NOTICE INVITING FOR e-TENDER

Name of Work: **Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work).**

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NIT No. 44/EE/SJHD/2026-27 (2nd Call) of Rs. 94,17,619/- (Rupees Ninety four lakh seventeen thousand six hundred nineteen Only) having Pages No. 1 to 114 is hereby approved.

Executive Engineer,
SJHD, CPWD
New Delhi

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(P)/SJHD

CENTRAL PUBLIC WORKS DEPARTMENT
Notice Inviting e-Tenders

The Executive Engineer, Safdarjung Hospital Division, CPWD, New Delhi – 110029 (Tel. No.: 011-26109901 / e-mail: deleecsjh.cpwd@nic.in) on behalf of the President of India invites online **percentage rate composite bid** from approved and eligible enlisted contractor in Building and Roads category of CPWD for the following work: -

NIT No.	**44/EE/SJHD/2026-27 (2nd Call)**
Name of work & location	**Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work)**
Estimated cost put to Tender	**Rs. 94,17,619/-** **(Civil work Rs. 73,50,726/-+** **Electrical work Rs. 20,66,893/-)**
Earnest Money	**Rs. 1,88,352/-**
Last date of online submission of bid, copy of receipt for deposition of original EMD issued from division office of any Executive Engineer, CPWDand other document as specified in the bid document	Upto 03:00 PM on Dated **16.11.2026**
Time & date of opening of bid	03:30 PM on Dated **16.11.2026**

**** To be filled in by EE(C), SJHD**

The bid forms and other details can be obtained from the website www.etender.cpwd.gov.in. To participate in the bidding process for tenders to be hosted on the new website, all intending contractor(s)/Firm (s)/agencies are requested to register/update their profiles on the new e-Tendering and e-Auction website: https://etender.cpwd.gov.in and https://eauction.cpwd.gov.in repectively. Information on updation of profiles is available on CPWD Website https://www.cpwd.gov.in vide circular;https://www.cpwd.gov.in/WriteReadData/othercir/50798.pdf All intending contractor(s)/Firm(s)/Agencies are requested to update their profile in new e-tendering website well in advance before last date of submission of tender.

Executive Engineer,
SJHD, CPWD
New Delhi

PART -A

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING

The Executive Engineer, Safdarjung Hospital Division, CPWD, New Delhi – 110029 (Tel. No.: 011-26109901 / e-mail: deleecsjh.cpwd@nic.in) on behalf of the President of India invites online percentage rate composite bid from approved and eligible enlisted contractor in Building and Roads category of CPWD for the following work: -

NIT No.	**44/EE/SJHD/2026-27 (2nd Call)**
Name of work & location	**Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work)**
Estimated cost put to bid	**Rs. 94,17,619/-** **(Civil work Rs. 73,50,726/-+** **Electrical work Rs. 20,66,893/-)**
Earnest Money	**Rs. 1,88,352 /-**
Stipulated Period of Completion of work	**03 (Three) Months**
Last date of online submission of bid, copy of receipt of deposition of original EMD and other document as specified in the bid document	Upto 03:00 PM on **16.11.2026**
Time & date of opening of bid	03:30 PM on **16.11.2026**

**** To be filled in by EE(C), SJHD**

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. The successful bidder (to be called as Main Contractor) shall have to associate specialized agency(s) for execution of the specialized work(s) after the acceptance of tender as per the details mentioned in "Special Conditions for association of Specialized Agencies"
3. Information and Instruction\s for bidders posted on web site shall form bid document.
   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 www.etender.cpwd.gov.in or www.cpwd.gov.in free of cost.

   But the bid can only be submitted after deposition 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 Insurance Surety Bonds, Account Payee Demand draft or Bankers Cheque or Fixed Deposit Receiptsor/ and Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank towards EMD in favour of **Executive Engineer (C), SJHD, CPWD,New Delhi** as mentioned in NIT, receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/ AE(P), CPWD and other documents as specified.

   Note: EMD deposited in any Division office of Executive Engineer (CPWD) only will be accepted and not to any other Organizational/PWD Office.
4. The intending bidder must have valid Class-III digital signature certificate with encryption key (combo type) to perform any operations / transactions on the e-tendering portal / website and the bidder should download and install the eMsigner on their system as per instructions available on download section ofhttps://etender.cpwd.gov.in.

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 tendering process as per details available on the website. The intending bidder must have valid class-III digital signature to submit the bid.
6. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
7. Contractor can upload documents in the form of JPG format and PDF format.
8. Contractor must ensure to quote rate of civil & electrical component as given in the prescribed column(s) meant for quoting rate in figures appears in yellow colour and the moment rate is entered, it turns sky blue.
   In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).
   However, If a tenderer 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
9. The bid can only be submitted after depo
10. sition of receipt for deposition of original EMD issued from division office of any Executive Engineer, CPWD. **(Form-A).**
11. Those contractors not registered on the website mentioned above, are required to get registered beforehand.
12. The intending bidder must have valid contractor registration and digital signature to submit the bid.
13. Contractor should quote the percentage above or below to two places of decimal only.
14. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
15. The tenderers shall sign a declaration under the officials Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful tenderers shall return all the drawings given to them. Otherwise, department may reject the bid.
16. The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.
17. If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
18. Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.
19. The agency shall follow the standard operating procedure and guidelines scrupulously at the construction site to contain the outbreak of COVID-19. It is the sole responsibility of the agency to adhere to the SOPs issued by CPWD and other orders & Guidelines issued by various Governments (Govt. of India and or/ state Govt. and /or Dist. Administrative of local Govt). The quoted rates shall inclusive of all such required measures and materials like Soaps, Detergents, Sanitizers, Disinfections, Masks, Gloves and other personal protection equipment's to contain COVID-19 and nothing extra shall be paid."

Executive Engineer
SJHD CPWD
New Delhi

LIST OF MANDATORY DOCUMENTS TO BE SCANNED AND UPLOADED WITHIN THE PERIOD OF BID SUBMISSION:

1. Insurance Security Bonds, account Payee Demand Draft, Fixed Deposit Receiptor Bank Guarantee of any Commercial Bank against EMD.
2. Copy of receipt for deposition of original EMD issued from division office of any Executive Engineer, CPWD. **(Form 'A').**
3. Enlistment Order of the Contractor.
4. 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 account of the work executed and/or for any action taken by CPWD or GST department in this regard.
   "**as applicable**" means –GST registration is required in the State/UT from where the contractor makes taxable supply of goods or services or both and not in the other state.
5. Valid Electrical Contractor License or undertaking that "I/We shall either obtain valid electrical license at the time of execution of electrical work or associate an approved and eligible contractor of CPWD in appropriate class having valid electrical contractor license".
6. An affidavit on Rs.100 stamp paper duly attested by notary is to be uploaded as regard to that I/we have not been debarred susupended for tendering in CPWD till the last date of submission of bid.
7. Undertaking on structural stability and soundness as per prescribed format **Form 'F'** on Rs.200 stamp paper duly attested by notary is to be uploaded**.**
8. Email & mobile no. of the firm/ agency on the letter head of firm/ agency (For making correspondence)
9. Certificate of ERP Training through any of the CPWD Regional Training Institutes (RTIs) or through the National CPWD Academy (NCA), Ghaziabad or through any other special training arranged by ERP unit at CPWD Headquater.
10. Sample consent letter of Contractor for e-MB on page no. 15.

Executive Engineer,
SJHD, CPWD
New Delhi

CHECK LIST FOR BIDDERS FOR SUBMISSION OF BID

1. The bidder should read all the instructions, terms & conditions, contract clauses, nomenclature of items, specifications etc., contained in the bid document very carefully, before quoting the rates.
2. The bidder should also read the General conditions of contract 2023 (Maintenance work) (Amended up to date) published by D.G., CPWD, Nirman Bhawan, New Delhi-110011 which will be a part of the Agreement.
3. The bidder shall quote his rates keeping in mind the specifications, terms & conditions, additional and special conditions etc. and nothing shall be payable extra whatsoever unless otherwise specified.
4. The bidder shall have to execute guarantee bond in respect of water supply & sanitary installations as per Performa at Annexure I.
5. The bidder shall have to execute guarantee bond in respect of Water Proofing treatment as per Performa at Annexure II.
6. The bidder shall have to make his own arrangement for housing facilities for staff and labour away from site and shall have to transport the labour to and fro between site and labour camp at his own cost. No labour huts will be allowed to be constructed at the site except a few temporary sheds for chowkidars and storekeepers. The decision about how many huts can be allowed for chowkidars and storekeepers at site shall rest with the Engineer-in-charge and the bidder shall have no claim on this account.

Executive Engineer,
SJHD, CPWD
New Delhi

CPWD-6 FOR e-TENDERING

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
NOTICE INVITING TENDER

The Executive Engineer, Safdarjung Hospital Division, CPWD, New Delhi – 110029 (Tel. No.: 011-26109901 / e-mail: deleecsjh.cpwd@nic.in) on behalf of the President of India invites online percentage rate composite bid from approved and eligible enlisted contractor in Building and Roads category of CPWD for the work of "**Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work)".**

The enlistment of the contractors should be valid on the last date of submission of tenders.

