltd, RINL, JSW Steel Ltd.
4	Admixtures, Plasticizer, Super Plasticizer, Curing Compounds	Fosroc, CICO, Sika, BASF, Ardex Endura
5	Modular Expansion Joint	Herculus, Sanfield India Ltd. Vexcolt, MNR, CS
6	Ready Mix Concrete (RMC)	Ultratech, RMC Ready Mix (India)
	Structural Steel Work	
7	Structural Steel	SAIL, Tata Steel, Rashtriya Ispat Nigam Ltd. (RINL), JSW Steel Ltd. and Jindal Steel & Power Ltd.
8	M.S. tubular windows	Jangid Engineering, AGFUV, SEN HARVIC, NAVAIR Delhi, SUKRITI Delhi, Chandni industries, or as approved by E-I-C.
9	Pressed steel door frame	Bhawani fire Ghaziabad (UP) any other manufacturer as approved by Engineer-in-Charge
10	GPSP Door frame & Shutters	Tata Pravesh, Shakti Hormann, Home's Guard

C=
I= } Nil AE(P)(C) EE(C)
O=

11	MS Tubular door frames	Apollo, as approved by Engineer-in-Charge
	Block Work	
12	AAC Blocks	Ultratech, HIL, BILTECH or any other ISI marked as approved by E-I-C.
13	AAC Block Adhesive	UltraTech, Ardex Endura, Ferrous Crete
	Roofing Work	
14	Profile Steel Sheet (PPGL)	Ezydec of TATA, JSW Steel Ltd., Jindal Steel & Power Ltd.
15	Sandwich Insulated Panel	Kingspan, Metecno India
16	Polycarbonate sheet	GE Plastic, LEXAN, DPI Daylighting,
	Water proofing	
17	Integral Water Proofing compound with cement (For Plaster & Mortar)	Fosroc : Conplast 421, Dr. Fixit : LW+, Sika : Sikacin, Ultratech weather Pro WP+200 Asian Paints : Smart care vitalia & equivalent product of BASF, CICO, Birla Opus
18	Water proofing for bathroom/toilet/ balcony & other wet areas	Fosroc : Brush Bond Dr. Fixit : Pidifine 2K Sika : Nito Bond Asian Paints : Damp Block 2K, MYK Arment: AquaArm Saniflex & equivalent product of BASF, CICO, Ardex Endura, Ultratech weather Pro HI-FLEX, Birla Opus C2K, C2K+
19	Crystalline water proofing compound	Fosroc : Fosroc Crystalline Dr. Fixit : Dr. Fixit Crystalline Sika : Sika Crystalline Asian Paints: Crystalline Quarty , MYK Arment: AquaArm C-35 & equivalent product of BASF
20	HDPE/SBS membrane	Fosroc, Pidilite, BASF, MYK Arment
	Flooring	
21	Ceramic Tiles (Antiskid/Matte/Glazed	Kajaria, RAK, Somany, NITCO, Johnson
22	Vitrified Tiles (Antiskid/Matt/Glazed)	Kajaria, RAK, Somany, NITCO, Johnson
23	Mosaic tiles/Chequered Tiles	Ultra Tiles, NITCO, Kajaria, Johnson
24	Grouts, Tile Adhesive	Latecrete, BASF, Roff (Pidilite), Ultratech TILEFLXO
25	Vinyl flooring	Armstrong/Forbo/Polyflor or approved equivalent make
	Wood Work	
26	Flush door shutters	Duro, Merino, Century, Durian, Green Ply (Only ISI marked flush doors shutters to be used.)
27	Particle Board	Kitply, Greenlam, Merino.

C=
I= } Nil AE(P)(C) EE(C)
O=

28	WPC (Wood Polymer Composite) board, Frame Shutter	ALSTONE, GREEN PLY, RAJSHRI, Plasto Green
29	Laminated Particle Board	Greenlam, Century Ply, Merino
30	Laminates	Greenlam, Century Ply, Merino
31	Plywood	Green Ply, Century, Merino, Duro, Durian.
32	Natural veneer	Century, Green Ply, Merino, Greenlam
33	PVC Shutter	Rajshri, M/s Jain Wood Industries , Plasto Green
34	Block Board	Jayna, Orion Doors (Modern Wudtech Industries), Archidply, Green Panel
35	FRP Doors/Panelled & Wiremesh doors	Jayna, Jain Doors Pvt. Ltd., Bhatt FRP
36	Bamboowood Panel door, Flush door, cupboard shutter	Epitome Bamboo wood products (Mutha Industries Pvt. Ltd.) or approved equivalent make
	Fire doors	
37	Fire Rated Doors	Signum Fire Protection, Shakti Hormann, NAVAIR, Promat International, TATA Pravesh
38	Fire door Accessories	Yale, AssaAbloy, Ozone, Dorma, Shakti Hormann
	False Ceiling & Wall paneling	
39	False Ceiling suspension Grid	Armstrong, Hunter Douglas, Bollard, USG Boral, Saint Gobain, Aerolite, Diamond Ceiling, Tranquil
40	False Ceiling tiles (GRG tiles, Calcium silicate tiles, Mineral fiber tiles)	Armstrong, Hunter Douglas, USG Boral, Saint Gobain, Aerolite, Diamond Ceiling, Tranquil
41	Gypsum Board	Gyproc (Saint Gobain), USG Boral,
42	Glass Wool	Dow Corning, U.P. Twiga, Isover, Tranquil
43	Acoustic Wall paneling	KNAUF (Armstrong), Anutone, Bollard, Saint Gobain, Arolite, Tranquil
44	Cement bonded wood particle board	Bison (NCL), Birla aerocon
	Aluminium/ uPVC Doors & Windows	
45	Aluminium Section	Hindalco, Jindal, Indian Aluminium Co.
46	UPVC Doors & Windows (PROFILE makers & their authorized Fabcicators only)	Fenesta, KOMERLING, Aluplast, Duroplast, Prominence, Encraft , Advika Fenster
	Hardware (Doors, Windows, Cupboard, Kitchen)	
47	Anodised Aluminium Hardware (Heavy Duty)	Kinlong, Alualpha, Classic, Ebco
48	Aluminium sliding door roller etc.	TPI, Classic or equivalent
49	Hardware for uPVC Windows	Rotto, Dorset, Kinlong, Fenesta
50	Floor Spring	Godrej, Dorma, Hafele, Geze, DORSET, KICH
51	Door Closure	Godrej, Dorma, Hafele, Geze, DORSET, KICH

C=
I= } Nil AE(P)(C) EE(C)
O=

52	Stainless steel Fittings	Jindal, Dorma, Dorset, Godrej, Ozone, KICH, ARCH
53	Dash/Anchoring Fasteners	HILTI, Fischer, Bosch, Wurth
54	SS 304 Grade Kitchen Baskets	Godrej, Ebco, Hettick
	Glass	
55	Clear/Float/Frosted/Reflective/ Coated Glass	Saint Gobain, AIS, Modiguard, Gold Plus, Sisecam Flat Glass
	Facade work	
56	Aluminium Composite Panel	Alstone, VIRGO, EUROBOUND, ALUTUFF, VIVA, REYNOARCH, ALEX, ALUTECH.
57	Aluminium High Pressure Composite Panel	VIRGO, ALUTUFF, VIVA, Timex.
58	Structural Glazing	Schueco India Pvt. Ltd./Wicona / Guttmann or approved equivalent
59	Curtain Glazing	Hindalco, Jindal, Indal
60	Patch fittings/spider fitting	Godrej Dorma, Kich, Dorset, Hafele
61	High Pressure Laminate	Virgo, Marino, Century ply, Greenlam
	Paints & Distempers	
62	Cement Based Wall Putty	Birla wall care, JK White, Berger, Asian Paints
63	Cement Primer (Interior)	Nerolac, BP White (Berger), Decoprime WT (Asian), White Primer (ICI), Birla Opus Prime I-10
64	Cement Primer (Exterior)	Nerolac Popular Primer White, Asian Paints (AP Trucare Exterior Wall Primer), Berger Weather Coat Exterior Primer, Dulux Professional Exterior, Birla Opus Prime E-10
65	Acrylic Emulsion Paint (Interior)	Asian Paints (Apcolite All Protek), Nerolac (Beauty Gold Washable), Berger (Platina Easy Clean), ICI- Dulux: (3 in 1.), Birla Opus Calista Ever Clear/I50
66	Premium Acrylic Emulsion Paints (Interior)	Asian Paints: Royale, Nerolac : Impression, Berger : Silk Glamor ICI Dulux : Velvet touch Birla Opus Prime One Pure Elegance
67	Oil Bound Washable Distemper/Dry Distemper	Asian Paints (Professional Acrylic Distemper), Nerolac : Beauty Acrylic Distemper Berger : Bison Acrylic Distemper Dulux ICI : Maxilite Birla Opus Prime D-20
68	1st Quality Acrylic Distemper (washable/Ready Mix/Low VOC)	Asian Paints (Tractor Aqua Lock Paint) Berger : Commando or equivalent paints Birla Opus Prime D-20

C=
I=
O= } Nil AE(P)(C) EE(C)

69	Premium Acrylic Smooth Exterior Paint with silicon additive	Asian Paints : Apex Ultima, Nerolac : Excel Total Berger : Weathercoat Long Life 7/ All Guard ICI-Dulux : Weathersheild Ultra Clean Birla Opus Prime E-70/True look
70	Textured Exterior Paint	Asian Paints, Nerolac, Berger Paints, ICI Dulux (Tex-matt), Ultratech Paint, Luxture Birla Opus Prime
71	Synthetic Enamel Paint	Asian (Apcolite Premium gloss enamel), Nerolac : Synthetic Hi gloss Berger : Luxol Hi gloss ICI-Dulux : Gloss Synthetic enamel Birla Opus Prime N-53/N52/ Sparkle glass/ Style Cover Max
72	Epoxy Paint	Asian Nerolac, Berger, ICI, Kansai Akzo Nobel, Birla Opus Prime
73	Fire Paint	Asian Paint, Akzo Nobel Coatings India Ltd. PROMAT, Jotun, Berger Paint, Birla Opus
74	Steel Primer (Red Oxide Zinc Chromate Primer)	Asian Paints, Nerolac, Berger, ICI, Birla Opus Prime/ NR8/ SGE RO Primer
75	Wood Primer	Asian Paints (Wood Primer- White/Pink), Berger ICI, Nerolac, Birla Opus Prime
76	Melamine Polish	Asian Paints Melamine Gold, Wudfin of Pidilite, Timbertone of ICI Dulux, Birla Opus Allwood
77	Gypsum Plaster	Ferrous Crete, Gyproc Saint Gobain, Ultratech, JK White
	Weather seals	
78	Epoxy Grouting compound	Saint Gobin-Weber, Markchem, Home Pride
79	Silicon based Structural sealant & Weather sealant	G.E. Plastics, Dow Corning, (Wacker), BASF, Pidilite (Dr. Fixit/Roff)
80	Poly-Sulphide Sealant	Fosroc, Pidilite (Dr. Fixit/Roff), Sika, BASF
	Plumbing & Drainage Works	
81	G.I./M.S. Pipe	Tata, Jindal (Hisar), PRAKASH SURYA.
82	G.I. Fittings	Unik, AVAk, Zoloto, Leader
83	CPVC Pipe & fitting	Astral, Supreme, Prince, Ashirwad, PRAYAG POLYMERS PVT. LTD
84	HDPE Pipes	Reliance, Jain Pipes, ORIPLAST, Supreme
85	DI Pipes	Electosteel, JSAW-JAL (JINDAL), Tata Ductura
86	DI Fittings	Electosteel, Jindal, Tata Ductura.
87	uPVC pipe and fittings	Astral, Supreme, Ashirwad, Prince, Finolex
88	Centrifugally Cast (spun) Iron pipes & fittings	NECO, Kapilansh, SKF, RPMF, BIC

C=
I=
O= } Nil AE(P)(C) EE(C)

89	Hubless Centrifugally Cast (spun) Iron Pipes & Fittings	NECO,SKF, Kapilansh, RPMF
90	C.I. Manhole covers, frames & GI Gratings	NECO, BIC, Kapilansh, SKF, RAJ Iron Foundary Agra, RPMF
91	SFRC/RCC Manhole covers & gratings	KK, JAIN, PARGATI, NTC
92	RCC Pipes (NP-2)/(NP-3)	Lakshmi, Sood&Sood, Jain Pipe Co. (Newai), Mahaveer Enterprises (Newai), any other ISI marked with the approved by Engineer in Charge.
93	PE-AL-PE Composite pressure pipes and accessories	Jindal (Jindal Pex tube Pvt. Ltd.), Kitec.
	CP & Sanitary Fitting	
94	CP Brass Fittings (Superior Range)	Jaquar, Grohe, Roca, Kohler, Euronics
95	CP Brass Fittings (Normal Range)	Hindware, Jaquar (ESSCO Series), Parryware, PRIMA (ISI marked), CERA, Plumber, Johnson, KINGSTON, PRAYAG POLYMERS PVT. LTD. (Series 7000 & 6000), PLATO, KEROVIT, RAK, Euronics
96	Sanitary ware, Fittings & accessories (Superior Range)	Kohler, Roca, Hindware, Jaquar, Euronics
97	Sanitary ware, Fittings & accessories (Normal Range)	Hindware, CERA, Parryware, Jaquar (Esco), Johnson, PRIMA PRAYAG POLYMERS PVT. LTD, Somany, GLOCERA, RAK Ceramics, KEROVIT, Euronics
98	Mirror Glass	Atul, Modi Guard, Gold Plus, Golden Fish, Sisecam,
99	Stainless Steel Sink	Neelkanth, Nirali, Jayna, Johnson, PRAYAG POLYMERS PVT. LTD
100	Extruded Polystrene Insulation Board	Dowcorning, Supreme, Texas, Analco
101	SMC Tank	Sintex (Welspun), Sivosky, Mahindra
	Miscellaneous	
102	Stainless Steel Railing, Accessories etc.	JINDAL, Dorma, Giesse, Godrej, Hardwyn, KICH
103	Paver Block & Kerb Stone	Pavcon Hyper Tiles/Dynamic Industries, Dala Tiles, Mayur, KK, Power, Sharda, Navya, Any other ISI marked with the approval of engineer in charge.
104	Floor hardener	Ironite, Ferrok, Hardonate, Saint Gobin-Weber
105	PVC water tank	ISI Market tanks of sintex, Supreme, Prayag, Astral.
	Other Chemicals	
105	Acrylic Polymer	Sunanda Polyalk EP, Sika Latex, Dr. Fixit, Forsoc
106	Micro Concrete	Fosroc Renderoc RG or equivalent of Dr. Fixit, Sika, Ultratech, Forsoc

C=
I= } Nil AE(P)(C) EE(C)
O=

107	Polymer based bonding agent	Nitobond SBR 300 or equivalent of Sika, Dr. Fixit, Ultratech
108	Orgnosilane (water repellant coating on lime)	Zydex- Zycosil Max, CTS- Silo 112, Protecto Seal SW
109	Elastomeric coating compatible with lime and organosilicane protection	Zydex- Elastomax, or equivalent of Dr. Fixit, Forsoc, Sika Ultratech
110	Silicone solvent (Conservation grade water repellent containing silane or siloxane)	Silo 111, Silo 112 or equivalent of product of Dr. Fixit, Forsoc.
111	PU Injection grout	Sika Injection 201 CE, Dr. Fixit PU Foam Injection, Asian smartcare PU Injection foam or equivalent from Forsoc

NOTE: All the Materials/Makes listed above and other than as specified above shall be used after obtaining prior approval from the Engineer-in-charge. Sample duly approved by Engineer-in-charge shall be kept in safe custody of contractor and displayed in board properly till completion of the project.

Notwithstanding any interim or final approval, the contractor remains responsible for satisfactory performance of all fittings & fixtures. The liability of the contractor is not limited by any approval of the maker of materials.

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

This agreement made this _____day of _____two thousand and _____ between_____, _____ (Name of the contractor, hereinafter call Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government of the other part).

WHEREAS THIS agreement is supplementary to a contract (hereinafter called the Contract) dated_____ and made between the GUARANTOR of the one part and the GOVERNMENT of the other part where by the Contractor inter alia, undertook to render the buildings and structures in the said contract recited completely water and leak proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said structures will remain water / leak proof for ten years from the date of completion of work.

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

Provided that the guarantor will not be responsible for leakage caused by earthquakes or structural defects or misuse of roof or alterations and for such purpose

a) Misuse of roof shall mean by operation, which will damage roofing treatment, like chopping of firewood and things of the same nature, which might cause damage to the roof.

b) Alteration shall mean construction of an additional storey or a part of roof or construction adjoining to existing roof, where by roofing treatment is removed in parts.

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

During this period of guarantee, the guarantor shall make good all defects and in case of any defects being found, render the building water proof at his own cost, to the satisfaction of the Engineer-in-Charge and shall commence the work for such rectification within seven days from the date of issue of the notice from the Engineer-in-Charge calling upon him to rectify the defects, failing which the work shall be got done by Department through some other contractor at the GUARANTOR'S cost and risk.

C=
I=
O= } Nil AE(P)(C) EE(C)

The decision of the Engineer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That is the Guarantor fails to execute the necessary rectification or commits breach thereunder then the Guarantor will indemnify the principal and his successors against all loss, damage, cost expense or otherwise which may be incurred by him by reasons of any default on the part of GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and / or damage and / or cost incurred by the Government, the decision of the Engineer-in-Charge will be final and binding on the parties.

IN WITNESS WHERE OF these presents has been executed by the Obligator _____and by _____and for and on behalf of the PRESIDENT OF INDIA on the day month and year first above written.

SIGNED, SEALED AND DELIVERED by (OBLIGOR) in the presence of:

1.

2.

SIGNED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA BY _____in the presence of:

1.

2.

TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER SUPPLY AND SANITARY INSTALLATIONS

The agreement made this _____ day of _____ Two Thousand and _____ between _____ son of _____ (hereinafter called the GUARANTOR of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government of the other part.)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated _____ and made between the GUARANTOR OF THE ONE PART AND the Government of the other part, whereby the contractor inter alia, undertook to render the work in the said contract recited structurally stable workmanship, finishing and use of sound materials.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable and guaranteed against faulty workmanship, finishing, manufacturing defects of materials and leakages, etc.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable after expiry of maintenance period prescribed in the contract for the minimum life of 02 (Two) year to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

The decision of the Engineer-in-charge with regard to nature and cause of defect shall be final.

During this period of guarantee, the guarantor shall make good all defects to the satisfaction of the Engineer-in-charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantor's cost and risk. The decision of the Engineer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if the guarantor fails to make good all the defects commits breach thereunder, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and or cost incurred by the Government, the decision of the Engineer-in-charge will be final and binding on both the parties.

IN WITNESS WHEREOF these presents, have been executed by the obligator _____ and _____ by _____ for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of:

1. _____
2. _____

SIGNED FOR AND ON BEHALF OF THE PRESIDENT OF INDIA BY _____

_____ in the presence of :

1. _____
2. _____

C=
I= } Nil AE(P)(C) EE(C)
O=

Schedule of Quantity (Civil)

Name of Work: Construction of Various Infrastructure at GC, CRPF, Chandauli *(SH: Balance work of Bulk & Development services).*

S. No	Description	Quantity	Unit	Rate	Amount
1	**EARTH WORK**				
1.1	Banking excavated earth by mechanical / manual means in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with ½ tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, flood banks, marginal banks, and guide banks etc., lead upto 50 m and for all lift:				
1.1.1	All kinds of soil.	4300	cum	197.90	8,50,970.00
1.2	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 for all lift, as directed by Engineer-in-charge.				
1.2.1	All kinds of soil.	7062	cum	177.50	12,53,505.00
1.3	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.	3531	cum	196.00	6,92,076.00
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	1:5:10 (1 cement : 5 coarse sand (zone-III): 10 graded stone aggregate 40 mm nominal size).	426	cum	6,518.60	27,76,924.00
2.2	Centering and shuttering including strutting, propping etc. and removal of form work for :				
2.2.1	Foundations, footings, bases for columns	360	sqm	392.15	1,41,174.00
3	**REINFORCED CEMENT CONCRETE**				
3.1	Centering and shuttering including strutting, propping etc. and removal of form for:				
3.1.1	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	14400	sqm	842.50	1,21,32,000.00

C=
I=
O=
} Nil

AE(P)(C)

EE(C)

3.1.2	Suspended floors, roofs, landings, balconies and access platform	5520	sqm	927.25	51,18,420.00
3.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto and above plinth level.				
3.2.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	165289	kg	107.85	1,78,26,463.00
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.:				
	Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
3.3.1	All works upto plinth level				
3.3.1.1	Concrete of M30 grade with minimum cement content of 350 kg /cum	1611	cum	9,655.70	1,55,55,333.00
3.4	Add for using extra cement in the items of design mix over and above the specified cement content therein.	322	quintal	733.50	2,36,187.00
4	**ROAD WORK**				
4.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	14400	sqm	218.90	31,52,160.00

C=
I= } Nil AE(P)(C) EE(C)
O=

4.2	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).	14400	cum	24.85	3,57,840.00
4.3	Supplying and stacking at site.				
4.3.1	Good earth	4280	cum	775.50	33,19,140.00
4.4	Providing and filling in position rubberized bitumen hot sealing compound for sealing of expansion joints in roads / pavements all complete as per direction of the Engineer-in-Charge.				
4.4.1	Providing and filling in position rubberized bitumen hot sealingcompound for sealing of expansion joints in roads / pavementsall complete as per direction of the Engineer-in-Charge.	72000	per cm depth per cm width per metrelength	8.65	6,22,800.00
4.5	Providing and applying 2.5 mm thick road marking strips (retro- reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	720	sqm	747.80	5,38,416.00
4.6	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5 mm), including making drainage opening wherever required complete etc. as per direction of Engineerin- charge (length of finished kerb edging shall be measured to calculate volume for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	108	cum	10,117.60	10,92,701.00

C=
I= } Nil AE(P)(C) EE(C)
O=

4.7	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in- Charge.				
4.7.1	With material conforming to Grade-II (size range 53 mm to 0.075 mm) having CBR Value-25	2160	cum	2,924.85	63,17,676.00
4.8	Construction of dry lean cement concrete sub base over a prepared subgrade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in- charge.	1440	cum	4,148.65	59,74,056.00
4.9	Providing and laying factory made chamfered edge Cement Concrete paver blocks In foot path, park & lawns driveway or light & traffic parking etc. of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineer- in-Charge.				
4.9.1	80mm thick Cement concrete paver block of M-35 grade with approved colour, design & pattern.	3600	sqm	1,091.50	39,29,400.00

C=
I= } Nil AE(P)(C) EE(C)
O=

4.10	Providing and placing in position 100 mm thick factory made machine batched & machine mixed Precast RCC Rectangular Covers on drains of footpath of various sizes, of M-25 grade cement concrete for RCC work, including cost of centering, shuttering, reinforcement of 8 mm dia TMT bars of Fe 500 grade @ maximum 100 mm c/c on both ways, neat cement punning on finished surface, properly encased on all edges with 1.6 mm thick, 100 mm wide MS sheet duly painted over priming coat, reinforcement to be welded at edges with MS sheet and providing 2 Nos. 12 mm dia bar for hooks etc including cost of cartage, all leads & lift, handling at site etc. all complete as per direction of Engineer-in-Charge.	1540	Sqm	3,081.95	47,46,203.00
5	**RAIN WATER HARVESTING & TUBEWELLS**				
5.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.				
5.1.1	All types of Soil				
5.1.1.1	400 mm dia	360	metre	990.80	3,56,688.00
5.2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.				
5.2.1	All types of Soil				
5.2.1.1	400 mm dia	240	metre	1,238.50	2,97,240.00

C=
I= } Nil AE(P)(C) EE(C)
O=

5.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.				
5.3.1	200 mm nominal size dia	160	metre	1,113.35	1,78,136.00
5.4	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.				
5.4.1	200 mm nominal size dia	160	metre	1,255.70	2,00,912.00
5.5	Supplying, filling, spreading & levelling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	12	cum	1,509.80	18,118.00
5.6	Supplying, filling, spreading & levelling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	12	cum	1,538.25	18,459.00
5.7	Supplying, filling, spreading & levelling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	12	cum	1,538.25	18,459.00
5.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge	32	cum	2,024.50	64,784.00

C=
I= } Nil AE(P)(C) EE(C)
O=

5.9	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	40	hour	1,085.05	43,402.00
5.10	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:				
5.10.1	200 mm dia	4	each	321.15	1,285.00
5.11	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.				
5.11.1	200 mm dia	4	each	2,293.65	9,175.00
	Total				**8,78,40,102.00**
	Modified Estimated Cost after using correction factor on DSR 2023 on account of GST @ 0.973				8,54,68,419.00
	Cost Index @-1% (Cost Index of 99 as on 01.04.2025 based on PAR 2023)				**8,46,13,735.00**
6	**ITEM BASED ON MARKET RATE**				
6.1	Providing and fixing HDPE pipes for treated water complete with required fittings as Elbow, Socket, Union, Nipple & Connector of standard fittings including trenching and refilling as per direction of Engineer-in-charge etc. External Work 40 mm dia	770	metre	229.70	1,76,869.00
6.2	Providing and fixing HDPE pipes for treated water complete with required fittings as Elbow, Socket, Union, Nipple & Connector of standard fittings including trenching and refilling as per direction of Engineer-in-charge etc. External Work 75 mm dia	1360	metre	409.90	5,57,464.00

C=
I=
O= } Nil

AE(P)(C)

EE(C)

6.3	Providing and fixing HDPE pipes for treated water complete with required fittings as Elbow, Socket, Union, Nipple & Connector of standard fittings including trenching and refilling as per direction of Engineer-in-charge etc. External Work 110 mm dia	1930	metre	927.70	17,90,461.00
6.4	Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, vacuum dewatering process, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately).				
	(Note:- The qty of cement used for 1 cum of the finished concrete of M-30 is 340 kg. If the actual qty of cement required as per design mix is more or less than 340kg/cum, then the extra/less cement shall be paid/ deducted separately. However, under no circumstances the qty of cement to be used shall either exceed 350 kg/cum or fall below 330 kg/cum of finished concrete. If the cement concrete exceds or fall below the said amounts, contractor shall have the discretion to either redesign the mix or bear the cost of extra cement.)				
6.4.1	Cement concrete prepared with batch mixing machine	2160	cum	10,503.95	2,26,88,532.00
	Total				**10,98,27,061.00**

C=
I= } Nil AE(P)(C) EE(C)
O=

PART- C

C= I= O	NIL	AE (P)(E)	EE(E)

PROFORMA OF SCHEDULES

(Electrical Works)

(Separate Performa for Civil, Elect. & Hort. Works in case of Composite Tenders) (Operative Schedules to be supplied separately to each intending tenderer)

SCHEDULE 'A'

Schedule of quantities (sheet Attached)

SCHEDULE 'D'

Extra schedule for specific requirements/ document for the work, if any. **---------NIL----------**

SCHEDULE 'E'

Reference to General Conditions of contract. **GCC 2023 for Construction Work** as amended/modified **upto last date of the submission of tenders.**

Name of Work	**:**	**Construction of Various Infrastructure at GC, CRPF, Chandauli.** ***(SH: Balance work of Bulk & Development services).***
Estimated cost of the work	**:**	
Electrical Items of Work	**:**	**Rs. 89,67,024/-**
i) Earnest money:	**:**	Indicated in schedule F of Civil component
ii) Performance Guarantee:	**:**	Same as in civil component
Security Deposit	**:**	Same as in civil component

SCHEDULE 'F'

General rules and directions:

Officer inviting tender — **Executive Engineer, CPWD, Varanasi.**

Definitions:

2(v)	Engineer-in-Charge	**Executive Engineer (E), CPWD, Allahabad.**
2(viii)	Accepting Authority	**Same as civil component.**
2(x)	Percentage on cost of materials and labour to cover all overheads and profits	15%

C= I= O	NIL	AE (P)(E)	EE(E)

2(xi)	Standard Schedule of Rates:	DSR 2025 for electrical works & MR
2(xii)	Department	Central Public Works Department
9(ii)	Standard CPWD contract Form GCC 2023, CPWD Form 7/8 as modified & corrected upto	**GCC 2023 (Construction Work),** CPWD form 7 as modified & corrected up to last date of submission of tender (Whether correction vide latest circulars are incorporated or not in this document)

Clause 1

(i)	Time allowed for submission of Performance Guarantee, programme chart (Time and progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW welfare board or proof of applying thereof from the date of issue of letter of acceptance	**As per civil component**
(ii)	Maximum allowable extension **with late fee @ 0.1% per day of Performance Guarantee amount beyond the period as provided in (i) above**	**As per civil component**

Clause 2

Authority for fixing Compensation under Clause 2 — **Superintending Engineer, CPWD, Allahabad or successor thereof.**

Clause 2 A

Whether Clause 2A shall be applicable — **No**

Clause 5

Applicable clause 5/ Clause 5A — **As prescribed in civil component**

Number of days from the date of issue of letter of acceptance for reckoning date of start Mile stone(s) as per table given below: - **As prescribed in civil component**

S. No	Description of mile stone	Time Allowed in days (from date of start)	Amount to be with-held in case of non-achievement of milestone
	Same as prescribed in civil component.		