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 tender.

1. The work is of Composite **Estimated Cost Rs. 94,17,619/- (Civil work Rs. 73,50,726/- +Electrical work Rs. 20,66,893/-).** 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 (as amended up to last date of submission of bid) which is available as a Govt. of India Publication and also available on website https://etender.cpwd.gov.in or 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 **03 (Three) 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 work is available.
5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract 2023(Maintenance) 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 but before last time and date of submission of bid as notified.
7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
8. The contractor registered prior to 01.04.2015 on e-tendering portal of CPWD shall have to deposit tender processing fee at existing rates, or they have option to switch over to the new registration system without tender processing fee any time.
9. **The bid submitted shall become invalid and e-Tender processing fee shall not be refunded if:**

(i) The bidder is found ineligible.
(ii) The bidder does not upload scanned copies of all the documents stipulated in the bid documents.
(iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of tender opening authority.
(iv) If a tenderer quote nil rates against each item in item rate tender or does not quote any percentage above or below on the total amount of the tender or any section / sub head in percentage tender, the tender shall be treated as invalid and not considered lowest tender.
(v) The documents scanned and uploaded by the participated agency should be in the proper format (JPG format and PDF format). In case during the opening of tender and downloading the

documents, if the documents uploaded by the firm are not downloadable or not openable or not readable, then the agency will be disqualified and this shall be responsibility of the contractor and the department will not entertain any request in this regard.

Earnest Money in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (for balance amount as prescribed) from any of the Commercial Banks(drawn in favour of **Executive Engineer (C), SJHD, CPWD, New Delhi,)** shall be scanned and uploaded to the e-Tendering website within the period of bid submission. **The original EMD should be deposited either in the office of Executive Engineer, SJHD, CPWD, New Delhi 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) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT. EMD deposited in any Division office of Executive Engineer (CPWD) only will be accepted and not to any other Organizational/PWD Office.**

This receipt shall also be uploaded to the e-Tendering website by the intending bidder upto the specified bid submission date and time.

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 lac, 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.

Interested contractor who wish to participate in the bid has also to make following payments within the period of bid submission:

(i) e-tender Processing Fee – One time payment for new registration or renewal **https://etender.cpwd.gov.in** validity One year

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. Online bid documents submitted by intending bidders shall be opened only of those bidders, whose original EMD deposited with any division of CPWD and other documents scanned and uploaded are found in order.

Online bid documents submitted by intending bidders shall be opened only of those bidders, **whose EMD deposited with any division office of CPWD and other documents scanned and uploaded are found in order.**

The bid submitted shall be opened at **03:30 PM** on **16.11.2026.**

11. The contractor whose bid is accepted will be required to furnish performance guarantee of 5% (Five Percent) of the bid amount 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, Banker's Cheque or Bank Guarantee (for balance amount as prescribed) from any of the Commercial Banksin accordance with the prescribed form. 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 shall be returned after receiving the aforesaid performance guarantee. Contractor whose bid is accepted will also required to furnish either copy of applicable licenses/registrations or proof for applying 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 and programme chart (Time and Progress) within the period specified in Schedule F.

12. The description of the work is as follows:
" **Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work)**." 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 bidders implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

13. The competent authority on behalf of 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.

13. 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.

14. 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 bidder shall be bound to perform the same at the rate quoted.

15. 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 gazetted 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.

16. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

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

i. If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department within 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.

ii. If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department after expiry of 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.

iii. 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.

18. This Notice Inviting Tender shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-

a) The Notice Inviting Tender, 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 (Amended upto the last date of submission of bid)

19. GST or any other tax applicable in respect of inputs procured by the contractor for this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same. However, component of GST at time of supply of services (as provided in CGST Act 2017) provided by the contract shall be varied if different from that applicable on the last date of receipt of tender including extension if any.

20. 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 the concerned Executive Engineer/ Assistant Engineer (Phone no....., e- mail Id *.....) or ERP help line 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.

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 financial bid document will include following three components:

Part A: - CPWD-6 and **CPWD-7**

Part B:- General / specific conditions, specifications and schedule of quantities applicable to major component (Civil work) of the work.(SE/EE in charge of major component shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components).

Part C: - Schedule A to F, general/specification condition, specialization and schedule of quanity applicable to minor component (Electrical work) of the work.

21.1.3 The bidders must associate himself, with agencies of the appropriate class eligible to bid for each of the minor component individually as per details given in respective minor component.

21.1.4 After acceptance of the bid by competent authority, the EE in charge of major component 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 of major component and has also to sign two or more copies of agreement depending upon number of EE's in charge of minor components. One such signed set of agreement shall be handed over to EE in charge of minor component(s). EE of major component will operate **Part A** and **Part B** of the agreement. EE in charge of minor component(s) shall operate **Part C** along with **Part A** of the agreement.

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

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

21.1.7 The main contractor has to associate agency(s) for major 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 major component(s) within prescribed time. Name of the agency(s) to be associated shall be approved by Engineer-in-charge of major component(s).

21.1.8 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 major component(s). 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.

21.1.9 The main contractor h**a**s to enter into agreement with contractor(s) associated by him for execution of major component(s). Copy of such agreement shall be submitted to EE in charge of each major 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.

21.1.10 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

21.1.11 The composite work shall be treated as complete when all the components of the work are completed. 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.

21.1.12 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. In case of extension of agreement due to delay and/or reduction in scope of work due to foreclosure, no claim on account of reduction in value of work, loss of business, loss of profit, consequently overheads, any type of interest etc. shall be entertained.

23. If the exigencies of the work so demand, the engineer-in-charge may allow payment to a third party, who is creditor to the contractor, after fulfilling the conditions under clause 7B.

Executive Engineer (C),
SJHD, CPWD,
New Delhi

सं0 54(कैश)/का.अभि./स.ज.अ.मं./2026–27/ **दिनांकः**

ई–निविदा आमन्त्रण सूचना

कार्यपालक अभियंता, स.ज.अ.मं., के.लो.नि.वि. नई दिल्ली–110029 (दूरभाष स0. 011–26109901) के द्वारा भारत के राष्ट्रपति की ओर से निम्नलिखित कार्य के लिए ऑनलाईन कम्पोजिट दर प्रतिशत निविदा **from approved and eligible enlisted contractor in Building and Roads category of CPWD** से आंमन्त्रित की जाती हैं। नि.आ.सू.स0. **44/EE/SJHD/2026-27 (2nd Call)** **कार्य का नामः Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work). अनुमानित लागतः Estimated Cost:- Rs. 94,17,619/- (Civil work Rs. 73,50,726/- & Electrical work Rs. 20,66,893/-) धरोहर राशिः Rs. 1,88,352/- समापन की अवधिः 03 (Three) Months निविदा भरने की अन्तिम तिथि एवं समयः 16.11.2026 upto 03 :00 PM** तक।

Tender forms and other details can be obtained from the website https://etender.cpwd.gov.in.

कार्यपालक अभियंता
स0ज0अ0मं0, के.लो.नि.वि.
नई दिल्ली

Copy to:

1. अधीक्षण अभियंता, दिल्ली परिमंडल–10, के.लो.नि.वि., ईस्ट ब्लांक–1, तल–7, आर.के. पुरम, नई दिल्ली को सूचनार्थ।
2. कार्यपालक अभियंता (वै), स.ज.अ.वै.मं.,के.लो.नि.वि. नई दिल्ली को सूचनार्थ।
3. कार्यपालक अभियंता, क.पा.आ.मं., के.लो.नि.वि. नई दिल्ली को सूचनार्थ।
4. योजना शाखा, स.ज.अ.मं., के.लो.नि.वि. नई दिल्ली को सूचनार्थ।
5. सहायक अभियंता–1, 2, 3 एवं 4, स.ज.अ.मं., के.लो.नि.वि. नई दिल्ली को सूचनार्थ।
6. नोटिस बोर्ड, स.ज.अ.मं, के.लो.नि.वि. नई दिल्ली।

ई–मेल द्वारा

कार्यपालक अभियंता

SECTION-I
BRIEF PARTICULARS OF THE WORK

1. Salient details of the work for which bids are invited, are as under:

(i) Name of work: - **Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work).**

Composite Estimated Cost: **Rs. 94,17,619/- (Civil work Rs. 73,50,726/- & Electrical work Rs. 20,66,893/-)**

(ii) Period of completion**: 03 (Three) Months**

(iii) Last date and time of submission of bid **16.11.2026 at 03:00 P.M.**

2. The work site is situated in area under the jurisdiction of SJHD, CPWD, New Delhi for Civil works.

3. General features and major components of the work are as under: -

Civil works: -As per scope of work and Schedule of Quantities attached.