Time allowed for execution of work — **As per Civil Work**

Authority to decide

(i) Authority to convey the decision of shifting of milestone and extension of time	**Engineer-in-Charge of major component of work or successor thereof.**
(ii) Authority to decide rescheduling of milestone and extension of time	**Superintending Engineer, CPWD, Allahabad or successor thereof**
(iii) Shifting of date of start in case of delay in handing over of site	**Superintending Engineer, CPWD, Allahabad or successor thereof**

C=
I=
O } NIL — AE (P)(E) — EE(E)

PROFORMA OF SCHEDULE CLAUSE 5 SCHEDULE OF HANDING OVER OF SITE

Part	Portion of site	Description	Time Period for handling over reckoned from date of issue of letter of intent
Part A	Portion without any hindrance	**As prescribed in civil component**	**As prescribed in civil component**
Part B	Portions with encumbrances		
Part C	Portions dependent on work of other agencies		

Clause 6

Mode of Measurement: EMB

Clause 7

Gross work to be done together with net payment/Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment **8.00 Lakhs**

Clause 7A

Whether Clause 7A shall be applicable Yes

Clause 8A Authority to decide Compensation on account, if contractor fails to submit completion plans **As per civil component.**

Clause 10A

List of testing equipment to be provided by the contractor at site lab As per list (Page-142)

Clause 10B(ii)

Whether clause 10-B(ii) and shall be applicable No

Clause 10C

Component of labour expressed as percentage of value of work **Applicable**

Clause 10CC **Not Applicable**

C=
I=
O } NIL AE (P)(E) EE(E)

Clause 11

Specification to be followed for execution of work: As per CPWD Specification for electrical work specification Part-I Internal-2023, Part-II External-2023, Part-V Wet riser & Sprinkler system-2022, Part VI Fire Detection and Alarm System – 2018, Part VII D.G. Sets - 2013, Amendment (05.11.2024) & General Specifications for HVAC-2024 with up to date amendments.

Clause 12

12.2(C)

Deviation limit beyond which clause 12.2 (c) shall apply for building work — **As prescribed in civil component**

(i) Deviation limit beyond which clause 12.2 (c) shall apply for foundation work (except items mentioned in earth work subhead in DSR and related items) — **As prescribed in civil component**

(ii) Deviation Limit for items mentioned in earth work subhead of DSR and related items — **As prescribed in civil component**

Clause 16

Competent Authority for Deciding reduced rates: **Superintending Engineer, CPWD, Allahabad or successor thereof**

Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site — **As per attached**

Clause 19C	Authority to decide penalty for each default.	Engineer-in -charge or successor thereof
Clause 19D	Authority to decide penalty for each default.	Engineer-in -charge or successor thereof
Clause 19G	Authority to decide penalty for each default.	Engineer-in -charge or successor thereof
Clause 19K	Authority to decide penalty for each default.	Engineer-in -charge or successor thereof

Clause 25

(i)	Conciliator	**As prescribed in civil component**
(ii)	Arbitrator Appointing Authority	**As prescribed in civil component**
(iii)	Place (Seat) of Arbitration	**As prescribed in civil component**

C=
I= } NIL AE (P)(E) EE(E)
O

Clause 32

Sl. No	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i)	
						Figures	Words
1.	Graduate Engineer or Diploma Engineer	**As prescribed in civil component**					

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers**.**

Diploma holder with minimum 10 years relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 38

i)	a)	Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2018 printed by CPWD	**NA**
ii)		**Variations permissible on theoretical quantities**	
	a)	Cement for works with estimated cost put to tender not more than Rs. 25 lakhs.	
		For works with estimated cost put to Tender is more than Rs. 25 lakhs	**NA**
	b)	Bitumen all works	
	c)	Steel reinforcement and structural steel Sections for diameter, section and category.	
	d)	All other materials	

C=
I= } NIL AE (P)(E) EE(E)
O

ANNEXURE

Clause- 10 –A & 18

List of mandatory machinery, tools and plants & testing Equipment to be deployed by the contractor at site

1.	*Steel/Aluminium Ladder 1.5 m to 8 m.*	*2 Nos.*
2.	*Chase cutting machines.*	*2 Nos.*
3.	*Electrical wire drawing equipment.*	*2 Set.*
4.	*Torque wrench for nut/bolt/screws.*	*2 Nos.*
5.	*Conduit die set.*	*2 Set.*
6.	*Pipe vice.*	*1 No.*
7.	*Bench vice.*	*1 No.*
8.	*L.T.Meggar 500/1000 volts.*	*1 No.*
9.	*Tong Tester.*	*1 No.*
10.	*Multimeter.*	*1 No.*
11.	*Hydraulically operated & hand operated crimping machine.*	*1 No.*
12.	*Earth tester.*	*1 No.*
13.	*Portable Ordinary drilling machine.*	*2 Nos.*
14.	*Portable Hammer drilling machine.*	*2 Nos.*
15.	*Overhead conduit puller.*	*1 No.*

C=
I=
O } NIL AE (P)(E) EE(E)

Eligibility condition for Associate agency for execution of E&M part of Works.

1. The tenderer should either himself meet the eligibility conditions for execution of minor component of work i.e. E&M work (i/c specialized E&M) Works or otherwise he will have to associate with agencies, fulfilling the eligibility requirements prescribed in the tender document.
2. In case the main contractor is himself eligible (as per eligibility criteria) for executing all or some components of E&M work and intends doing job himself, he may not be required to associate with another agency for such components of E&M work of work. In such cases the main contractor also has to submit the documents as per eligibility criteria mentioned for associated agency of individual E&M component(s) within one month of award of work or 15 days before start of electrical related work whichever is earlier.
3. In case, the main contractor himself is not eligible (as per eligibility criteria) for executing any of the components of E&M work, he can directly procure the equipment of approved make from OEM and get it installed from authorized agency/service provider of the OEM or specialized agency as per criteria mentioned for associate eligible agency.
4. In case the main contractor himself is not eligible (as per eligibility criteria) and also not willing to directly procure the equipment as per para above, he will have to associate with him eligible agencies for doing such components of E&M work of work. In such cases the main contractor has to submit proposal for approval of associate agency along with documents in support of fulfilling eligibility criteria mentioned for associated agency of individual E&M components within one month of award of work or 15 days before start of electrical related work whichever is earlier.
5. In the event of the associated E&M agency not performing satisfactorily or failure of associate agency to complete the E&M work, the main contractor on written directions of the department, shall remove the Associate agency deployed on the work and shall submit proposal for approval of new associate agency without any loss of time or variation in cost to the department. Such new associate agency shall also give an undertaking along with the main tenderer that both of them shall guarantee for the equipment already supplied for which payment has been released by the department in part. If any equipment supplied for the work, during the currency of the earlier associate agency and paid partly by the department, becomes redundant /not in a position to be installed and commissioned and put to beneficial use due to change in agency for execution of E&M work, the main contractor shall be responsible for replacement of the equipment(s) at no cost to the department. No change of associate agency will be allowed without prior approval of the Engineer-in-charge of the work.
6. The main contractor shall be responsible and liable for proper and complete execution of the Electrical work and ensure coordination and completion of both civil and electrical work.
7. The associate contractor shall attend the inspection of the work by the Engineer-in- charge of E&M works as and when required.

C=
I=
O } NIL AE (P)(E) EE(E)

PROPOSAL FOR ASSOCIATING AGENCY FOR E&M WORKS

I/we hereby propose the following agency for execution of E&M work component mentioned herein. Consent Letter from the proposed associated agency is enclosed.

(i) **Name of work: Construction of Various Infrastructure at GC, CRPF, Chandauli (SH: Balance work of Bulk & Development services)**

(ii) Component of E&M Work : ……. ……..

(iii) Name of Associated Agency : ……. ……..

(iv) Details of Enlistment : ……. ……..

(v) Category and Class of Enlistment : ……. ……...

(vi) Monetary limit of work in Enlistment : ……. ……..

(vii) Validity of Enlistment : ……. ……..

(viii) Copy of Enlistment Order attached : (Yes /No)

(ix) Copy of electrical contractor license attached: (Yes /No)

(x) Copy of completion certificates of similar work experience attached: (Yes /No)

(xi) Copy GST Registration attached : (Yes/No)

(xii) Copy PAN Card Attached : (Yes/No)

(xiii) Consent Letter of agency attached : (Yes/No)

Encls: Self Attested photocopies of as stated above

Seal & Signature of the Main Contractor

C=
I= } NIL AE (P)(E) EE(E)
O

Eligibility criteria for main contractor /associated agency for E.I. works:

(Pdg. E.I., Fans & Service Connection)

1. The tenderer(s) must associate eligible agencies to execute components of E.I. Works who fulfill the prescribed eligibility criteria given below. However, the contractor shall also be eligible to carry out himself any or all of the components of E.I. Works without associating any specialized agency provided:

    a) He fulfills the prescribed eligibility criteria respectively for these work(s).

    Or

    b) He directly procures the equipment of approved make from manufacturer and get it installed from authorized agency/service provider of the manufacturer or specialized agency as per the eligibility criteria mentioned in subsequent para.

2. **Internal Electrical Installations, External Lighting/Cabling/Earthing & Service Connection:**

    The associate agency shall be registered/enlisted in CPWD in composite category in appropriate class and should have a valid electrical license.

3. **SUBMISSION OF PROPOSAL FOR APPROVAL OF ASSOCIATED AGENCY:**

a. In support of the eligibility conditions of the proposed associated electrical agency, copy of their registration documents, Electrical Contractor's License, PAN Card, GST Registration duly attested by the applicants (Main Contractor) shall be submitted to the Engineer-in-charge of minor component for deciding the eligibility within seven days of receipt of the same. Such associating electrical agency will certify that they are not debarred as on the day of application for sale of tender.

b. Proposal for Associating Electrical Agency for the Work shall be submitted in prescribed Proforma along with Willingness Certificate & MOU enclosed herein.

Eligibility condition for Associate agency for execution of SITC of DG Set.

The main agency has to associate the OEM/specialized agency of DG Set.

The associate specialized agency should have successfully completed similar works, as mentioned under during last 7 years ending last day of month previous to one in which tender are invited:

(i) Three similar works each costing not less than 40% of estimated cost of relevant subhead put to tender.

OR

(ii) Two similar works each costing not less than 60% of estimated cost of relevant subhead put to tender.

OR

(iii) One similar works each costing not less than 80% of estimated cost of relevant subhead put to tender.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7 % per annum; calculated from the date of completion to previous day of last date of submission of tender.

Similar work shall mean works of "SITC of DG Set".

The main contractor/agency has to submit detail of such associate agency to Engineer-in-charge **(SITC of DG Set)** with in fifteen days from date of start of work. The associate agency shall be approved by Engineer-in-charge **(SITC of DG Set).** In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of Engineer-in-charge **(SITC of DG Set).** The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the main contractor to change the agency executing such items of work and this shall be binding on the contractor.

However, the composite category contractor shall also be carry out himself work without associating any specialized agency provided: -

a) He fulfils the prescribed eligibility criteria respectively for these work(s).

OR

b) He directly procures the equipment of approved make from manufacturer and get it installed from authorized agency/ service provider of the manufacturer or specialized agency as per criteria mentioned in the NIT.

At the time of engaging associated agencies the contractor is to submit:

(i) Written commitment from OEM/OEA to supply the DG Sets and delivery schedule as per requirement of department.

(ii) Certificate from OEM/OEA or authorized service provider of engine manufacturer for satisfactory installation and commissioning of DG Set after completion of the work.

(iii) Required Guarantee of DG Set from OEM/OEA in favor of Engineer-in- Charge to cover defect liabilities.

C= I= O	NIL	AE (P)(E)	EE(E)

(iv) Authorization certificate from OEM.

(v) An undertaking that mandatory free service is carried out during the guarantee period by the authorized service provider of engine manufacturer.

(vi) Undertaking from OEM for this work for unconditional support technically throughout the execution of work contract for useful life of the system.

(vii) Undertaking from OEM of for this work, providing all spares required for healthy functioning of the Equipment for at least seven years from the date of supply of equipment.

C= I= O	NIL	AE (P)(E)	EE(E)

ON 100 Rs. STAMP PAPER
MEMORANDUM OF UNDERSTANDING [M.O.U] BETWEEN

Component of E&M WORK:----------

1] M/S [Name of the firm with full address]
Enlistment Status
Valid Upto:
[Henceforth called the main contractor]

And

2] M/S [Name of the firm with full address]
Enlistment Status
Valid Upto:

[Henceforth, called Associated Contractor]

Name of Work:-Construction of Various Infrastructure at GC, CRPF, Chandauli *(SH: Balance work of Bulk & Development services).*

NIT No. -

Whereas the main contractor has agreed to entrust the above work only to the associated contractor.

We state that MoU between us will be treated as an agreement and has legality as per Indian Contract Act (amended up to date) and the department (CPWD) can enforce all the terms and conditions of this agreement for execution of the above work only in respect of this work. Both of us shall be responsible for the execution of above work as per the agreement to the extent this MoU allows. In case of any delay in the payment by the main contractor, the associated contractor can apply to the CPWD to release the payment under Clause 7B and deduct the same from the bills of the main contractor. In case of any dispute, either of us will go for mediation by the CE or SE (as the case may be) and his decision shall be final and binding on both of us.

We have further agreed as under:

1. The Associated Contactor will execute above work as per terms and conditions of this agreement.

C=
I= } NIL AE (P)(E) EE(E)
O

2. All the machinery and equipment, tools and tackles required for execution of the above work, as per this MoU, shall be the responsibility of the Associated Contractor.
3. The site staff required for the execution of above work shall be arranged by the Associated Contractor as per terms and conditions of this MoU.
4. All the correspondence regarding execution of the above work shall be done by the department with the main contractor. In case of non-compliance of the provisions of agreement of the work by the associated contractor, the main contractor shall be held responsible and action will be taken against him as per agreement provisions.
5. In case of non-performance, associated contractor will be debarred from participation or association in the CPWD tenders by the CPWD.