4. Work shall be executed according to the General conditions of contract Maintenance Work -2023 with amendment issued upto date of submission of tender including extension, if any for Central PWD works available separately at Printer's outlets. The bidder may obtain the address of the outlets of the Printer from the Executive Engineer, SJHD, CPWD, New Delhi.

Executive Engineer,
SJHD, CPWD
New Delhi

Sample Consent Letter of Contractor for e-MB
Letter Head of Contractor

To,

The Executive Engineer
Safdarjung Hospital Division
CPWD, New Delhi – 110029

Name of Work : - Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work).

NIT No. 44/EE/SJHD/2026-27 (2nd Call)

Sir,

With reference to the above cited work and agreement, I hereby submit my consent for recording of online measurement on CPWD ERP system and making payment of work done on the basis of online submission of measurement of CPWD ERP System.

Yours faithfully,

Dated ……

Place……..

(Signature of Contractor/authorized representative)

Name & Seal

GENERAL TERMS AND CONDITIONS

1. The work is to be carried out in Staff Quarters at West Kidwai Nagar, New Delhi which includes all branches like Civil work.
2. The contractors are advised to get acquainted with the proposed work and its site and also study the Architectural Drawings, specifications and special conditions carefully before tendering. No claim of any sort shall be entertained on account of any site conditions and ignorance of specifications and special conditions.
3. For the discipline of Civil works CPWD specifications 2019 (Vol. I & II) with up to date correction slips. All Electrical works shall be carried out as per CPWD specification Electrical Works, Part-I (Internal)-2023; Part-II (External)-2023, General Specifications for Heating, Ventilation & Air-Conditioning (HVAC) - 2017, General Specifications for Electrical Works Part VI Fire Detection and Alarm System – 2018 Indian Electricity Rules –1995 as amended till date of receipt of tenders. For items which are not covered under CPWD specifications, the special conditions / BIS specifications shall apply. In this regard the decision of Engineer-in-Charge shall be final.
4. All materials, T & P, consumable and contingent articles required for the work shall be arranged by the contractor. Materials used shall be in preference as per the nomenclature of the item/ as per approved list/CPWD Specifications and as per directions of Engineer-in-Charge. Replaced materials used shall have same or richer specifications to the original materials and compatible to the work.
5. All malba / rubbish / silt / waste / garden waste etc. generated due to any operation shall be disposed off on daily basis by the contractor to the specified common disposal point to be decided by Engineer-in-charge. After the collection of full truck load of the said malba (approx 4.5 cubic Metre), the same shall be disposed off same day by the contractor to the authorized municipal Dhallao/ dumping ground, which will be paid for separately as per the item in contract. The contractor shall be fully responsible for any consequences arising out of non-removal and disposal of such malba / rubbish etc. In case of failure, a compensation of Rs. 4000/- per day (Rupees Four thousand) only shall be recovered from the bill / security deposit of the contractor.
6. The contractor or his representative shall be available at site on every visit of officer-in-charge as well as visit of senior officers.
7. Chases, holes & drilling works etc. shall be done using power operated tools.
8. The contractor shall have to carry out the work other than day to day construction according to program given by the Executive Engineer / Assistant Engineer / Junior Engineer-in-charge. The contractor shall not carry out any work in any building without permission of Engineer-in-charge or his authorized representatives. The contractor shall have to adhere to this program failing which he shall be wholly responsible for any inconvenience caused to the occupants. No claim for idle labour on any account shall be entertained. The contractor shall depute his representative daily to the site of work. His name and Signature shall be attested by the contractor for record in the department.
9. The offices where the work is to be executed on any day shall be got approved from the representative of the Engineer-in-charge at the site of work. No work shall be carried out in any office without the approval of the representative of the Engineer-in-charge.
10. Any work carried out without the approval of the representative of the Engineer-in-charge at the site of work shall be rejected and shall not be measured and paid for.

11. The site for the collection and stacking of the material shall be got approved from the Engineer-in-charge.
12. The sample of all the items shall have to be got approved by the contractor from the Engineer-in-charge before the supply commences and shall be without prejudiced to the right of the Engineer-in-Charge to get random samples tested out of the actual lot received.
13. The Engineer-in-Charge will be at liberty to take respective sample(s) of each item of Schedule of Quantity in any approved laboratory as decided by him. The sample for testing will be provided by the contractor. All expenditure required to be incurred for taking sample, conveyance, packing and testing charges etc. will be borne by the contractor himself. In case any sample particular lot fails in testing, the contractor will be bound to replace the entire lot with fresh material of prescribed specification and the rejected lot will be returned to the contractor only after fresh lot is supplied.
14. Rejected materials will have to be removed by the contractor at his own cost immediately of the instructions of doing so.
15. In case of any dispute regarding rejection of quality of materials, the decision of the Engineer-in-Charge will be final and binding upon the contractor.
16. All taxes applicable at prevalent rates shall have to be paid by the contractor himself and the rates quoted by him shall include these taxes and nothing extra on this account shall be payable.
17. The rates for different items of work shall apply for all heights and depths, leads and lifts unless otherwise specified in the agreement or specifications applicable to the agreement.
18. Any damage done by the contractor to any existing work during the course of execution of the work shall be made good by him at his own cost.
19. Articles manufactured by the reputed firms and approved by Engineer-in-Charge shall only be used. Only articles classified, as 'first quality' by the manufacturer shall be used unless otherwise specified. In case articles bearing ISI, certification is not available in the market, quality of samples brought by the contractor shall be judged by standards laid down in the relevant CPWD specifications. For the items not covered by CPWD specifications relevant BIS standards shall apply. The sample of materials to be brought to site for use in work shall be got approved from the Engineer-in-Charge before actual execution of work.
20. The quantities of any item shall not be exceeded beyond the agreement quantities without prior permission of Engineer-in-Charge.
21. Statutory applicable recoveries such as on account of GST, Income tax, Surcharge, Construction Worker's Welfare Cess etc. as applicable from time to time shall be made from the gross amount of Running A/c Bill and Final Bill of the contractor.
22. The contractor shall make his own arrangements for obtaining electric connection, if required and make necessary payments directly to the department concerned.
23. The contractor shall make his own arrangement for getting the permission for entry of trucks carrying materials for the site from the traffic police.
24. No payment shall be made to the contractor for any damage caused by rain, snow fall, floods or any other natural causes whatsoever during the execution of work. The damage caused to work shall have to be made good by the contractor at his own cost and no claim on this account shall be entertained.
25. Some restrictions may be imposed by the security staff etc. on the working and or movement of labour and materials, etc., the contractor shall be bound to follow all such restrictions / instructions and nothing shall be payable on this account.
26. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards. He shall be responsible for all damages and accidents caused due to negligence on his part. No

hindrance shall be caused to traffic during the execution of the work by storing materials on the road.

27. The contractor shall be fully responsible for the safe custody of the material issued or brought by him to site for doing the work.
28. The rate for all items of work shall, unless otherwise clearly specified, include cost of all labour, material and other inputs involved in the execution of the items.
29. The order of preference in case of any discrepancy as indicated in condition no. 8.1 under "Conditions of Contract" given in the General Conditions of contract for Central P.W.D work 2023 (Maintenance) form may be read as the following.

    i. Description of Schedule of Quantities.
    ii. Particular Specification and Special Condition, if any.
    iii. General conditions.
    iv. Contract clauses of General conditions of contract.
    v. CPWD Specifications.
    vi. Drawings.
    vii. Indian Standard Specifications of BIS.
    viii. Sound engineering practice.
    ix. Manufacturers Specifications.

30. Any reference made to any Indian Standard Specifications in these documents, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work at site.
31. The contractor will not have any claim in case of any delay by the Engineer-in-Charge in removal of trees or shifting, removing of telegraph, telephone or electric lines (overhead or underground), water and sewer lines and other structure etc., if any which may come in the way of the work. However, suitable extension of time can be granted to cover such delay.
32. The contractor shall clean the site thoroughly of scaffolding materials, rubbish, equipments left out of his work and dress the site around the building to the complete satisfaction of the Engineer-in-charge before the work is treated as completed.
33. For unsatisfactory / not attending to the required / specified work the Engineer-in-Charge reserves his rights to levy compensation in accordance with the scale of non-conformity and the period for which this non-conformity continues.
34. No residential accommodation shall be provided to any of the staff engaged by the contractor. The contractor shall also not be allowed to erect any permanent / temporary set up for his staff in the campus.
35. The contractor shall comply with proper and legal orders and directions of the local or public authority or Municipality and abide by th-eir rules and regulations and pay all fees and charges which he may be liable.
36. The work shall be carried out in a manner complying in all respects with the requirements of relevant bye laws of the local bodies, labour laws, minimum wages act, workmen compensation act and other statutory laws enacted by Central Govt. as well as State Govt.
37. The contractor shall depute Engineers for Civil and Electrical Works as per the provision mentioned in schedule F.
38. Any other inventory added during the contract period to any of the installations of these office area/Common areas shall also be maintained within the scope of work without any extra cost.
39. The contractor shall provide necessary barriers, warning signals and other safety measures while executing the work or wherever necessary so as to avoid accidents. He shall also indemnify CPWD against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian law and Regulations for any accidents occurring due to any cause.

The contractor 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 contractor due to the above provisions thereof.

40. Any damage caused due to negligence of contractor during the routine construction shall be of firm's responsibility. The firm has to make good the same at his own risk and cost.
41. The contractor will arrange & store all the materials along with relevant bill/invoices of materials brought at site so that officers of CPWD can review the quantity and quality of material present in store.
42. All the materials to be used at site shall be of preferred make only and it shall be got approved from Engineer–in–charge before use.
43. The sample of all the items shall have to be got approved by the contractor from the Engineer-in-charge before the supply commences and shall be without prejudiced to the right of the Engineer-in-Charge to get random samples tested out of the actual lot received.

Executive Engineer,
SJHD, CPWD
New Delhi

RECEIPT OF DEPOSITION OF ORIGINAL EMD (FORM-A)

Receipt of deposition of original EMD (Receipt No. …….. Date……..)		
1.	Name of Work	Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work).
2.	NIT No.	44/EE/SJHD/2026-27 (2nd Call)
3.	Estimated Cost	Rs. 94,17,619/- (Civil work Rs. 73,50,726/- +Electrical work Rs. 20,66,893/-)
4.	Amount of Earnest Money Deposit	Rs. 1,88,352/-
5.	Last date of submission of bid	16.11.2026 upto 03:00 PM
6.	Name of Contractor	
7.	Form of EMD	
8.	Amount of Earnest Money Deposit	
9.	Date of submission of EMD	
10.	E-Mail ID	
11.	Mobile No.	
Signature of EMD receiving Officer: Name and Designation of EMD receiving Officer: Office Stamp:		

 # columns form 6 to 11 are mandatory to be filled by bidder

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.P.W.D.- 7

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
PERCENTAGE RATE BID AND CONTRACT FOR WORK

STATE :- **Delhi** CIRCLE:- **Delhi Circle-10**
BRANCH :- **B&R** DIVISION **:-** **SJHD**
REGION :- **Region Delhi**

Percentage Rate Bid

Name of work **:-** **Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work).**

Dear Sir,

(i) Bids to be uploaded online by **03:00 PM** on **16.11.2026**

(ii) To be opened online in presence of Bidders who may be present at **03:30 PM** on **16.11.2026** in the office of Executive Engineer, SJHD, CPWD, New Delhi.

**** To be filled by Executive Engineer (C), CPWD, New Delhi.**

CPWD Form-7

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 respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects of accordance with, such conditions so far as applicable.

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

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 (for balance amount as prescribed) from any of the Commercial Banks 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 earnest money and the performance guarantee absolutely.

The said performance guarantee shall be guarantee to execute all the works referred to in the bid documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the bid form. Further, I/We agree that in case of forfeiture of Earnest Money & 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 works(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 bidding 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 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 the Contractor
Postal Address ----------
Telephone No. ----------

Witness: ----------

Address: ----------

Occupation: ----------

FAX ----------

E-MAIL ----------

…**…To be filled by the Executive Engineer

…***…To be filled by the Contractor

ACCEPTANCE

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

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

(a)

(b)

(c)

For & on behalf of President of India

Signature ……*……

Dated: ……* ……

Designation……*…….

***To be filled in by the Engineer-in-charge**

On Non-Judicial Stamp Paper of Minimum Rs. 100/-

(Guarantee offered by Bank to CPWD in connection with the execution of contractors)
Form of Bank Guarantee for Earnest Money Desposit/ Performance Guarantee/ SecurityDeposit/Mobilization Advance

1. Whereas the Executive Engineer, SJHD, CPWD on behalf of the President of India (hereinafter called "The Government") has entered into and 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"), hereby undertake 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.

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 …….

Witness:

1. Signature …….
   Name and address

Authorized signatory
Name

Designation
Staff code no.
Bank seal

2. Signature …….
   Name and address

* 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 I, strike out the portion not applicable. Bank Guarantee will be made either for performance guarantee/security deposit/mobilization advance, as the case may

TERM & CONDITION FOR AIR POLLUTION FROM DEMOLITION & CONSTRUCTION ACTIVITIES

The guidelines regarding preventive measures for Air Pollution from demolition & construction activities issued by Mimistry of Enviornment and Forest notification dated 29.03.2016 & Office Memorandum No. DG/CON/Misc./04 Dated 23.01.2017 and any other guide lines issued even during the execution in compliance of Hon'ble National Green Tribunal directions are applicable to the contractor (some guide lines / directions are enclosed herewith). All appropriate protection measures as per NGT & DPCC guidelines / directions shall be taken by the contractor and nothing extra shall be payable to the contractor on this account.

CENTRAL PUBLIC WORKS DEPARTMENT

OFFICE MEMORANDUM
No. DG/CON/Misc./04
ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAVAN,NEW DELHI DATED: 23.01.2017

Sub : Compliance on Construction & Demolition Waste Management Rules, 2016 – Regarding Disposal of Waste to the approved by local Authority.

Ref : Ministry of Environment and Forest notification dt. 29.03.2016 Construction and Demolition Waste Management Rules 2016 in exercise of powers Conferred by Environment (Protection) Act 1986 (Available at web address www.moef.gov.in).

The above Rules notified by Ministry of Environment and Forest are brought to the notice of all NIT approving authorities and they are directed to incorporate suitable provisions in the special conditions and ensure compliance of the Rules.

This issues with the approval of ADG(TD).

23/01/17

Superintending Engineer (C&M)

Issued from file No. CSQ/CM/C/17(1)/2017

Copy to:-

1. All Spl. DGs, CPWD, E-in-C, PWD, Delhi Govt. They are requested to endorse a copy of this O.M. to all ADGs, CEs, SEs & EEs concerned.

Executive Engineer (C)

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(P)/SJHD

[Published In the Gazette of India, Part-II, Section-3, Sub-section (ii)]
Ministry of Environment, Forest and Climate Change

NOTIFICATION

New Delhi, the 29th March, 2016

G.S.R. 317(E).-Whereas the Municipal Solid Wastes (Management and Handling) Rules, 2000 published vide notification number S.O. 908(E), dated the 25th September, 2000 by the Government of India in the erstwhile Ministry of Environment and Forests, provided a regulatory frame work for management of Municipal Solid Waste generated in the urban area of the country;

And whereas, to make these rules more effective and to improve the collection, segregation, recycling, treatment and disposal of solid waste in an environmentally sound manner, the Central Government reviewed the existing rules and it was considered necessary to revise the existing rules witha emphasis on the roles and accountability of waste generators and various stakeholders, give thrust to segregation, recovery, reuse, recycle at source, address in detail the management of construction and demolition waste.

And whereas, the draft rules, namely, the Solid Waste Management Rules, 2015 with a separate chapter on construction and demolition waste were published by the Central Government in the Ministry of Environment, Forest and Climate Change vide G.S.R. 451 (E), dated the 3rd June, 2015 inviting objections or suggestions from the public within sixty days from the date of publication of the said notification; and Whereas, the objections or suggestions received within the stipulated period were duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sections 6, 25 of the Environment(Protection) Act, 1986 (29 of 1986), and in supersession of the Municipal Solid Wastes (Management and Handling) Rules, 2000, except as respect things done or omitted to be done before such supersession, the Central Government hereby notifies the following rules for Management of Construction and Demolition Waste –

1. Short title and commencement-(1) These rules shall be called the Construction and Demolition Waste Management Rules, 2016.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Application.-The rules shall apply to every waste resulting from construction, re-modelling, repair and demolition of any civil structure of individual or organisation or authority who generates construction and demolition waste such as building materials, debris, rubble.

3. Definitions –(1) In these rules, unless the context otherwise requires,-

(a) "ACT' means the Environment (Protection) Act, 1986 (29 of 1986);

(b) "**construction**" means the process of erecting of building or built facility or other structure, or building of infrastructure including alteration in these entities;

(c) "**construction and demolition waste**" means the waste comprising of building materials, debris and rubble resulting from construction, re-modelling, repair and demolition of any civil structure;

(d) **"de-construction"** means a planned selective demolition in which salvage, re-use and recycling of the demolished structure is maximized;

(e) "demolition" means breaking down or tearing down buildings and other structures either manually or using mechanical force (by various equipment) or by implosion using explosives.

(f) "form" means a Form annexed to these rules;

(g) "local authority" means an urban local authority with different nomenclature such as municipal corporation, municipality, nagarpalika, nagarnigam, nagarpanchayat, municipal council including notified area committee and not limited to or any other local authority constituted under the relevant statutes such as gram panchayat, where the management of construction and demolition waste is entrusted to such agency;
(h) " schedule" means a schedule annexed to these rules;
(i) "service provider' means authorities who provide services like water, sewerage, electricity, telephone, roads, drainage etc. often generate construction and demolition waste during their activities, which includes excavation, demolition and civil work;
(j) "waste generator" means any person or association of persons or institution, residential and commercial establishments including Indian Railways, Airport, Port and Harbour and Defence establishments who undertakes construction of or demolition of any civil structure which generate construction and demolition waste.
(2) Words and expressions used but not defined herein shall have the same meaning defined in theACT.