(Authorized Signatory)
SIGNATURE OF MAIN CONTRACTOR
Date : ……
Place : ……

1. Witness with address
   (From main contractor side)

(Authorized Signatory)
SIGNATURE OF ASSOCIATED CONTRACTOR
Date : ……
Place : ……

1. Witness with address
   (From associated contractor side)

C=
I= } NIL AE (P)(E) EE(E)
O

के.लो.नि.वि.		CPWD

WILLINGNESS CERTIFICATE

Name of Work:- Construction of Various Infrastructure at GC, CRPF, Chandauli ***(SH: Balance work of Bulk & Development services).***

Component of E&M WORK:----------

I hereby give my willingness to work as associated contractor for the above mentioned work.

I will execute the work as per specifications and conditions for the agreement and as per direction of the Engineer-in-charge. Also I will employee full time technically qualified supervisor for the works. I will attend inspection of officers of the department as and when required.

Date: **Signature of Contractor**

C=
I= } NIL AE (P)(E) EE(E)
O

Additional Terms & Conditions for E&M Works

1. **Specification:-** The work shall be executed as per CPWD's general specification for Electrical Works part-I (Internal)-2023, Part-II (External)-2023, Part-III Lift & Escalations 2003, Part-IV (Sub-station)-2013, Part- V Wet Riser & sprinkler system 2020, HVAC-2024, Part- VI Fire Detection and Alarm system- 2018, Part-VII D.G. Sets- 2013 (Amendment 05.11.2024), Indian Electricity Rules, 1956, Indian Electricity Act, 2003 amended upto date and as per direction of Engineer-in-Charge. The additional specifications are to be read with above and in case of any variations; specifications given along with the tender shall apply.

2. **Location**:- The work is to be executed at **CG, CRPF, Chandauli.** The Contractor is advised to visit the site before submission of their tender.

3. **RELATED DOCUMENTS**

In the case of discrepancy between the Schedule of Quantities, the Specifications and/ or the Drawings, the following order of preference shall be observed:

(i) Description of Schedule of Quantities.

(ii) Particular Specification and Special Condition, if any.

(iii) CPWD Specifications

(iv) Indian Standard Specifications of B.I.S.

(v) Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2010

(vi) National Electrical Code 2023 as amended up to date and

(vii) National building code 2016 as amended up to date and Energy Conservation Building Code of India 2017 (ECBC 2017) as amended up to date.

4. **TERMINOLOGY**

The definition of terms shall be in accordance with relevant Bureau of Indian Standards of related items, Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2010, National building code 2016, National Electrical Code 2023.

5. **Rates**

The work shall be treated as on works contract basis and the rates tendered shall be for complete items of work (except the materials, if any, stipulated for supply by the department) inclusive of all taxes, GST (including works contract tax, if any), duties, and levies etc. and all charges for items contingent to the work, such as, packing, forwarding, insurance, freight and delivery at site for the materials to the supplied by the contractor, watch and ward of all materials (including those, if any, supplied by the department) for the work at site etc.

Prices quoted shall be firm. Price adjustments shall however be governed by Clause 10C/ 10CC of the Conditions of Contract given in form CPWD 7 or 8 of the tender documents, for works executed under these forms. All relevant documents shall be produced by the contractor to the Engineer-in-charge, whenever called upon by him to do so, for working out such adjustments in rates.

6. **Performance Guarantee**

As per CPWD General Condition of Contract (GCC)-2023 (amended up to date). After the acceptance of tender, the contractor shall submit an undertaking from the OEM of transformer & HT Panel regarding :-

(a) Authorization certificate.
(b) The OEM is unconditionally support the lowest tenderer technically throughout the execution of contract as well as for Maintenance/ Comprehensive Maintenance Contract for the useful life of the transformer and HT panel.
(c) OEM provides all the spares required for healthy functioning of the equipment for at least seven years from the date of supply of equipment.

7. **Taxes and Duties**

Being an indivisible works contract, GST or any other taxes or duties etc. are not payable separately. The GST/works contract tax shall be deducted from the bills of the contractor as applicable in the State in which the work is carried out, at the time of payments.

8. **Mobilization Advance**

No mobilization advance shall be paid for the work.

9. **Completeness of Tender**

All sundry fittings, assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items which are useful and necessary for proper assembly and efficient working of the various components of the work shall be deemed to have been included in the tender, irrespective of the fact whether such items are specifically mentioned in the tender documents or not.

10. **Works to be done by the Contractor**

Unless and otherwise mentioned in the tender documents, the following works shall be done by the contractor, and therefore their cost shall be deemed to be included in their tendered cost: -

(i) Foundations for equipment and components where required, including foundation bolts.
(ii) Cutting and making good all damages caused during installation and restoring the same to their original finish.
(iii) The openings/sleeves for the cables, Conduits, Pipes, ducts, rising mains etc. shall be marked in the drawing and provided during construction. No core cutting / openings in walls shall be allowed one the slab is cast or wall is constructed.
(iv) Foundation for equipment, poles, supports and brackets (other than for mounting of light fitting) and components wherever required, including foundation bolts.

(v) Suspenders and brackets for suspending/supporting cables, as required.
(vi) Suspenders for cable trays for laying the cables, where required.
(vii) Excavation and refilling of trenches in soil wherever the pipes/ cables are to be laid directly in ground, including necessary base treatment and supports for pipes as specified.
(viii) Sealing of all floor openings provided by him for pipes, earthing, rising mains and cables, from fire safety and water ingress point of view, after laying, of the same.
(ix) Painting at site of all exposed metal surfaces of the installation other than pre- painted items like fittings, poles, pipes, switchgear/ distribution gear items, cubicle switchboard etc. Damages to finished surfaces of these items while handling and erection, shall however be rectified to the satisfaction of the Engineer-in-charge.
(x) Testing and commissioning of completed installation.
(xi) Contractor has to submit detailed shop drawing for E.I. & substation equipments for approval to Engineer-in-charge before starting of work.
(xii) Provision of supports / clamps for equipments, cables etc. wherever required.
(xiii) Small wiring, inter-connection etc. inclusive of all materials and accessories, necessary to comply with the regulations as well as proper and trouble free operation of the equipment.
(xiv) Closing of the cable entry points in sub-station against seepage of water, rodents etc.
(xv) Tools and tackles required for handling and installation.

11. **Power & Water Supply: -** Responsibility for supply of power & water for execution of work shall be of main contractor.

12. **Tools for Handling and Erection**
All tools and tackles required for handling of equipment and materials at site of work as well as for their assembly and erection and also necessary test instruments shall be the responsibility of the contractor.

13. **PAYMENT TERMS**
The following percentage of contract rates shall be payable against the stages of work shown herein:

Stage of work	**Machinery and Equipment**
After initial inspection (wherever specified) and delivery at site in good condition on pro-rata basis	**70%**
On completion of installation on pro-rata basis	**20%**
On testing, commissioning and handing over.	**10%**

Original copies of supplier's GST invoice showing contract number, goods description, quantity, packing list, unit price and total amount, dispatch detail, test done at factory etc. have to be submitted by agency for ascertaining the genuinity of material source and supply.

14. **Co-ordination with Other Agencies**
The contractor shall co-ordinate with all other agencies involved in the building work so that the building work is not hampered due to delay in the work. Recessed conduit and other works, which directly affect the progress of building work, should be given priority.

C=
I= } NIL AE (P)(E) EE(E)
O

15. **Care of Buildings**

Care shall be taken by the contractor to avoid damage to the building during execution of his part of the work. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of his work from the site.

16. **Structural Alterations to Buildings**

16.1 No structural member in the building shall be damaged/ altered, without prior approval from the competent authority through the Engineer-in-charge.

16.2 Structural provisions like openings, cut-outs, if any, for the work, shall be used. Where these require modifications, or where fresh provisions are required to be made, such contingent works shall be carried out by the contractor at his cost.

16.3 All such openings in floors shall be closed by the contractor after installing the cables/ conduits/ rising mains etc. as the case may be, by any suitable means as approved by the Engineer-in-charge without any extra payment.

16.4 All chases required in connection with the electrical works shall be provided and filled by the contractor at his own cost to the original architectural finish of the buildings.

17. **Addition to an Installation**

Any addition temporary or permanent to the existing electrical installation shall not be made without a properly worked out scheme/ design by a qualified Electrical Engineer to ensure that such addition does not lead to overloading, safety violation of the existing system.

18. **Work in Occupied Buildings**

18.1 When work is executed in occupied buildings, there would be minimum of inconvenience to the occupants. The work shall be programmed in consultation with the Engineer-in-charge and the occupying department. If so required, the work may have to be done even before and after office hours.

18.2 The contractor shall be responsible to abide by the regulations or restrictions set in regard to entry into, and movement within the premises.

18.3 The contractor shall not tamper with any of the existing installations including their switching operations or connections thereto without specific approval from the Engineer-in-charge.

19. **Conformity to The Electricity Act 2003,**

19.1 Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2023

19.2 All Electrical works shall be carried out in accordance with the provisions of Indian Electricity Act,2003 and Central Electricity Authority (Measures relating to Safety and Electric Supply)Regulations 2023, amended up to date (Date of call of tender unless specified otherwise).

20. **General Requirements of Components**

SUBMISSION OF PROGRAMME

As per the time stipulated in the NIT from the date of receipt of the letter of acceptance, the successful tender shall submit a program indicating submission of drawings, supply of equipment, installation, testing, commissioning and handing over of the installation to the Engineer-in-Charge. This program shall be framed keeping in view the milestones stipulated in the contract, wherein building progress shall be given priority.

21. **Quality of Materials**

21.1 All materials and equipment supplied by the contractor shall be new. They shall be of such design, size and materials as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.

21.2 None of the material/ items/ equipment etc supplied shall be more than six months old from date of supply at site. Copy of GST Gate Pass/ Invoice/ Shipment / Custom Clearance certificate/ details (in case of imported equipment) shall be submitted to prove the date of manufacture & genuineness of the equipment/ machines supplied.

21.3 The materials shall be procured only from the manufacturers or their authorized dealers & documentary proof for such procurement & supply shall be produced by the contractor if desired by the department. The department reserves the right to send such materials to the manufacturers or authorized test laboratory to verify the genuineness & quality of the product.

21.4 Contractor shall preserve the copies of invoices, test certificates. gate passes etc. to prove the genuineness of material / purchases. The responsibility of procurement, genuine material of specialized works shall rest with the contractor.

22. Inspection of Materials and Equipment

22.1 All major equipments i.e. HT panel, transformers, bus duct, LT panel, DG sets, Lifts, Chiller, AHU etc. shall be offered for initial inspection at manufacturers works. The contractor will intimate the date of testing of equipments at the manufacturer's works before dispatch. The successful tenderer shall give advance notice of minimum two weeks regarding the dates proposed for such tests to the department's representative to facilitate his presence during testing. The Engineer-in-charge may witness such testing. The cost of the Engineer's visit to the factory will be borne by the department. Equipments will be inspected at the manufacturer/Authorised dealers premises, before dispatch to the site by the contractor if so desired by the Engineer-in-charge.

22.2 Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to the Engineer-in-charge and consignee.

22.3 After completion of the work in all respects the contractor shall offer the installation for testing and operation.

22.4 The Departmental officers will take adequate care to ensure that only tested and genuine materials of proper quality are used in work. Similarly, for fabricated equipment, the contractor will first submit dimensional detailed drawings for approval before fabrication is taken up in the factory. Suitable stage inspection at factory also will be made to ensure proper use of materials, workmanship and quality control.

22.5 Contractor shall preserve the copies of invoices, test certificates; gate passes etc. to prove the genuineness of material/purchases. The responsibility of procurement, genuine material of specialized works shall rest with the contractor.

22.6 No inspection outside the country is permissible if required so the same will be deemed to be waived off and necessary test reports shall be submitted before the dispatch of equipment.

23. Ratings of Components

23.1 All components in a wiring installation shall be of appropriate ratings of voltage, current, an/frequency, as required at the respective sections of the electrical installation in which they are used.

23.2 All conductors, switches and accessories shall be of such size as to be capable of carrying the maximum current, which will normally flow through them, without their respective ratings being exceeded and compliant to related to Indian Standards (BIS).

24. Conformity to Standards

24.1 All components shall conform to relevant Indian Standard Specifications, wherever existing. Materials with ISI certification mark shall be preferred.

24.2 The material in required quantity to be used in the work shall be got approved from the Engineer-in-charge before its use at site. The Engineer-in-charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.

25. Interchangeability

Similar parts of all switches, lamp holders, distribution fuse boards, switch gears, ceiling roses, brackets, pendants, fans and all other fittings of the same type shall be interchangeable in each installation.

26. Dispatch of Materials to Site and their Safe Custody/ Storage/ Isurance

26.1 The contractor shall dispatch materials to site in consultation with the Engineer-in- Charge. Programme of dispatch of material shall be framed keeping in view the building progress. Safe custody/ storage of all machinery and equipment supplied by the contractor/ Associate contractor shall be the responsibility of the main contractor till final taking over by the department.

26.2 All consignments are to be duly insured up to the destination from warehouse at the cost of the contractor. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

26.3 All consignments are to be duly insured up to the destination from warehouse to warehouse at the cost of the contractor. The insurance cover shall be valid till the equipment from the manufacture has been supplied and erected.

27. Workmanship

Good workmanship is an essential requirement to be complied with. The entire work of manufacture/ fabrication, assembly and installation shall conform to sound engineering practice. The work shall be carried out in engineering like manner & bad workmanship shall be rejected summarily. For redoing the job, no claim of the contractor shall be entertained on this account.

28. Proper Supervision/Skilled Workmen

The contractor shall be a licensed electrical contractor of appropriate class suitable for execution of the electrical work. He shall engage suitably skilled/ licensed workmen of various categories for execution of work supervised by supervisors / Engineer of appropriate qualification and experience to ensure proper execution of work. They will carry out instructions of Engineer-in-charge and other senior officers of the Department during the progress of work. The contractor or his authorized representative shall sign the site order book & comply with the remarks entered therein by the Engineer-in-charge or his representative.

29. SAFETY CODES AND LABOUR REGULATIONS

29.1 In respect of all labour employed directly or indirectly on the work, the tenderer, here in after called the contractor, at his own expense will arrange for the safety provision outlined in section 9 of PART-IV SUB STATIONS 2013 to comply with the statuary regulations, ISI recommendations and CPWD codes, BIS recommendation, factory Act.

29.2 In case of default, the department shall be at liberty to make arrangements and provide facilities as aforesaid and recover the cost from the contractor. The contractor shall provide necessary barriers warning signals and other safety measures to avoid accidents. He shall also indemnify CPWD against claims for compensation arising out of negligence in this respect.