(4) Duties of the waste generator –

(1) Every waste generator shall prima-facie be responsible for collection, segregation of concrete, soil and others and storage of construction and demolition waste generated, as directed or notified by the concerned local authority in consonance with these rules.
(2) The generator shall ensure that other waste (such as solid waste) does not get mixed with this waste and is stored and disposed separately.
(3) Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall segregate the waste into four streams such as concrete, soil, steel, wood and plastics, bricks and mortar and shall submit waste management plan and get appropriate approvals from the local authority before starting construction or demolition or remodelling work and keep the concerned authorities informed regarding the relevant activities from the planning stage to the implementation stage and this should be on project to project basis.
(4) Every waste generator shall keep the construction and demolition waste within the premise or get the waste deposited at collection centre so made by the local body or handover it to the authorised processing facilities of construction and demolition waste; and ensure that there is no littering or deposition of construction and demolition waste so as to prevent obstruction to the traffic or the public ordains.
(5) Every waste generator shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities; Waste generators who generate more than 20 tons or more in one day or 300 tons per project in a month shall have to pay for the processing and disposal of construction and demolition waste generated by them, apart from the payment for storage, collection and transportation. The rate shall be fixed by the concerned local authority or any other authority designated by the State Government.

(5) Duties of service provider and their contractors –
(1) The service providers shall prepare within six months from the date of notification of these rules, a comprehensive waste management plan covering segregation, storage, collection, reuse, recycling, transportation and disposal of construction and demolition waste generated within their jurisdiction.
(2) The service providers shall remove all construction and demolition waste and clean the area every day, if possible, or depending upon the duration of the work, the quantity and type of waste generated, appropriate storage and collection, a reasonable timeframe shall be worked out in consultation with the concerned local authority.
(3) In case of the service providers have no logistics support to carry out the work specified in sub rules(1) and (2) , they shall tie up with the authorised agencies for removal of construction and demolition waste and pay the relevant charges as notified by the local authority.
(6) Duties of local authority-The local authority shall

(1) issue detailed directions with regard to proper management of construction and demolition wastewithin its jurisdiction in accordance with the provisions of these rules and the local authority shall seekdetailed plan or undertaking as applicable, from generator of construction and demolition waste
(2) chalk out stages, methodology and equipment, material involved in the overall activity and finalclean up after completion of the construction and demolition
(3) seek assistance from concerned authorities for safe disposal of construction and demolition wastecontaminated with industrial hazardous or toxic material or nuclear waste if any
(4) shall make arrangements and place appropriate containers for collection of waste and shallremove at regular intervals or when they are filled, either through own resources or by appointing private operators
(5) shall get the collected waste transported to appropriate sites for processing and disposal eitherthrough own resources or by appointing private operators
(6) shall give appropriate incentives to generator for salvaging, processing and or recycling preferably in-situ
(7) shall examine and sanction the waste management plan of the generators within a period of one month or from the date of approval of building plan, whichever is earlier from the date of its submission
(8) shall keep track of the generation of construction and demolition waste within its jurisdiction and establish a data base and update once in a year
(9) shall device appropriate measures in consultation with expert institutions for management of construction and demolition waste generated including processing facility and for using the recycled products in the best possible manner
(10) shall create a sustained system of information, education and communication for construction and demolition waste through collaboration with expert institutions and civil societies and also disseminate through their own website;
(11) shall make provision for giving incentives for use of material made out of construction and demolition waste in the construction activity including in non-structural concrete, paving blocks, lower layers of road pavements, colony and rural roads.

(7) Criteria for storage, processing or recycling facilities for construction and demolition wasteland application of construction and demolition waste and its products-

(1) The site for storage and processing or recycling facilities for construction and demolition waste shall be selected as per the criteria given in **Schedule I**;
(2) The operator of the facility as specified in sub- rules (1) shall apply in **Form I** for authorization from State Pollution Control Board or Pollution Control Committee.
(3) The operator of the facility shall submit the annual report to the State Pollution Control Board in**Form II.**
(3) Application of materials made from construction and demolition waste in operation of sanitary landfill shall be as per the criteria given in **Schedule II.**

(8) Duties of State Pollution Control Board or Pollution Control Committee-

(1) State Pollution Control Board or Pollution Control Committee shall monitor the implementation of these rules by the concerned local bodies and the competent authorities and the annual report shall be sent to the Central Pollution Control Board and the State Government or Union Territory or any otherState level nodal agency identified by the State Government or Union Territory administration for generating State level comprehensive data. Such reports shall also contain the comments andsuggestions of the State Pollution Control Board or Pollution Control Committee with respect to any comments or changes required;
2) State Pollution Control Board or Pollution Control Committee shall grant authorization to construction and demolition waste processing facility in **Form-III** as specified under these rules after examining the application received in **Form I**;

(3) State Pollution Control Board or Pollution Control Committee shall prepare annual report in**Form IV** with special emphasis on the implementation status of compliance of these rules and forward report to Central Pollution Control Board before the 31stJuly for each financial year.

(9) Duties of State Government or Union Territory Administration-

(1) The Secretary in-charge of development in the State Government or Union territory administration shall prepare their policy document with respect to management of construction and demolition of waste in accordance with the provisions of these rules within one year from date of final notification of these rules.
(2) The concerned department in the State Government dealing with land shall be responsible for providing suitable sites for setting up of the storage, processing and recycling facilities for construction and demolition waste.
(3) The Town and Country planning Department shall incorporate the site in the approved land useplan so that there is no disturbance to the processing facility on a long term basis.
(4) Procurement of materials made from construction and demolition waste shall be made mandatory to a certain percentage (say 10-20%) in municipal and Government contracts subject to strict quality control.
(10) Duties of the Central Pollution Control Board - (1) The Central Pollution Control Board shall,-

(a) prepare operational guidelines related to environmental management of construction and demolition waste management;
(b) analyze and collate the data received from the State Pollution Control Boards or Pollution Control Committee to review these rules from time to time;
(c) coordinate with all the State Pollution Control Board and Pollution Control Committees for any matter related to development of environmental standards;
(d) forward annual compliance report to Central Government before the 30thAugust for each financial year based on reports given by State Pollution Control Boards of Pollution Control Committees.

(11) Duties of Bureau of Indian Standards and Indian Roads Congress -The Bureau of Indian Standards and Indian Roads Congress shall be responsible for preparation of code of practices and standards for use of recycled materials and products of construction and demolition waste in respect of construction activities and the role of Indian Road Congress shall be specific to the standards and practices pertaining to construction of roads.

(12) Duties of the Central Government –

(1) The Ministry of Urban Development, and the Ministry of Rural Development, Ministry ofPanchayat Raj, shall be responsible for facilitating local bodies in compliance of these rules;
(2) The Ministry of Environment, Forest and Climate Change shall be responsible for reviewing implementation of these rules as and when required.

13. Timeframe for implementation of the provisions of these rules -The timeline for implementation of these rules shall be as specified in **Schedule III:**

14. Accident reporting by the construction and demolition waste processing facilities-In case of any accident during construction and demolition waste processing or treatment or disposal facility, the officer in charge of the facility in the local authority or the operator of the facility shall report of the accident in **Form-V** to the local authority. Local body shall review and issue instruction if any, to the in chargeof the facility.

Executive Engineer,
SJHD, CPWD
New Delhi

Schedule I

Criteria for Site Selection for Storage and Processing or Recycling Facilities for construction and Demolition Waste

[See Rule 7(1)]

(1) The concerned department in the State Government dealing with land shall be responsible for providing suitable sites for setting up of the storage, processing and recycling facilities for construction and demolition and hand over the sites to the concerned local authority for development, operation and construction, which shall ultimately be given to the operators by Competent Authority and wherever above Authority is not available, shall lie with the concerned local authority.

(2) The Local authority shall co-ordinate (in consultation with Department of Urban Development of the State or the Union territory) with the concerned organizations for giving necessary approvals and clearances to the operators.

(3) Construction and demolition waste shall be utilized in sanitary landfill for municipal solid waste of the city or region as mentioned at Schedule I of thse rule. Residues from construction and demolition waste processing or recycling industries shall be land filled in the sanitary landfill for solid waste.

(4) The processing or recycling shall be large enough to last for 20-25 years (project based on-site recycling facilities).

(5) The processing or recycling site shall be away from habitation clusters, forest areas, water bodies, monuments, National Parks, Wetlands and places of important cultural, historical or religious interest.

(6) A buffer zone of no development shall be maintained around solid waste processing and disposal facility, exceeding five Tonnes per day of installed capacity. This will be maintained within the total area of the solid waste processing and disposal facility. The buffer zone shall be prescribed on case to case basis by the local authority in consultation with concerned State Pollution Control Board.