29.3 Nothing in these specifications shall be construed to relieve the contractor of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with applicable statutory regulations and safety codes in force from the safety angle.

30. Testing

All tests prescribed in these General Specifications, to be done before, during and after installation, shall be carried out, and the test results shall be submitted to the Engineer-in-charge in prescribed Performa, forming part of the Completion Certificate.

C= I= O	NIL	AE (P)(E)	EE(E)

31. Commissioning on Completion

After the work is completed, it shall be ensured that the installation is tested and commissioned.

32. WATCH & WARD

The watch & ward of the materials & of the installations would be responsibility of the contractor till the work is completed / handed over. Nothing extra shall be paid to the contractor on this account.

33. SITE CLEARANCE

The site shall be cleared of malba, debris etc. due to execution of work at site by the contractor without any extra cost to the department.

34. Completion Plan and Completion Certificate

For all works completion certificate after completion of work as given in Chapter 17Appendix E of Internal 2023 (amended upto date) shall be submitted to the Engineer-in-charge. The preform as enclosed shall also be referred to for the check list, related necessary action and the testing as applicable.

Completion plan drawn to a suitable scale indicating the following, along with three print copies of the same shall also be submitted along with related soft copy in pen-drive and/ or CD.

(a) General layout of the building & Substation equipments.

(b) Locations of main switchboard and distribution boards, indicating the circuit numbers controlled by them.

(c) Position of all points and their controls.

(d) Types of fittings, viz LED, pendants, brackets, bulk head, fans and exhaust fans etc.

(e) Name of work, job number, accepted tender reference, actual date of completion, names of Division/Sub-Division, and name of the firm who executed the work with their signature.

(f) In case of non submission of proper completion drawings & documents an amount of Rs. 1,00,000/- shall be withheld.

***35.* Warrantee**

35.1 The installation will be handed over to the Department after necessary testing and commissioning. The materials supplied by the contractor will be guaranteed against any manufacturing defect, inferior quality. The warrantee period will be for a period of 12 months from the date of handing over to the Department. The equipments or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in- Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in- charge in this regard shall be final & building on the contractor.

C=
I=
O } NIL AE (P)(E) EE(E)

35.2 The firm will be required to submit guarantee/warranty certificate of all LED fittings for 5 years from the manufacturer/OEM to the department. A certificate from OEM regarding availability of spare parts during the guarantee/warranty period shall also be submitted.

36. License, Certificate of Competency, Permit for Electrical Work

Electrical installations shall be carried out under the supervision of a person holding a certificate of competency issued by the appropriate government. The workmen shall also hold the appropriate certificate of competency issued by appropriate government. The Contractor shall also have electrical license from appropriate Government for appropriate class and voltage.

Helpers/trainees may assist licensed person on the installation work strictly under supervision of licensed person who shall allow him to work within the limited area, which has not been connected to source of electrical supply.

37. **Inspection by CEA**-: If required as per Statuary guidelines / norms after completion of the work, the contractor will offer the same for inspection of Central Electricity Authority if required under statuary provision. The contractor will extend all help including test facilities to the representative of Central Electricity Authority. In case the contractor fails to make desired facilities available during inspection, the department reserves the right to provide the same at the risk & cost of the contractor. The observation of Central Electricity Authority which are a part of agreement will be attended by the contractor promptly. The installation will be commissioned only after receiving clearance from Central Electricity Authority. Inspection fees of Central Electricity Authority will be borne by the department.

38. INDEMNITY

The successful tenderer shall at all times indemnify the department, consequent on this works contract. The successful tenderer shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from on the department during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful tenderer in so far as the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

Additional Conditions for E.I. & Fans work.

1. All the Additional Terms and Condition as mentioned under "Additional Terms and Conditions for E&M works" shall be treated as part and parcel of these Additional Conditions.

2- The work shall be carried out strictly in accordance with CPWD General Specifications for Internal Electrical Works 2023 & External Work-2023 and in accordance with Indian Electricity Rules, 1956, Indian Electricity Act, 2003 as amended upto date and as per instructions of the Engineer-in-Charge including as below and nothing will be paid extra.

(a) All material shall be got approved from Engineer-in-Charge before use. One sample flat/Bay shall be made for approval of final location of switch boards/ fittings etc. and then only work shall be executed in other flats/bays.
All damages done to the building during execution of Electrical work shall be the responsibility of the contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in- Charge. Any expenditure incurred by the department in this condition shall be recovered from the contractor and decision of the Engineer-in-Charge about recovery shall be final.

(b) All hardware items such as screws, thimbles, G.I. wires etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned. All hardware materials such as nuts/bolts/screws/ washers etc. to be used in the work shall be zinc/cadmium plated iron.

(c) CONDUIT LAYOUT shall be prepared by contractor and got approved before execution of work. In case contractor does not do so before start of work, recovery @ 2(two)% of tendered amount of I.E.I. works shall be made from the bill. Minimum No. of Junctions to be kept, & if required junctions to be kept underneath the fitting locations in corridor/rooms so that junctions are not visible after fittings are fixed/in position. Drop of conduit shall be well planned w.r.t. location of fitting/D.B. and criss crossing to be avoided. All chases in walls shall be cut using electrical chisels/cutters. For this purpose electricity shall be arranged by contractor. In case contractor fails to do chase cutting by electrical chisels/cutters and resorts to manual methods, a recovery of Rs.50/- per point shall be made from contractor's bill.

(d) Any conduit which is not to be wired by the contractor shall be provided with GI fish wire for wiring by some other agency subsequently. Nothing extra shall be paid for the same.
Termination of multi-stranded conductors shall be done using crimping type thimbles at both the ends. Nothing extra shall be paid for the same.

(e) All metal boxes to be applied primer and painted, then only should be installed else recovery @Rs.20/- per point should be made from contractor's bill. Boxes shall have socket arrangement for tightening screws, instead of simple holes in M.S. sheet. Boxes shall be again painted at the time of wiring.

(f) For Submain Wiring, Colour Code for different phases and Neutral (R.Y.B. black) to be maintained. While circuit wiring, wiring for fan point, wiring for light point shall be done with different colours for easy identification. Wiring for neutral shall be done with black colour and all connections to fans & fittings wherever visible shall be made with white PVC insulated copper wire or wherever cover sleeve may be provided. At Switch board, Switch shall be fixed in a logical manner w.r.t. fittings layout.

(g) Unless specifically approved by Executive Engineer (E.), loose wire box, above DB shall not be provided however DB's shall have loose wire box of same make.

All connections to MCB's shall be made using thimble/lugs.

All DB's i/c incoming & outgoing MCB's shall be suitably numbered with PAINT for location/circuits. DB shall be fixed in recess suitably (30 mm. approx. projected from unplastered wall) to ease opening of door. Top of DB to match with door frame height as per site conditions.

(h) Phenolic laminated sheet shall be of Egg white colour, and shall be filed/rounded at edges and of minimum 3mm thick.

(i) All fittings and fans should be properly earthed through the protective conductor.

Provision of earth bars in main boards, earth terminal block in DB's & earth studs in all metal boxes shall be made, connection to this stud shall be crimped.

A clamp type termination should be made in the termination of earth strips (where provided) to pipe electrodes to provide surface type contact.

(j) The earthing shall be carried out in the presence of the Engineer-in-charge or his authorized representative.

(k) The size at switch box for providing Modular Plate type Switch/Sockets shall be properly settled to take care of all necessary switches/screws/fan regulators. Blanking plate if required shall also be provided at no extra cost.

(l) For point wiring in steel conduit all piano type switch or all modular type switches/sockets/telephone outlets/T.V. outlets shall be of only one make.

C=
I=
O } NIL AE (P)(E) EE(E)

(m) Whenever supply items like fans & fittings etc. are also included in the Schedule of work, such items shall be executed only after completion of atleast 75% of the wiring items.

(n) The contractor shall make his own arrangement at his own cost for electrical/ general tools and plants required for the work.

(o) The sole responsibility about efficiency of equipment rest with the contractor. **5% (Five percent) of the cost of LED fittings & fans, motors shall be retained as Security Deposit from each bill and the amount so deducted would be released after guarantee/warranty period (i.e. 5 years & 2 years respectively) from the date of completion of the entire work under the agreement if the performance of the equipment is found satisfactory.** If any defect is noticed during the guarantee/warranty period, the contractor shall rectify it within 15 days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another agency at the risk and cost of contractor.

Other Additional conditions

3. The work shall be carried out according to approved drawings/details for execution of work and as per instructions of the Engineer-in-Charge who will have the right to change the layout as per requirement at site and the contractor shall not have any claim due to change in layout.

4. The work shall be carried out in engineering like manner. The bad workmanship will not be accepted and defects shall be rectified at contractor's cost to the satisfaction of the Engineer-in-Charge. The programme of electrical works are to be co-ordinated in accordance with the building work and no claim for idle labour will stipulated in the tender, electrical work shall have to be completed alongwith completion of civil work.

5. All the debris of the electrical works should be removed and the site should be cleared by the contractor immediately after the accruing of debris. Similarly any rejected material should be immediately cleared off from the site by the contractor.

6. Watch and ward of the material/equipment shall be the responsibility of the contractor till handing over of installation to the department.

7. The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.

8. The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department. However if there is any delay in construction from the department side, the installation may be taken over in parts, but the decision on the same shall rest with Engineer-in-Charge which shall be a binding on the contractor.

9. Some of the items of work, if already executed: on that case the successful tenderer shall have to use these items for completing the work. For wiring, the existing conduit wherever required shall be used by the contractor. The recovery will be made for these items as accepted rate of similar items.

10. The secured advance as applicable shall be allowed.

11. **Test Certificate** Test certificate for the work carried out shall also be submitted failing which recovery @1% tendered amount & maximum of Rs.1500/- shall be made from final bill.

12. **Panels:** Drawing of panel shall be submitted for approval within 30 days from award of work and fabrication to be taken up only after approval of such drawing. Before painting proper surface treatment shall be done and then powder coated. These shall be offered for inspection during fabrication.
13. Quantities indicated in Schedule of work are only tentative; contractor shall consult AE-in-Charge before procurement. Payment shall be made only for the quantities actually executed and measured.

14. **Time Period**: Contractor has to plan his activities, so that electrical work is to be carried out in close co-ordination with CIVIL work and in no case CIVIL work be delayed because of delay in electrical work and the work has to be completed accordingly.
15. The makes for items shall be as per list attached.

16. Material to be used in the work shall be ISI marked as applicable. The material in required quantity to be used in the work shall be got approved from the Engineer-in-charge before its use at site. The Engineer-in-charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.

17. Contractor shall preserve the copies of invoices, test certificates, gate passes etc. to prove the genuineness of material/purchases. The responsibility of procurement, genuine material of specialized works shall rest with the contractor.

18. Contractor is advised to visit site before quoting rates for determining site conditions. No claim or argument shall be entertained in this regard at later stage.

19. Required repairing and finishing work is to be done by agency after installation of split air conditioners.

20. The contractor shall make his own arrangement at his own cost for electrical / general tools and plants required for the work.

21. The rates of all items of work shall unless clearly specified otherwise, includes the cost of all labour, materials and other input involved in the execution of work.

C= I= O	NIL	AE (P)(E)	EE(E)

22. Central / State Sales Tax / Contract Tax / Excise Duty, GST etc. should be included in the rates tendered. Statutory deductions of contract tax at source shall be made while releasing payment through running/final bills. A certificate specifying the rate and amount of deduction shall however be issued. No Form 31/32 (road permit) shall be issued by the department. The road permit shall be arranged by the tenderer at his own.

23. All U.G. Cable work shall be got inspected and measurements lest checked by the Assistant Engineer in charge of work and his authorized representative before filling up the trenches, failing which work remain subject to 100% recheck at the risk and cost of the contractor.

24. All U.G. Cables before laying shall be got tested for continuity in presence of the authorized representative of the Engineer-in-Charge. Note to this effect shall be given in site order book.

25. Route of the U.G. Cables shall be got approved from the Engineer-in-Charge or his authorized representative.

26. Earthing shall invariably be done in the presence of the Engineer-in-Charge pr his authorized representative.

27. Completion Plan: Contractor shall submit completion plan (for works costing more than Rs.1/- lacs in triplicate before finalization of bill failing which recovery @2.5% subject to maximum of Rs.15000/- shall be made from final bill. Contractor has to submit SLDs & layout plan in triplicate in Dwd.pdf & A0 size hard copies in triplicate duly signed and checked by the concerned JE/AE.

28. Notwithstanding the schedule of quantities, all items of interrelated works consider necessary to make the installation complete and operative are deemed to be included shall be provided by the contractor at no extra cost.

29. **No inspection out side the country is permissible if required so the same will be deemed to be waived off and necessary test reports shall be submitted before the dispatch of equipment.**

Additional Terms & Conditions for DG Set work

1. **All the Additional Terms and Condition as mentioned under "Additional Terms and Conditions for E&M works" shall be treated as part and parcel of these Additional Conditions.**

2. **Acceptable makes for different equipments:-** The acceptable makes of various equipments/ components / accessories have been indicated in the List of Acceptable Makes / Manufacturers. The tenderer shall work out the cost of the offer on this basis. Alternate makes are not acceptable and tenders with any other make (s) shall be rejected.

3. The successful tenderer should furnish well in advance three copies of detailed instructions and manuals of manufacturer's for all items of equipments regarding installation, adjustments, operation and maintenance including preventive maintenance & trouble shooting together with all the relevant data sheets, spare parts catalogue etc. all in triplicate.

4. All the equipments and fabricated items etc. shall be offered for initial inspection at manufacturer's works. The contractor will intimate the date of testing of equipments at the manufacturers works before dispatch .The successful tenderer shall give advance notice of minimum two weeks regarding the dates proposed for such tests to the Engineer in charge to facilitate his presence during testing. The Engineer in Charge may witness such testing. The cost of Engineers visit to the manufacturer's works will be borne by the Department.

5. All routine tests conforming to relevant IS shall be carried out in the presence of Engineer-in-Charge or his authorized representative. The department reserves the right to inspect or not to inspect the equipment at the works of the manufacturer. In the later case confirmation in writing will be issued by the department. However, nothing extra shall be paid for conducting routine test in the presence of department's representative.

   Copies of all manufacturer's routine and type test certificates of the equipments carried out at the manufacturers premises shall be furnished to the inspecting officer and consignee. After completion of work in all respect, the contractor shall offer the installation for testing and operation.