(7) Processing or recycling site shall be fenced or hedged and provided with proper gate to monitor incoming vehicles or other modes of transportation.

(8) The approach and or internal roads shall be concreted or paved so as to avoid generation of dust particles due to vehicular movement and shall be so designed to ensure free movement of vehicles and other machinery.

(9) Provisions of weigh bridge to measure quantity of waste brought at landfill site, fire protection equipment and other facilities as may be required shall be provided.

(10) Utilities such as drinking water and sanitary facilities (preferably washing/bathing facilities for workers) and lighting arrangements for easy landfill operations during night hours shall be provided and Safety provisions including health inspections of workers at landfill sites shall be carried out made.

(11) In order to prevent pollution from processing or recycling operations, the following provisions shall be made, namely:

(a) Provision of storm water drains to prevent stagnation of surface water;

(b) Provision of paved or concreted surface in selected areas in the processing or recycling facility for minimizing dust and damage to the site.

(c) Prevention of noise pollution from processing and recycling plant:

(d) Provision for treatment of effluent if any, to meet the discharge norms as per Environment (Protection) Rules, 1986.

(12) Work Zone air quality at the Processing or Recycling site and ambient air quality at the vicinity shall be monitored.

(13) The measurement of ambient noise shall be done at the interface of the facility with the surrounding area, i.e., at plant boundary.

(14) The following projects shall be exempted from the norms of pollution from dust and noise as mentioned above:

For construction work, where at least 80 percent construction and demolition waste is recycled or reused in-situ and sufficient buffer area is available to protect the surrounding habitation from any adverse impact.

(15) A vegetative boundary shall be made around Processing or Recycling plant or site to strengthen the buffer zone.

Schedule II

Application of materials made from construction and demolition waste and its products.
[See Rule 7(3)]

Sl. No.	Parameters	Compliance Criteria
1	Drainage layer in leach ate collection system at bottom of Sanitary Landfill Gas Collection Layer above the waste at top of Sanitary Landfill and Drainage Layer in top Cover System above Gas Collection Layer of Sanitary Landfill For capping of sanitary landfill or dumpsite, drainage layer at the top	Only crushed and graded hard material (stone, concrete etc.) shall be used having coarse sand size graded material (2mm – 4.75mm standard sieve size)Since the coarse sand particles will be angular in shape (and not rounded as for riverbed sand), protection layers of non-woven geo-textiles may be provided, wherever required, to prevent puncturing of adjacent layers or components.
2	Daily cover	Fines from construction and demolition processed waste having size up to 2 mm shall be used for daily cover over the fresh waste. Use of construction and demolition fines as landfill cover shall be mandatory where such material is available. Fresh soil (sweet earth) shall not be used for such places and borrow-pits shall not be allowed. Exception – soil excavated during construction of the same landfill. During hot windy days in summer months, some fugitive dust problems may arise. These can be minimised by mixing with local soil wherever available for limited period.
3	Civil construction in a sanitary landfill	Non-structural applications, such as kerb stones, drain covers, paving blocks in pedestrian areas

Form –V
See [Rule14]
Accident reporting

1. Date and time of accident :

2. Sequence of events leading to accident :

3. The type of construction and demolition waste involved in accident :

4. Assessment of the effects of the accidents

a. on traffic, drainage system and the environment :

5. Emergency measures taken :

6. Steps taken to alleviate the effects

a. of accidents :

7. Steps taken to prevent the recurrence

a. of such an accident :

8. Regular monthly health checkup of workers at

a. Processing / recycling site shall be made

9. Any accident during the collection,

a. transportation and treatment including

b. processing and recycling should be informed

c. to the Competent Authority (Local Authority) or

d. Prescribed Authority

Date : Authorized Signatory
Place: Designation

[18-6/2014-HSMD]
Bishwanath Sinha, Joint Secretary

NOTE:- 1. This Card is valid only for specified working place/place of duty. 2. The Contractor is fully responsible for any misuse of this card beyond duty hours/days. 3. The Contractor bears responsibility for the character of Cardholder worker.	• Sl. No..... **WORKERS IDENTITY CARD** Name of Agency with address :- Telephone No./Mobile Registration No. :- VALID UPTO

Name of Worker :- Present Address:- Permanent Address:- Identification Mark:- Place of Duty	Photo Signature of Worker Signature of Contractor :

PART-B

PROFORMA OF SCHEDULES

SCHEDULE 'A'				
Schedule of quantities		**CIVIL**	**:**	**Attached**
SCHEDULE B				
Schedule of materials to be issued to the contractor:				**NIL**
SCHEDULE C				
Tools and plants to be hired to the contractor:				**NIL**
SCHEDULE 'D'				
Extra schedule for specific requirements/documents for the work, if any:				**NIL**
SCHEDULE 'E'				
Reference to General Conditions of contract: -		**General Conditions of Contract (GCC)– Maintenance Work -2023 amended/modified up to last date receipt of tender i/c extension, if any**		
Name of Work:-		**Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil and Electrical work)**		
Estimated cost of work:-		Civil	:	**Rs. 94,17,619/- (Civil work Rs. 73,50,726/- +Electrical work Rs. 20,66,893/-)**
(i)	Earnest money: (To be returned after receiving performance guarantee)		:	**Rs. 1,88,352/-** (To be refunded after receipt of P.G.)
(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.		
(iii)	Security Deposit :-	2.5% of tendered Value.		
SCHEDULE 'F'				
General Rules & Directions: -				
Officer inviting tender:-		Executive Engineer (C), SJHD, CPWD, New Delhi.		
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3		See below		
Definitions:				

2 (vi)	Engineer-in-Charge	(i)	Civil work	Executive Engineer (C), SJHD, CPWD, New Delhi. or his successor
2 (viii)	Accepting Authority	Competent Authority.		
2 (x)	Percentage on cost of materials and labour to cover all overheads and profits.	15%		
2 (xi)	Standard schedule of Rates	**Civil**	DSR 2023 upto date correction slips upto the last date of receipt of online bid including extension & **Market Rates**.	
2 (xii)	Department	Central Public Works Department		
9 (ii)	Standard CPWD contract form	GCC -2023 Maintenance work, CPWD form 7 as modified and corrected up to date **amended/modified up to last date receipt of tender i/c extension, if any**)		

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, in days.	7 days
(ii) Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount beyond the period as provided in (i) above.	3 days

Clause 2	
Authority for fixing compensation under clause 2.	Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi or his successor.

Clause 2A	
Whether Clause 2A shall be applicable	Not Applicable

Clause 5			
Number of days from the date of issue of letter of acceptance for reckoning date of start :	10 days		
Mile stone(s) as per table given below:			
Sl. No.	Description of Milestone (Physical)	Time allowed in days (From date of start)	Amount to be with-held in case of non-achievement of milestone.
---------- Not applicable ----------			
Time allowed for execution of work :		**03 (Three) Months**	
Authority to decide:			
(i)	Authority to convey the decision of shifting of Milestone and Extension of time	Executive Engineer, SJHD, CPWD, New Delhi.	

(ii)	Authority to decide Re-scheduling of mile stones and Extension of time	Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi or his successor
(iii)	Shifting of date of start in case of delay in handing over of site	Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi or his successor.

Schedule of handing over of site

Part	**Portion of site**	**Description**	**Time Period for handing over reckoned from date of issue of Performance guarantee**
Part A	Portion without any hindrance	All	As per **Performance Guarantee**
Part B	Portions with encumbrances	Nil	NA
Part C	Portions dependent on work of other agencies	Nil	NA

Clause 5A	
Whether Clause 5A shall be applicable	Not Applicable

Clause 6	
Electronic Measurement Book (EMB)	
Mode of measurements	**Electronic Measurement Book (EMB) through CPWD ERP Portal**

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	Work done 40% of Tender Amount Or Mutually Agreed by Engineer-in- charge and Agency

Clause 7A	
Whether Clause 7A shall be applicable	Yes

Clause 10A	
List of testing equipment to be provided by the contractor at site lab.	As per requirement of site and direction of Engineer-in-charge.