6. All consignments are to be duly insured up to the destination from warehouse at the cost of the contractor. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

7. WORKS TO BE DONE BY THE CONTRACTOR

Unless otherwise mentioned in the tender documents, the following works shall bed one by the contractor and therefore, their cost shall be deemed to be included in the ir tendered cost-whether specifically indicated in the schedule of work or not: -

(i) Foundations for equipments including vibration isolation springs/ pads,

(ii) Making good all damages caused to the structure during installation andrestoring the same to their original finish.

C= I= O	NIL	AE (P)(E)	EE(E)

(iii) Minor building works necessary for installation of equipments, foundation trench for fuel line & cable, making of opening in walls or in floors and restoring them to their original condition/ finish and necessary grouting etc. as required.

(iv) All supports for exhaust & water pipes, chimney, bus trunking (if included inscope of contract), cables, anti-vibration pads etc. as are necessary.

(v) All electrical work and neutral earthing, body earthing, required for engine& alternator, main board/ control panels, and control wiring including loop earthing, if specified in Schedule of Work.

(vi) All pipes, bus trunking and/ or cable connections.

(vii) POL i.e. HSD oil and lub. oil for diesel engine for testing & commissioning for12 hours i/c 1hr of 10% overloading at OEA/ OEM works shall be arranged by the contractor. POL i.e. HSD oil and lub. oil for trial run of 4 Hrs. at site at available load shall be arranged by the department.

(viii) Painting of all exposed metal surfaces of equipments and components with appropriate colour.

(ix) Clearance/ Approval of the complete installation from CPCB/ State Pollution Control Board, Central Electricity Authority (CEA)/ Local Bodies and other licensing authorities, wherever required.

8. **Technical specifications for DG set work:-**

(i) The tenderer shall submit the de-rating calculations for engine along with supporting manufacture catalogues & model no of Engine & Alternator, offered.

(ii) CPCB Norms- The DG Sets shall be meet the requirements of environmental (protection) rules 1986 as laid down by Ministry of Environment & Forests read with GSR 771 (E) dtd. 11-12-13 with respect to emission norms of the diesel engine for supplies made on or after 01-07-14 and with respect to noise level GSR 371 (E) dated 17/05/2002 for the DG sets supplies made on or after 01-01-05. The firm need to furnish the certificate of Type approval and certificate of conformity of production issued by the Central Pollution Control Board (CPCB) or any authorised agency as prescribed by MoEF / CPCB in the above law.

(iii) At the time of submission of tender document the contractor is to submit:

(a) Written commitment from OEM/OEA to supply the DG Sets and delivery schedule as per requirement of department.

(b) Certificate from OEM/OEA or authorized service provider of engine manufacturer for satisfactory installation and commissioning of DG Set after completion of the work.

(c) Required Guarantee of DG Set from OEM/OEA in favor of Engineer-in- Charge to cover defect liabilities.

(d) An undertaking that mandatory free service is carried out during the guarantee period by the authorized service provider of engine manufacturer.

9. INSPECTION AND TESTING

The successful tenderer will arrange staff/fuel/POL for test run at his cost

Inspection and Testing of DG sets of capacity more than 200 KVA

C= I= O	NIL	AE (P)(E)	EE(E)

For DG sets of capacity more than 200 KVA, testing shall necessarily be carried out at factory/ manufacturer premises in presence of representative of the Department.

For testing, following procedure will be followed: All major items/ equipments i.e. engine & alternator in assembled condition, associated electrical control panels etc. shall be offered for inspection and testing at factory/ manufacturers works. The successful tenderer shall give a notice of minimum two weeks for carrying out such tests. The Engineer-in-charge/ or his authorized representative shall witness such inspection & testing at mutually agreed date. The cost of the representative's visit to the factory will be borne by the Department.

The department also reserves the right to inspect the fabrication job at factory and the successful tenderer has to make arrangements for the same.

DG set will be tested on load of unity power factor for the rated KW rating. During testing, each of the D.G. sets covered under scope of work, shall be operated for a period of 12 hours on the rated KW at DG set's KW rating including one hour on 10% overload after continuous run of the 12 Hours. During testing all controls/operations safeties will be checked and proper record will be maintained. Any defect/abnormality noticed during testing shall be rectified. The testing will be declaredsuccessful only when no abnormality/ failure is noticed during the testing. The DG set will be cleared for dispatch to site only when the testing is declared successful by authorised representative/ Engineer-in-Charge.

10. Inspection and Testing of DG sets of capacity equal to or less than 200 KVA

For DG sets of capacity equal to or less than 200 KVA, testing shall necessarily be carried out at site. However, initial inspection can be done at factory/manufacturer works before dispatch at site of work at the discretion of Engineer-in-Charge. All major items/ equipment i.e. engine & alternator in assembled condition, Electrical control panel etc. shall be offered for initial inspection at factory/ manufacturers works. The cost of the Engineer's visit to the factory will be borne by the Department. After initial inspection, DG Set and associated Electrical panel equipments shall be cleared for dispatch at site.

Copies of all documents of routine and type test certificates of the equipment, carried out at the manufacturers premises shall be furnished to the Engineer-in-charge and consignee.

After completion of the installation work in all respects, the contractor shall offer the DG Sets for testing. Testing shall be carried out exactly as mentioned above in "Inspection and Testing of DG sets of capacity more than 200 KVA para 4".

The requirement of testing of DG Set at manufacturer's premises, in presence of representative of the Department, can be dispensed with/ waived off, keeping in view the exigency of works, with the prior approval of the Chief Engineer. However, test certificates of the particular DG Set on full load, as mentioned in para 4 above, shall be submitted at the time of delivery of DG Set at site.

11. Trial Run/ Running-in-Period

After successful testing of the DG Set, a trial run at available load will be carried out for 120 Hours or 15 Days whichever is earlier. The DG Set will be operated and a log of all

C=
I=
O } NIL AE (P)(E) EE(E)

relevant parameters will be maintained during this period. The arrangement of staff for trial run/ running in period will be made by the successful tenderer. However, diesel shall be provided by Department. The contractor will be free to carry out necessary adjustments. The DG Set will be said to have successfully completed the trial run, if no break-down or abnormal/ unsatisfactory operation of any component of the entire installation included in the scope of work of the contract, occurs during this period. After this the DG Set will be made available for beneficial use. After the DG Set has operated without any major break-down/ trouble, it shall be taken over by the department subject to guarantee clause of the contract. This date of taking over of the DG Set, after trouble free operation during the trial run/ running-in period, shall be the date of acceptance/ taking over.

12. Safety measures

All equipments shall incorporate suitable safety provisions to ensure safety of the operating personnel as per manufacturers' standard practice.

13. STATUTORY CLEARANCE(S)

Approval/ clearance of the complete installation shall be obtained by the contractor from CPCB/ State Pollution Control Boards/ Local Bodies/ Central Electricity Authority (CEA)/ other licensing authorities wherever required. However, application shall be made by Department and any statutory fee, as applicable, shall be paid byDepartment directly to the govt. authorities concerned.

14. Drawings for Approval on Award of the work

The contractor shall prepare & submit three sets of following drawings and get them approved from the Engineer-in-charge before the start of the work. The approval of drawings however does not absolve the contractor not to supply the equipments/materials as per agreement, if there is any contradiction between the approved drawings and agreement.

(a) Lay out drawings of the equipments to be installed including control cables, fuel/ lube oil pipes and supports/ structure for exhaust piping, Chimney and bus ducts/ cable trays.

(b) Drawings including section, showing the details of erection of entire equipments.

(c) Electrical wiring diagrams from engine-alternator set to Electrical control panel, Electrical control panel to essential LT board including the sizes and capacities of the various electrical/ control cables and equipment.

(d) Dimensioned drawings of Acoustic enclosure/ Engine-Alternator set and Electrical control panel.

(e) Drawings showing details of supports for pipes, chimney cable trays, ducts etc.

(f) Any other drawings relevant to the work.

15. Drawings/Documents to be furnished on completion of Installation

C= I= O	NIL	AE (P)(E)	EE(E)

Two sets of the following laminated drawings shall be submitted by the contractor while handing over the installation to the Department. One set shall be laminated on a hard base for display in the DG set room/room where AMF panel is installed and another set shall be displayed in Junior Engineer's room. In addition, drawings will be given on Compact Disc (CD):

(a) DG set installation drawings giving complete details of all the equipments, including their foundations.

(b) Line diagram and layout of all electrical control/AMF panels giving switchgear ratings and their disposition, cable feeder sizes and their layout.

(c) Control wiring drawings with all control components and sequence of operations to explain the operation of control circuits in AMF panel/PCC.

(i) Manufacturer's technical catalogues of all equipments and accessories.

(ii) Operation and maintenance manual of all major equipments, detailing alladjustments, operation and maintenance procedure.

16. AFTER SALES SERVICES

The contractor shall ensure adequate and prompt after sales service free of cost during guarantee period, and against payment after the guarantee period is over, in the form of maintenance, spares and personnel as and when required during normal life span of the equipments and shall minimize the breakdown period. In case of equipment supplied by other manufacturers the firm shall furnish a guarantee from the manufacturer for the same before the DG Set installation is taken over.

PREFERRED MAKES OF MATERIALS FOR E & M

Sl.	Details of Materials/ Equipment	Manufacturer's Name
	I.E.I, MCBDB & MCB, Cables and Wires	
1	MCB, Isolator, Industrial plug Socket, RCCB, RCBO's (ISI Marked/IEC Compliant)	Schneider Electric ACTI-9(N)/ Legrand (DX3)/ LK (Formerly L&T) (Exora)/ ABB (SB200M)/Seimens (Betaguard)/Havells
2	MCBDB & Loose Wire Box	Schneider Electric (Acti-9)/ LK(Exora)/Siemens/ ABB (Elegance)/ Havells/ Legrand (Ekinox)
3	Change Over Switch	LK/ Havells/ Hager/ C&S
4	Automatic Transfer Switch (ATS)	Asco/Russel/Socomac/Hager/ABB/ LK
5	FRLS PVC insulated copper conductor single core cable for wiring. (ISI marked)	Finolex/ RR Kabel/ Havells/ Polycab/ KEI/Grandlay
6	Armoured/Unarmoured Telephone cable, Coaxial Cable	Delton/ Finolex/ RR Kabel/ Havells/ Grandlay
7	MS Conduit (ISI marked) with heavy duty MS conduit pipe accessories	BEC/NIC/AKG/RMCON/JPC **(Note: The make of accessories shall be same that of conduit pipe and will comply to IS/4768 part 2 2003)**
8	PVC conduit (ISI marked) with heavy duty PVC conduit pipe accessories	AKG/ Norpack/BEC/Polypack/Precision/Anchor/ Polycab
9	Modular switches, socket/ telephone socket/ cable TV socket/ data outlet socket/ fan regulator/ GI boxes etc (Wiring accessories)/ regulators/ Motor starter etc.	Legrand / Schneider electric / Wipro / M.K. /Havells / ABB
10	Industrial Socket	L&T/Legrand/Schneider/Havells/ABB
11	Selector Switch & Toggle Switch	Salzer (L&T)/ Siemens/ Kaycee/Rishabh/ABB
12	PVC Trunking	MK/ Schneider Electric/ Legrand/OBO
13	GI Pipe	Tata/ Jindal (Hissar)/ Prakash Surya
14	Paints	Nerolac/ Asian/ Berger
15	Terminal Blocks & Connectors	Elmax/Wago/Hensel/Connectwell
16	Phenolic Laminated Sheet/ Bakelite sheet	Hylam/ Formica (P-I Grade)/ Mylam/Greenlam
17	Cat-6 Cable, Co-Axial cables, Telephone Wires & cable	Amp, Avaya/ Beldon/ Legrand/ Molex/ Schneider/ Comscope/ D-Link
18	LED Fittings (ISI Marked/BEE Certified)	Wipro/ Phillips/ Havells/ /Lighting Technology
19	Exhaust fan/Fresh Air Fan	Havells/Crompton greaves/USHA/ Bajaj
20	Ceiling Fan ISI Marked/BEE Certified)/Wall Fan	Havells/ Crompton Greaves/ USHA/Bajaj
21	Wall Bracket Fitting	Havells/ Decon / Phillips/Lighting Technology/ Luster/

		Jaquar/Anchor Panasonic/ Orient Electric/Halonix
22	Geysers (BEE Certified)	Racold/CG/Havells/Usha/Jaquar/Bajaj
23	Hot Dipped Galvanized Octagonal Pole (Factory finish)	Valmont/ Wipro/ Phillips/Crompton Greaves/Bajaj/ Paruthi Engineers Pvt. Ltd.
24	Polycarbonate Junction Box/ Enclosure	Hensel/ Spelsberg/ Naptune-Bals/OBO
25	XLPE Insulated PVC Sheathed Alum./ Copper Conductor Armored Cable of 1.1KV Grade	Finloex/ RR Kabel/KEI/Havells/Polycab/Grandlay
	Sub Station Equipments	
1	LT panel/ Meter Panel Board/ Outdoor Feeder Pillar/APFC panels / Bus ducts	Tricolite Electrical Industries/ C&S/ Sterling & Wilson/ MILESTONE/ Adlec Control System Pvt. Ltd./ Advance Panels & Switchgears Pvt. Ltd./ Associated Switchgears & Projects Ltd/ Allied Engineers/ Pristine/ SPC Electrotech Pvt. Ltd. /ASES/Shalabh/ R P Control/Excel Control System
2	SMDB	Schneider Electric ACTI-9(N)/Legrand/LK(FORMERLY L&T)(ENERSYS-S)/ABB(Elegance)/Siemens
3	Air insulated Rising Main/ Bus Trunking & accessories	C&S/ L&T/Schneider/Legrand/Godrej
4	Sandwich type bus Trunking/ Rising Main & accessories	C&S/ L&T/Schneider/Legrand/Godrej
5	Moulded Case Circuit Breaker (MCCB) Thermal Release/ Microprocessor Based (Ics=Icu=100%)	Schneider electric NSX series/ Legrand (DPX3)/ L&T(D-Sine)/ABB(T-Max)/Siemens(VL series)/C&S(Winbreak-1/2) /
6	Power/ Aux. Contactor 3/4 Pole	Schneider Electric/ Legrand/Hager/L&T/ ABB/ Siemens /C&S/BCH
7	Potential transformers/ Current Transformers	Automatic Electric/ Gilbert & Maxwell/ Matrix/ Precise/ L&T/ Kappa
8	LED Type Indicating Lamps/ Push button	Schneider electric /L&T / Siemens/C&S/Vaishno
9	Over load relays	Schneider Electric/ L&T/ Siemens/C&S/ABB
10	Conventional/Electronic Digital Meters (A/V/PF/Hz/KW/KWH)	Conzerv/ L&T/ Secure/ AE/ C&S
11	Timer	Schneider Electric/ Legrand / Hager / L&T/ABB/Siemens/C&S
12	Fasteners/ GI Clamps	Hilti/ Fisher/ Chilli / GMGR
13	D.W. Corrugated HDPE Pipe (ISI Marked)	REX/ Duraplast/Triputi/ Duraline/CPE
14	Transformer (Oil/ Dry pipe)	Crompton/ ABB/ Schneider/VOLTAMP
15	HT Panel/ Ring main Unit	Compton/ Siemens/ ABB/ L&T/ Schneider
16	H.T. Cable (ISI marked)	Finloex/ RR Kabel/KEI/Havells/Polycab

C=
I=
O } NIL AE (P)(E) EE(E)

17	HT End Termination/Cable Joining Kit	Reychem/ Denson/ Cab Seal/safekei/3M
18	ACBs with Display	Schneider Elecric(Masterpact)/Legrand(DMX3MP4)/L&T (U-Power-OMEGA)/ABB(Emax)PR122/Seimens
19	Rubber mat	Jyoti/ Deep Jyoti/ Premier (Duly ISI Marked)
20	Ammeter	Rishab/ L&T/AE/C&S
21	Voltmeter	Rishabh/ L&T/AE/C&S
22	Capacitor and Reactors /APFC Relay	EPCOS/ L&T/ DUCATI/ ABB/ Siemens/ Schneider
23	XLPE Insulated PVC Sheathed Alum./ Copper Conductor Armored/ Unarmored Cable of 1.1KV Grade	Finloex/RR kabel/KEI/ Havells/Polyacb/ Grandlay
24	Cable Glands Double Compression With Earthing Links	Baliga Lighting/ Comet/ Cosmos/ Dowells/Gripwell
25	Bimetallic Cable Lug	Comet/ Dowells (Biller India)/ Hex Brass (Copper Alloy India) / Jainson/ Action
26	MS/ GI Cable Tray	Pilco/slotco/pasco/MEM/ BEC/ steelways/ Legrand/ RMcon/True leader/R.P. Controls/OBO
27	Programmable Logic Controller (PLC)	Siemens/ Allen Bradley/ L&T/ ABB
28	VCB Panel	Crompton / ABB/ Schneider/ Voltamp/ Legrand/ Siemen
	DG Set	
1	Diesel Operated Generating Engine	Cummins India/ Caterpillar/ KOEL/ Volvo Penta/Perkins
2	Alternator	Stamford/ leroy somer/ kirloskar electric/ caterpillar/ Crompton
3	DG Set Canopy/ Enclosure & AMF Panel	As per OEM/OEA of respective DG set manufacturer
4	Alarm Annunciator	Advani Oralikon/ L&T/ Minilec
	Fire Fighting Equipments	
1	MS pipe	Tata/ Jindal (Hisar)/Parkash surya
2	GI Pipe	Tata/ Jindal (Hisar)/Parkash surya
3	Forged Steel Fittings/flanges	Johnsons Industries/ VS Forge/ JK Forging/ True forge
4	Forged Steel Fittings and flanges (for welding joints)	VS Forge/Rohini/kanwal forge/Johnson/ True forge
5	Pipe hangers	Chilli/Hilti/GMGR
6	Gun metal/ Brass Valve (ISI marked) /(Full way Globe valve/Non return valve)	Sant/ Leader/ Advance/ Zoloto/ Kirloskar
7	Butterfly/Sluice (ISI marked)	Audco/ Sant/ Leader/ Advance/ Zoloto/ Kirloskar
8	Check Value (ISI marked)	Audco/ Sant/ Leader/ Advance/ Zoloto/ Kirloskar
9	Foot Valve (Cast Iron / Gun Metal)	Audco/ Sant/ Leader/ Advance/ Zoloto/ Kirloskar
10	Y- Type Strainer	Audco/ Sant/ Leader/ Zoloto/ Kirloskar
11	Fire/ Sprinkler Pump/ Terrace Fire Pump	Kirloskar/KSB/ Grundfos/ Wilo Mather & Platt
12	Electrical Motor	ABB/ Siemens/ Kirloskar/ Grundfos/ Crompton/ NGEF

C=
I=
O

NIL

AE (P)(E)

EE(E)

13	Diesel Engine for fire pump	Cummins India/Ashok Leyland/ KOEL/ Greaves
14	Couplings (Type-Type)	Lovejoy/ Fenner/ Dunlop
15	Anti Vibration Mounting	Kanwal Industrial Corporation/ Dunlop/ GERB/ Resistoflex
16	Pressure Switch (ISI marked)	System Sensor/Indfoss/Danfoss/Switzer/Honeywell Siemens
17	Pressure Guage (ISI marked)	H Guru/ Fiebig/ Dwyer
18	Double/Single Headed Landing Value (ISI marked)	Minimax/ New Age/ Safeguard/ Lifeguard/ Padmini/ Omex/ Andex/Suprex
19	Male Female Fire Hose Coupling (SS 304) (ISI marked)	Minimax/ New Age/ Safeguard/ Lifeguard/ Padmini/ Omex/ Andex/Suprex
20	First Aid Hose Drum/ Fire Hose reels/ Shut off Nozzle (Gunmetal/ ABS) (ISI marked)	Minimax/ New Age/ Safeguard/ Lifeguard/ Eversafe/ Padmini/ Omex/ Andex/Suprex
21	SS 304/ Gun metal Branch Pipe & Nozzle (ISI marked)	Minimax/ New Age/ Safeguard/ Lifeguard/ Padmini/ Omex/ Andex/Suprex
22	Fireman Axe	Minimax/ New Age/ Safeguard
23	Water Flow Switch (FM/UL listed)	System Sensor/ Rapid Control/ Potter/ Switzer
24	Rust preventive polymeric 4mm thick tape for pipes directly buried in ground pipe protection pypkoat (AW4) wrapping (ISI marked)	Pypcoat/Marphalt/Rustech/Safex
25	Level controller & indicator (water) (ISI marked)	Auto Pump/ Cirrus Engineering/ Techtrol
26	Fire brigade inlet connection (ISI marked)	Minimax/ New Age / Safeguard / Lifeguard/Padmini/ Omex/ Eversafe/Suprex
27	Thermoplastic pipe for first aid hose reel (ISI marked)	New Age / Safeguard/ Lifeguard/Padmini/ Omex / Eversafe/Suprex
28	Fire Sealent	Promat/ Birla 3M/ Hilti
29	Overload relays	Schneider electric / Larsen & Toubro/ Siemens/ C&S / ABB
30	Power/ Aux. Contractor 3 /4 pole	Schneider electric / Legrand/Hager/ LK(FORMERLY L&T)/ABB/ Seimens/ BCH
31	LED Type Indicating lamps/ Push Button	Schneider electric / LK(FORMERLY L&T)/Siemens/C&S/ABB
32	LT jointing Kit/Termination	Raychem/ denson/ cap seal/ Safekei/ 3M
33	RRL hose pipe (ISI Marked)	New Age/Safeguard/Lifeguard/Padmini/Omex
34	Dry Battery	Exide/ Amar raja/ HBL/ Pulse/Amco
35	Battery Charger	Statcon/Amar raja/CDC/AE/Expofyn/Thycon India
36	Epoxy Paint	ICI/ Asian/Berger/ Nerolac
37	Air release Valve	Rb/ Tbs/Cimbrio/Zoloto
38	Analogue/digital Measuring Instruments (Voltmeter/Ammeter/ Energy Meter/KW/PF/Multi Function Meter)	AE/Rishabh/LK(FORMERLY L&T)/C&S/Conzerve
39	Aluminium/Copper power Cable/	Finolex/RR Kable/ KEI/Havells/ /Polycab

C=
I=
O } NIL AE (P)(E) EE(E)

	Control cable(Armoured/Unarmoured)	
40	Cable gland and Lugs	Comet/Dowells/Hex brass(Copper Alloy India)/Jainson/ Action
41	Solenoid Valve/Spray nozzle	Perker / HD / Tyco/Emersion
42	Sprinkler	HD / Tyco/Reliable /Wormald/Viking
43	Sprinkler head/Water Curtain Nozzle	Tyco/Viking/Omex/Newage/Lifeguard
44	Steel Flexible Extension	Omex/Newage/Tyco /Lifeguard
45	Vibration Eliminator	Resistoflex/D waren/ Kanwal
46	Welding Electrodes	Advani/ESAB/ LK(FORMERLY L&T)
47	Deluge Valve	Tyco/Viking/HD
48	Cast Iron Valve	Kirloskar/Kartar/kalpana/Joloto/Audco/Advance
49	Fire survival cables	Bonton

	Fire Alarm System	
1	Manual call box	Notifier/Johnson Control/Honeywell/Siemens/Bosch/ EST (Edwards)
2	Strobe lights cum hooter	Notifier/Johnson Control/Honeywell/Siemens/Bosch/ EST (Edwards)
3	Fire alarm control panel	Notifier/Johnson Control/Honeywell/Siemens/Bosch/ EST (Edwards)
4	Repeater panel	Notifier/Johnson Control/Honeywell/Siemens/Bosch/ EST (Edwards)
5	Talk back unit	Notifier/Johnson Control/Honeywell/Siemens/Bosch/ EST (Edwards)
6	Smoke detector /Heat Detector	Notifier/Johnson Control/Honeywell/Siemens/Bosch/ EST (Edwards)
7	Cat-6 cable, wires & Fiber optic cable	Amp/Avaya/Belden/Legrand/ Molex/ Schneider/Comscope /D-Link
8	Response Indicator	Agni devices/Apollo/System Sensor/ Electro quip
9	Fire Extinguisher (ISI marked)	Lifeguard/Ceasefire/Minimax/Safex/ Kanex
	Water Supply Pump Sets	
1	Submersible Pump Set	KSB/CG/Kirloskar/Grundfoss
2	Submersible Pump Set	KSB/CG/Kirloskar/Grundfoss/Wilo
3	GI pipe	Tata/Jindal Hisar/Prakash surya
4	Sluice Valve / Check Valve/ Butterfly valve/ Non Return Valve	Kirloskar/Sant/ Leader/ Zoloto/Audco/Advance
5	Submersible Cable	Fionolex/RR Kable/ KEI/ Havells/Polycab/ Grandlay
	HVAC	
1	Split Air conditioner	Daikin/Hitachi/ Voltas / Blue star/ LG
2	Window type Air Conditioner	Daikin/Hitachi/ Voltas / Blue star/ LG
3	Voltage Stabilizer	Daikin/Hitachi/ Voltas / Blue star/ LG
4	VRV A.C (Outdoor/Indoor/Remote	Daikin / Hitachi/ Mitshubishi Electric/O General/Toshiba

C=
I=
O } NIL AE (P)(E) EE(E)

	Control/Y Joint)	
5	Copper Refrigerant Piping	Rajco / Mandev / Totaline/Kwality Tubes/Shree Shyam
6	Nitrile Rubber Insulation (For Duct / Drain Pipe / Refrigerant Pipe Insulation)	Armaflex/Aeroflex/K Flex/Eurobatex/Superlon
7	UPVC drain pipe	Supreme/Finolex/Astral/Ashirvad
8	Multicore Copper flexible Cable	Finolex/Polycab/RR Kabel/KEI
9	Two way pressure independent balancing & control valve	Siemens/Danfoss/Belimo
10	Adhesive for insulation	Pidilite/Superlon/Armacell
11	GI/GSS Sheet for ducting	Tata/SAIL/Jindal Hissar/ Asawa insulation
12	Auto air vent	Zoloto/Rapid cool/Emerald/Cimberio
13	Air Handling Unit with coil	Zeco/Edgetech/Waves/Flaktwood/VTS/Systemair
14	Air Washer	Zeco/Edgetech/Waves/Flaktwood/ Humidin/Symphony
15	Axial flow/Centrifugal Fan	Kruger/Greenheck/Wolter/Nicotra/Systemair/ Comefri/ Air flow
16	Balancing Valve	Advance/L&T/Honeywell/Danfoss/Belimo
17	Dash Fasteners	Canon / Fischer /Hilti
18	Variable Pumping System	Grundfos/Armstrong/Xylem ITT/wilo/Kirloskar
19	Chilled/Hot water circulation and Condenser water pump	Grundfos/Armstrong/Xylem ITT/wilo/Kirloskar
20	Electric Motor	ABB / Siemens / Kirloskar / Grundfos / NGEF / Crompton Greaves
21	CPRX Compound/Tar Felt	Shalimar Tar Product/Asian/Pidilite
22	Grills, Diffusers	Air Flow
23	Fire Dampers	Air Flow
	Uninterrupted Power supply (UPS)	
1	Online/Offline UPS	Numeric/Eaton/APC/Vertiv/Mitsubshi/Toshiba
	Fire Suppression System	
1	Gas Based Fire Suppression System	ASES/3M/Ceasfire
	PA System	
1	Voice alarm controller	JBL/Yamaha/Bose/Electro-Voice (EV)/QSC/ Behringer/Bosch
2	Speaker	JBL/Yamaha/Bose/Electro-Voice (EV)/QSC/ Behringer/Bosch
3	Amplifire	JBL/Yamaha/Bose/Electro-Voice (EV)/QSC/ Behringer/Bosch
	CCTV System	
1	Bullet Camera	Cp Plus/Matrix/Globus Infocom/Zicom/Prama /Indinatus/Samsung India/Panasonic
2	Dome Camera	Cp Plus/Matrix/Globus Infocom/Zicom/Prama /Indinatus/ Samsung India/Panasonic
3	Network Video Recorder	Cp Plus/Matrix/Globus Infocom/Zicom/Prama /Indinatus/ Samsung India/Panasonic
4	Hard Disk Drive	Seagate/Hitachi/Wd
5	Led Monitor	Samsung/Lg/Panasonic/Sony
6	Network Switch	Netgear/D-Link/Digisol/ Brocade/Hpe-Aruba

C=
I=
O

NIL

AE (P)(E)

EE(E)