Clause 10B(i)	
Whether Clause 10B(i) shall be applicable	Not Applicable

Clause 10C	Not Applicable		
Component of labour expressed as percent of value of work	Civil Work		

Clause 10CC			

Whether Clause 10CC shall be applicable	Not Applicable

Clause 11	
Specifications to be followed for execution of work	
Civil works:	C.P.W.D. Specification 2019 Vol.-I and Vol.-II (with correction slips upto last date of receipt of online tender including extension, if any) and as per manufactures specification

Clause 12

Type of work:	**MAINTENANCE WORKS**
Clause 12.2 & 12.3 Deviation limit beyond which clauses 12.2 shall apply for building works.	No Limit

Clause 16 Competent Authority for deciding reduced rates. (Shall be limited upto 5% of the Contract Value.)	Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi or his successor

Clause 18		
List of mandatory machinery, tools & plants to be deployed by the contractor at site	:	**Civil works:** As required for executing the items as per Schedule of Quantities and as per directions of Engineer-in-charge

Clause 19

Clause 19 C	…….. Authority to decide penalty for each default	Engineer – in - charge
Clause 19 D	…….. Authority to decide penalty for each default	Engineer – in - charge
Clause 19 G	…….. Authority to decide penalty for each default	Engineer – in - charge
Clause 19 K	…….. Authority to decide compensation for each default	Engineer – in - charge

Clause25

Settlement of Disputes by Conciliation and Arbitration:

(a)	Conciliator: -	ADG(Delhi), CPWD, New Delhi
(b)	Arbitrator :-	Superintending Engineer, DC-10, CPWD, New Delhi

	Appointing Authority	
(c)	Place of Arbitration: -	New Delhi

Clause 32							
"Requirement of Technical Representative (s) and Recovery Rates"							
Sl. No.	Minimum qualification of Technical Representative	Discipline	Designation (Principal Technical /Technical Representative	Minimum Experience in years	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 32(i) (Rs per month per person)	
						Figures	words
1	Graduate Engineer or Diploma Engineer	Civil work	Planning /Quality/ Billing Engineer	2 or 5 respectively	1	15,000/-	Rupees Fifteen Thousand only

Note:

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

b. 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 **2023** printed by CPWD with up to date correction slips	
(ii)	Variations permissible on theoretical quantities:		
	a)	Cement for works with estimated cost put to tender not more than Rs. 25 Lakh	3% plus/minus.
		For works with estimated cost put to tender more than Rs 25 Lakh	2% plus/minus.
	b)	Bitumen for all works.	nil on minus side
	c)	Steel Reinforcement and structural steel sections for each diameter, section and category.	2% plus/minus
	d)	Paints & Chemicals	Nil

Executive Engineer,
SJHD, CPWD,
New Delhi

GENERAL CONDITIONS

1. It shall be deemed that the contractor has satisfied himself about the nature and location of the work general and local conditions, particularly those pertaining to transport, handling and storage of materials, general ground conditions and highest flood level etc. before tendering. The department shall not be responsible for lack of knowledge as also the consequences thereof. The information & site data shown in the drawings and mentioned herein or elsewhere in the tender documents are being furnished for general information and guidance only. The Engineer-in-Charge shall not be responsible for the correctness thereof or any interpretations / or conclusions drawn there from by the contractor and nothing extra shall be paid even if, the site conditions / information are different or otherwise incorrect as it is presumed that the contractor has satisfied himself of all possible contingencies, situations, bottlenecks and acts which may be required between different agencies.
2. The contractor must study the specifications and conditions carefully before tendering. If there are varying or conflicting provisions made elsewhere forming part of the contract, the Engineer-in- Charge shall be the deciding authority with regard to the intention / interpretation of the documents and it will be binding on the contractor without any reservation whatsoever and nothing extra shall be paid. Any error in description, quantity or rate in schedule of work /item or any omissions there from shall not vitiate the contract or release the contractor from the execution of the whole work or any part of the work comprised there in according to drawings and specifications or from any of his obligations under the contract.
3. For completing the work in time, the contractor might be required to work in shifts including night shifts and no claims whatsoever shall be entertained on this account. Not with standing the fact that the contractor will have to pay to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and / or extra amount for any other reasons.
4. The contractor or his authorized representative should always be available at the site of work to take instruction from the departmental officers, and ensure proper execution of work.
5. Permission shall be obtained by the contractor directly from traffic authorities for entry of trucks, vehicles and machinery to site of work as may be required for timely completion of the work.
6. **The contractor shall make his own arrangements for stores, labour tents etc. Water supplied by the department or not, recovery @ 1% shall be made on gross amount of work done**.
7. The contractor shall make his own arrangement of power connection at his own cost. No claim of whatsoever due to power failure shall be entertained.
8. Income Tax plus levied surcharge on Income Tax and Sales Tax / Work contract tax and other taxes etc. as applicable shall be recovered from the contractors.
9. The rates shall be inclusive of the pumping, bailing out of water due to rains, floods, leakage from sewers or water mains, sub soil water table or any other cause whatsoever during the course of execution of work. Nothing extra shall be payable on this account.
10. The quantity of earth required for filling back in trenches, plinth and side of foundations shall be kept at site of work by the contractor in such a manner so as not to hinder the progress of work in any way and/or any other construction activity. The contractor shall also ensure that the movement of traffic on service as well as main roads around the site of work is also not affected due to stacking of earth.
11. The contractor shall take instructions from the Engineer-in-Charge for stacking of all materials at site. The contractor shall not stack any materials on any location which may cause serious inconvenience to the public and other construction agencies using the site/surrounding. The Engineer-in-Charge may ask the contractor to remove all such material(s) considered by him to be causing inconvenience to anyone. Nothing shall be payable on this account.

12. The probable quantity of surplus earth etc. shall be removed simultaneously by the contractor. If the contractor fails to remove the malba within 48 hours, the department may remove the malba so collected and recovery @ Rs. 2,000/- per cum shall be made from the contractor. The decision of Engineer-in-charge shall be final in this regard.
13. Building rubbish / surplus excavated earth shall be removed simultaneously with the progress of the work so as to keep the site clear and to avoid any hindrance to the work and to prevent any inconvenience to public / traffic using the surrounding areas/ service roads.
14. The contractor shall have to carry out the work according to the programme submitted by him and approved by the Engineer-in-charge of the work. No claim for idle-labour on any account shall be entertained. If for any reason, any part of the site is not available temporarily for some time for any part of the work under the contract, the agreed construction schedule shall be suitably modified and contractor shall diligently divert his men and materials to utilize them profitably and no claim of damages whatsoever shall be entertained on this account. However the contractor shall be allowed suitable extension of time for completing the work as deemed fit by the competent authority.
15. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing barriers etc. He shall be responsible for all damages and accidents caused to existing / new work due to negligence on his part. No hindrance shall be caused to traffic during the execution of the work.
16. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fee and charges which may be liable. The contractor shall give due notices to municipality/police and / or other authorities that may be required under the law / rules in-force prevailing in that area and obtain all requisite permissions for temporary obstructions / enclosures and pay all charges which may be leviable on account of his execution of the work under the Agreement. Nothing extra shall be payable on this account.
17. Some restrictions may be imposed by the security staff / Traffic Police on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account.
18. Any damages done by the contractor to any existing work shall be made good by him simultaneously at his own cost. Existing adjacent buildings, drain pipes, culverts, overhead wires, water supply lines and similar services encountered during the course of execution shall be protected against damage by the contractor and nothing extra shall be payable for the same. The contractor shall not store material or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.
19. The contractor shall maintain in good condition all work executed by him till completion of the work and handing over the same to the department.
20. Approved samples of materials / items shall be kept at site of work till completion of the work. Each approved sample shall be signed by the contractor and Engineer-in-charge.
21. A reference made to any Indian Standard Codes in these documents , shall imply reference to the latest version of that standard including such revision / amendments as issued by the Bureau of Indian Standards at the time of execution of work . The contractor shall have to keep all relevant publications / codes at the site at his own cost However, Engineer-in-Charge may direct for keeping any other publication / code at the site of work, required in connection with work.
22. All necessary tests as per the NIT / CPWD specifications / relevant BIS codes shall be carried out on all other materials whether ISI marked or otherwise. Wherever NIT/ CPWD specifications/ relevant BIS codes do not specify the frequency of tests the same shall be carried out as per the direction of the Engineer-in–Charge. The material shall be got tested in approved laboratory for Delhi Circle -10 or as decided by Engineer-in-charge. The cost of sample including packing, transportation and other incidental charges shall be borne by the contractor.

23. Unless otherwise provided in the schedule of quantities the rates tendered by the contractor shall be all inclusive and shall apply to all heights , lifts, leads and depths of the work and

nothing extra shall be payable to him on this account. The rate for all items in which use of cement is involved shall be inclusive of charge for curing.