7	Media Convertor	Netgear /D-Link/Digisol/ Brocade/Hpe-Aruba
8	Power Wire/Cable	Polycab/Grandlay/Finolex/Skytone/R R Kabel
9	Pvc Conduit	AKG/PRECISION/FINOLEX /BEC/VIKAS
10	FIBER CABLE /CAT6 CABLES	Amp/Avaya/Beldon/Legrand/Molex/Schneider/Comscope
11	Hdpe Pipe	Rex Polyextrusion/Dura Line (Isi Marked) /Cpe
12	Network Rack	Valrack/Dynamic /Rittal/Comrack/Netrack/Legrand
13	Junction Box	Sintex/Schinder/Legrand /Hensel
14	UPS	Eaton/Delta/Numeric/Vertiv/Apc
15	Patch Card	Legrarnd/Panduit/Systimax/Siemon
16	Access Point	Hpe-Aruba/Cisco/Zuniper
17	Fiber Optic Module	Aruba/Cisco/Zuniper/Extreme
18	Patch Panel	Legrarnd/Panduit/Systimax/Siemon
	EPABX System/ IP Based PBX System	
1	EPABX System	Siemens/Cisco/Alcatel/Coral/Panasonic/Avaya
2	Master console phone	Siemens/Cisco/Alcatel/Coral/Panasonic/Avaya
3	Telephone instrument	Beetal/ Tata/ Panasonic/Coral
4	18 SWG sheet (Chrone Box)	Topaz/Coral/Crown
5	Constant voltage transformer	Topaz/Bhurji/Delta/ Servokon
6	Unarmoured telephone wire	Delton/ Finolex/RR Kabel/Havells
7	Cat-6 cable, Wires & Fiber optic cable	Amp/Avaya/Beldon/Legrand/ Molex/Schneider
8	IP Based PBX System	Matrix/Panasonic/NEC/CISCO/Alcatel/Eric sson/Siemens/Tadiran
9	Managed Network Switches	CISCO/Allied Tellies/HP/Netgwear/Juniper
10	Rack (Network/Server)	Netrack/WQ/Panduit/Rittal/Derwiser Emersion/Schneider(APC)/Valrack
11	All other items not covered above	As per approval of the Engineer-in-Charge
	Networking	
1	Network Switch	Cisco / Zuniper /Hpe-Aruba/Extreme
2	Access Point	Hpe-Aruba/Cisco/Zuniper
3	Fiber Optic Module	Aruba/Cisco/Zuniper
4	Network Rack	Valrack/Dynamic /Rittal/Comrack/Netrack/Legrand
5	Patch Panel	Legrarnd/Panduit/Systimax/Siemon

Note:- In case make of any equipment or material is not specified in the NIT, the matter shall be referred to the NIT approving authority and obtain the approval. Thereafter the agency can proceed with the supply of material.

C=
I=
O } NIL AE (P)(E) EE(E)

SCHEDULE OF QUANTITY (ELECTRICAL)

Name of work:- Construction of Various Infrastructure at GC, CRPF, Chandauli. ***(SH: Balance work of Bulk & Development services).***

S.No.	Description of Item	Qty		Rate	Unit	Amount
1	Supply, installation, Testing & Commissioning of 'Silent Type Diesel Generating set as per CPCB IV + or better norms along with having Prime Power Rating of KVA as below, 415 volts at1500 RPM, 0.8 lagging power factor at 415 V suitable for 50 Hz, 3 phase system & for 0.85 Load Factor, including testing at factory and site with fuel, load for test and other necessary arrangements Complete as per CPWD specifications, should have QR code which should contain drawing, test report OEM manual, Geo- Tag of manufacturing location, rating plate as per relevant IS Code etc. and consisting of the followings: (A) Diesel Engine: Tourbo charged Diesel engine 4 stroke water cooled, multi cylinder, dynamically balanced fly wheel, electric start of suitable BHP at 1500 RPM suitable for above output of alternator at 40Degree C, 50% RH & at 1000 Meter MSL , capable of taking10% over loading for one hour after 12 hours of continuous operation. The engine will be with Electronic governor, Dry type Air filter with service indicator, first filling of engine fuel (after commissioning) lubricating Oil, Coolant and other consumables complete with all the required accessories, the Electronic governor shall be as per ISO 8528.The engine shall comply to the latest CPCB norms (CPCB IV + or better) and Conforming to BS 5514, BS 649, IS 10000, IS 10002, IS 13018 and as per CPWD specifications. (B) Engine mounted Instrument Panel fitted with and having digital dis Plate for following: (i) Start-stop switch with key (ii) Water temperature indication (iii) Lubrication oil pressure indication (iv) Lubrication oil temperature indication (v) Battery charging indication and Voltage indication (vi) RPM indication (vii) Over speed indication					

C=
I=
O } NIL

AE (P)(E)

EE(E)

	(viii) Low lubrication Oil trip indication (ix) Engine Running Hours indication (x) Fuel Level (C) Alternator: Synchronous alternator rated of appropriate KVA, 415 volts at 1500 RPM, 3 phase 50 Hz, AC supply with 0.8 lagging power factor at 40 Degree C, 50% RH & at 1000 Meter MSL. The alternator shall be having Screen Protected Drip Proof (SPDP) enclosure IP23, brushless, continuous duty, dynamically balanced rotor, capable of taking 10% over loading for one hour after 12 hours of continuous operation, self cooled, self-excited and self-regulated through AVR conforming to IS13364(Part 2)/IS: 4722/BS 2613 suitable for tropical conditions and with class- H insulation. (D) Base Frame & Foundation:Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as per recommendations of manufacturer. (E) FUEL TANK:Daily service fuel tank of suitable litres capacity as per CPWD Specifications, fabricated out of 3 mm thick M.S. sheet complete with all standard accessories and fuel piping between fuel tank and diesel engine with MS class 'C' pipes of suitable dia. Complete with valves, level indications & accessories as required as per specifications. (F) Exhaust System:Dry exhaust manifold with hospital type exhaust silencer and catalytic convertor.(G) Starting System: 12V/24V DC starting system comprising of starter motors: voltage regulator and arrangement for initial excitation complete with suitable numbers of batteries (180 AH capacity lead acid SMF type) as required as per specifications. The battery shall be housed inside the acoustic enclosure of DG Set. (H) Acoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere and the temperature rise inside the enclosure, noise level outside enclosure.					

C=
I=
O } NIL AE (P)(E) EE(E)

	The acoustic enclosure should be suitable for cable connection/connection through bus-trunking. Such arrangements on acoustic enclosure should be water proof &dust-proof conforming to IP-65 protection. The enclosure shall be as per CPCB IV + or better norms etc. and as per CPWD specifications. (I) AMF Panel: Free standing floor mounted IP 42 automatic mains failure control panel including auto by-pass, suitable for KVA as below for silent type DG set complete with relays, timers, set of CTs for metering & protection and energy analyser to indicate currents, phase and line voltages, frequency, power factor, KWH, Kilo Volt Ampere Reative Hour (KVARH), KVA (Phase & Total), KW & provision for overload, short circuit, restricted earth fault, under frequency, power (aluminium) and control (copper) cabling of suitable size upto 15 meter between AMF panel, LT Panel and DG Set including connection interconnection etc. as required, all complete and inter locking and communication/ Ethernet /RS485/SNMP port open protocol for BMS integration including suitable software, the panel shall be of DG Set OEM make etc. as per approved by Engineering in charge and including the following: 1. Suitable numbers and appropriate capacity 4 pole motorised electrically operated draw out with cradle type 3 position ACB/ MCCB with electronic release for O/C & E/F and shunt trip. 2. Auto/Manual/Test/Off selector switch 3. Protection for under and over voltage phase reversal (2 nos Over voltage relay, 2 Nos. reverse power relay and 2 Nos. under voltage relay). 4. 3 Sets of current transformers 15 P 10 accuracy for protection and 15 VA class-I for metering. 5. Energy analyser unit to indicate current, Voltage(LN & L_L), kW, kVA (Phase & Total), Frequency, KWH, PF. 6. LED Indicating lamps for load on mains and load on set 7. Fuse/ MCB for instruments 8. Battery charger, complete with transformer/ rectifier, D.C. voltmeter and ammeter, selector switch for trickle, off and boost and current					

C=
I=
O } NIL AE (P)(E) EE(E)

	adjustment. 9. Main supply failure monitor 10. Supply failure timer 11. Restoration timer 12. Control unit with three impulse automatic engine start/stop and failure to start lockout.13. Impulse counter with locking and reset facility. 14. ON/OFF/Control circuit switch with indicator 15. Audio/Video annunciation for (i) High water temperature (ii) Low lubricating oil pressure (iii) Engine over speed (iv) Engine fails to start (v) Full load/maximum load warning 16. Protection for over/under Frequency, Loss of AC sensing, Over Current, Unbalancing load with suitable number of relays and accessories 17. Maintenance notification based on Engine Run Hour & due date. 18. Load Management through PLC to achieve auto opening and closing of incomer breakers, bus coupler switching of essential panel, interlocking providing signal to AMF Panel for load status and AMF shall give command to DG Set to auto start / auto stop depending upon load status and requirement etc. and necessary hardware and software required to perform the operation shall be provided by the contractor including all control wiring.					
1.1	320 KVA	2.00	Nos	24,47,399.00	each	48,94,798.00
2	Earthing with G.I. earth pipe 4.5 Meter long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	4.00	Set	7,658.00	Set	30,632.00
3	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 Meter long etc. with charcoal/ coke and salt as required	4.00	Set	8,351.00	Set	33,404.00

C=
I=
O } NIL AE (P)(E) EE(E)

4	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	60.00	Mtrs	755.00	meter	45,300.00
5	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	100.00	Mtr	287.00	Meter	28,700.00
6	Fabrication, supply, installation, testing and commissioning of MV compartmentalised free standing outdoor feeder pillar panel fabricated out of 2mm thick for frame work and covers and 3mm thick for gland plates MS sheet steel including cleaning & finishing complete with 7 tank process powder coating, totally enclosed dust and vermin proof, suitable for operation on 3 phase 415 V, 4 wire AC supply system, having suitable cable entry arrangement with detachable gland plate, including supply and fixing the following switch gear, interconnectrions, with suitable size aluminium busbar chamber conforming to section 4 of CPWD General Specification for Electrical Works Part - IV Substation 2013 etc complete as required including suitable size foundations and providing and fixing the following accessories, connection etc as reqd.					
	A. Incoming					
	100A 4P 25kA MCCB, with rotary handle and spreader link (Fixed Thermal Fixed Magnetic) - 1 No. Ics = 100% Icu					
	AC3: 95A AC1: 120A 3P Power Contactor, Coil: 220V AC, Aux. Contact: 1NO+1NC - 1 No.					
	Time Switch, Voltage: 110-240V AC, 1 Phase - 2W,Contact: 1 C/O, BASE/DIN - 1					
	Multifunction Meter with RS485(MODBUS), Parameters : VAF + kW + kWh + PF + PA + RH + OH + NI + MM + NC, 1Ph/3Ph 3W/4W, Acc. CL: 1, Input: 110/230/415V L-L, 1/5A, Aux. Supply: 60-300V AC/DC or 20-40V.AC / 20-60 V DC - 1 No.					
	100/5A 10VA Tape Wound Acc. Cl: 1 Ring Type Current Transformer - 3 No.					

C=
I= } NIL AE (P)(E) EE(E)
O

	(RYB) Pilot Light in Barrel Type Poly Carbonate Lens with Surface Mounted LED, Voltage: 220V AC- 1 Set					
	6A 1P 2Way Local - Remote/ Auto-Manual Switch with OFF, 90 Deg. Operation- 1 No.					
	6A 1P 10kA C-Curve MCB - 1 No.					
	O\G 16 A 4P MCB					
	16A 4P 10kA C-Curve MCB - 6 No.					
	BUSBAR DETAILS					
	BUSBAR RATING- 150 A	4.00	Set	92,008.00	Set	3,68,032.00
7	Supplying and laying of following size **DWC HDPE pipe** ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc.direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.					
7.1	63 mm dia (OD-63 mm & ID-51 mm nominal)	1050.00	Mtr	289.00	Meter	3,03,450.00
7.2	90 mm dia (OD-90 mm & ID-76 mm nominal)	250.00	Mtr	336.00	Meter	84,000.00
8	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing **RCC/HUME/ METAL/DWC pipe** as required.					
8.1	Above 35 sq. mm and upto 95 sq. mm	1050.00	Mtr	72.00	Meter	75,600.00
8.2	Above 95 sq. mm and upto 185 sq. mm	250.00	Mtr	97.00	Meter	24,250.00
9	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing **masonry open duct** as required.					
9.1	Above 35 sq. mm and upto 95 sq. mm	100.00	Mtr	58.00	Meter	5,800.00
9.2	Above 95 sq. mm and upto 185 sq. mm	50.00	Mtr	80.00	Meter	4,000.00

C=
I= } NIL AE (P)(E) EE(E)
O

9.3	Above 185 sq. mm and upto 400 sq. mm	220.00	Mtr	146.00	Meter	32,120.00
10	Supplying of one number PVC insulated and PVC sheathed / XLPE armoured **aluminium conductor** power cable of 1.1 KV grade of following sizes etc. as required.					
10.1	3.5 x 95 sq mm.	1150.00	Mtr	1,128.00	Meter	12,97,200.00
10.2	3.5 x 120 sq mm.	300.00	Mtr	1,423.00	Meter	4,26,900.00
10.3	3.5 x 300 sq mm.	220.00	Mtr	3,297.00	Meter	7,25,340.00
11	Supplying, installation of 4-pole, 1250 Amp. manual onload tap changing having 3 stable positions i.e. position-1 - ON position with normal supply, position-2- switch is in OFF position & out going terminals are isolated, position-3- switch is ON position with alternate supply with mechanical interlocking changeover switch in the cubical panel,including mounting the switch in the panel opening, making all necessary terminations, interconnections, testing, commissioning etc complete as required.	2.00	Nos	2,35,424.00	each	4,70,848.00
12	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.					
12.1	3½ X 95 sq. mm (45mm)	8.00	Nos	684.00	each	5,472.00
12.2	3½ X 120 sq. mm (45mm)	2.00	Nos	710.00	each	1,420.00
12.3	3½ X 300 sq. mm (70mm)	8.00	Nos	1,336.00	each	10,688.00
13	Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep)and re-filling etc as required					
13.1	100 mm dia	36.00	Mtr	1,918.00	meter	69,048.00
						-

C=
I= } NIL
O

AE (P)(E)

EE(E)

14	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level					
14.1	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)	2.00	cum	7,878.50	cum	15,757.00
15	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:					
15.1	Cement mortar 1:6 (1 cement :6 coarse sand)	2.00	cum	7,132.35	cum	14,265.00
	Total					**89,67,024.00**

C=
I= } NIL AE (P)(E) EE(E)
O