24. No structural member shall be chased or cut without the written permission of the Engineer-in-charge.
25. The entire work shall be carried out strictly as per CPWD specifications 2019 Vol. I & II with upto date correction slips. Wherever CPWD specifications are silent relevant BIS codes shall be applicable. If the item is not available in the relevant BIS Code then the decision of the Engineer-in-charge shall be final.
26. The contractor shall, if required by the Engineer-in-charge produce manufacturer's test certificate for any material of particular batch of materials supplied by him. The test(s) carried out as per relevant specifications / BIS code.
27. All incidental charges of any kind for the materials to be arranged by the contactor what so ever i/c cartage, storage, cutting and wastage etc. shall be borne by the contractor himself and nothing extra will be paid to him on this account.
28. The Contractor has to make his own arrangement for all the materials reqd. for the work & get the materials approved from the Engineer-in-charge before using the same in the work.
29. The dismantling wherever required should be done in a manner that no other portions of the building or its fixtures are damaged. If any damage is done to the building it will be made good by the contractor at his own cost and no claim what so ever will be entertained on this account.
30. The building rubbish is to be removed side by side during the progress of work &malba should be disposed off in authorized dumping ground. The site will be properly cleaned & dressed before recording of completion certificate.
31. The rates for different items of work shall apply for all heights, lifts & depths unless, otherwise specified.
32. The contractor must get himself acquainted with the proposed site for the works & study specifications & conditions carefully before tendering. No claim whatsoever on this account shall be entertained.
33. Contractor shall clear all the rubbish, scaffolding etc. from the site before the date of completion of work.
34. The work shall be carried out complying, in all respects, with the requirement of relevant local bye laws including NDMC/MCD/PWD.
35. All incidental charges of any kind whatsoever i/c cartage, storage, cutting & wastage etc. shall be borne by the contractor himself & nothing extra will be paid to him on any account.
36. The site shall be made available in stages as the work consists of dismantling & relaying etc. The contractor shall have to carry out the work according to programme given by Executive Engineer/Assistant Engineer-in-charge of the work. No claim for idle-labour on any account shall be entertained.
37. The work shall be carried out as per drawing, designs given by the Engineer-in-charge.
38. Stacking of materials shall be done by the contractor as per direction/ approval of Engineer-In-Charge.
39. The quantities of items should not be executed beyond the agreement quantities without prior permission of Engineer-in-charge.
40. Contractor will have to make his own arrangement for tools, plants & machinery required for the work & department will not supply any tool, plant except stipulated in the agreement.
41. The contractor should read the clauses of CPWD form 7 before tendering. The form shall be part of the contract. This form is available in the office of EE/AE & market as well as internet www.tenderwizard.com CPWD or www.cpwd.gov.in
42. S&S C.I. spun or ductile standard specials shall conform to relevant BIS specifications & bear ISI marking.

43. Department shall issue necessary request letter to local bodies addressed to local concerned bodies for necessary road cutting permission. The Contractor shall be responsible to obtain the required permission & accordingly he will plan the execution of work. The road restoration

charges shall be paid by the department. No payment shall be made to the contractor for obtaining the road cutting permission. Secured advance if any shall be paid after receipt of road cutting permission.

44. The contractor shall take all necessary measures for the safety of traffic during execution of work and provide, erect and maintain such barricades, including signs, marking, flags, lights and flagmen as necessary, at either end of the excavation/embankment and at such intermediate points, as directed by the Engineer-in-charge for the proper identification of construction area. He shall be responsible for all damages and accidents caused due to negligence on his part. Nothing extra shall be paid on this account.
45. Dismantled materials i.e. G.I./C.I. pipe & fittings etc. shall be kept in safe custody of the contractor as per directions of Engineer-in-charge& no payment shall be made on this account. Engineer-in-charge may allow removal of dismantled materials from site before payment of final bill.
46. All G.I./C.I. pipe, joints should be got test checked from AE, EE, being hidden item before refilling of Earth by Contractor. The contractor is responsible for getting it test checked.
47. Contractor will have to engage sufficient Nos. of workers, plumber, beldar to execute all complaints. One supervisor authorized by the contractor or his authorized representative or his qualified Engineer will remain at Enquiry Office to obtain/collect all the complaints & will further give to his workers. The Supervisor will have to maintain a register (as per Annexure B) on monthly basis & have to submit in duplicate to the concerned JE/AE. Supervisor has to give the complaints to the workers in prescribed Performa (Annexure C) which will be duly signed by Allottee/Client if any and the daily report to be submitted to the JE for records. Contractor has to intimate his mobiles numbers and that of supervisor/plumber in writing at enquiry counter so that urgent complains may be given on phone immediately.
48. Contractor will have to issue Identity cards to all workers/staff engaged on the work. Police verification of all workers is also to be done.

49. **DISPUTES**:- In case of any disputes or interpretation, Arbitration clause no. 25 of 'General Condition of Contract for CPWD Works 2023 (Maintenance work)' with upto date correction slips shall be followed.
50. There shall be no concretization of the trees within one meter of their circumference.
51. The contractor shall take all necessary measures for the safety of traffic during execution of work and provide, erect and maintain such barricades, including signs, marking, flags, lights and flagmen as necessary, at either end of the excavation/ embankment and at such intermediate points, as directed by the Engineer-in-charge for the proper identification of construction area. He shall be responsible for all damages and accidents caused due to negligence on his part. Nothing extra shall be paid on this account.
52. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fee and charges which may be liable. The contractor shall give due notices to municipality/police and / or other authorities that may be required under the law / rules in-force prevailing in that area and obtain all requisite permissions for temporary obstructions / enclosures and pay all charges which may be leviable on account of his execution of the work under the Agreement. Nothing extra shall be payable on this account.

    For completing the work in time, the contractor might be required to work in shifts including night shifts and no claims whatsoever shall be entertained on this account. Notwithstanding the fact that the contractor will have to pay to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and / or extra amount for any other reasons.

53. If there is any difference or discrepancy between the description of items as given in the schedule of quantities, particular specifications for individual items of work (including special conditions) and I.S. Codes etc., the following order of preference shall be observed.

    (i) Description (Nomenclature) of item as per Schedule of Quantities.
    (ii) Particular Specifications and Special Conditions, if any.
    (iii) CPWD Specifications (as amended/ modified up to previous day to last date of submission of bid)
    (iv) Indian Standards Specifications of B.I.S.
    (v) Additional Conditions
    (vi) General Conditions of Contract – Maintenance Work 2023 for CPWD Works (as amended/ modified up to previous day to last date of submission of bid)
    (vii) ASTM, BS or other foreign origin code mentioned in tender document.
    (viii) Manufacturer's specifications and as decided by the Engineer-in-Charge.
    (ix) Sound Engineering practices or well established local construction practices.
    (x) Drawings, if any.

54. Water tanks, taps, sanitary, water supply & drainage pipes, fittings & accessories should conform to bye-laws of local body/corporation, where CPWD specifications are not available. The contractor should engage approved licensed plumbers for the work and get the materials (fixtures/fittings) tested by the Municipal Body/ Corporation authorities wherever required at his own cost. The Contractor shall submit for the approval of the Engineer-in-charge, the name of the plumbing agency (along with their working experience in recent past) proposed to be engaged by him.
55. Due to unprecedented circumstances created by Covid 19, there may be delay or cut in allocation of budget to this division. Hence, no claim whatsoever shall be entertained if there is delay in payment.
56. **Agency will have to intimate its e-mail address, whatsapp contact and mobile phone no. in writing while at the time of submission of performance guarantee. Every notice, letter, intimation shall be intimated through same means of communication which will supersede the means of intimation through postal process.**

Executive Engineer
SJHD, CPWD
New Delhi

SPECIAL CONDITION FOR CIVIL WORK

1. Inspection of materials and work: All the materials brought to the site by the contractor for use in the work as well as fabricated work shall be subject to inspection and approval by the Engineer-in-charge.
2. Removal of rejected materials: In case any materials/Substandard work are rejected by the Engineer- in-Charge, the same shall be removed from the site within 48 hours, failing which the same may be got removed by the Engineer-in-charge at the risk and cost of the contractor. The decision of the Engineer-in-charge shall be final and binding in this regard.
3. Manufacturer's Test Certificate: The contractor shall, if required by the Engineer in charge produce Manufacture's Test Certificate for any material of particular batch of materials supplied by him. The test(s) carried out shall be as per relevant specifications/ BIS Code.
4. No claim / dispute shall be entertained on the conditions at any stage either during execution of work or after completion of work and decision of the Engineer-in-charge shall be final and binding.
5. Unless and until specified in the item the contractor shall make his own arrangement for lifting / hoisting / placing of steel girders / steel sections by suitable arrangement either manually or by mechanical crane etc. as approved by the Engineer-in-charge upto all heights in the building at no extra cost.
6. The contractor shall stack the building materials away from the building at site as approved by the Engineer-in-charge and nothing extra for lead / lift of material for bringing the materials manually in the premises shall be paid.
7. The contractor shall at his own cost make arrangement for weighing of the dismantled materials at site of work.
8. The dismantled bricks shall be accounted for recovery from the contractor at the rate of minimum 60% of 494 Nos. i/e 297 Nos. (Two Hundred and Ninety Seven Only) per cubic metre of brick masonry in cement mortar dismantled or actual numbers (75% minimum or actual numbers in case of brick work in mud mortar). The recovery of bricks / tiles, if not returned by the contractor will be made @ Rs.2500/- (Rupees Two thousand five hundred only) per thousand Nos.
9. The dismantled Red stone slabs shall be accounted for minimum 60% or actual quantity of the area of stone dismantled. The recovery of the balance stone slabs not returned by the contractor after being measured in respective item will be made at the rate of Rs.30/- per Sqm.
10. The contractor shall prepare one sample of all items which should be got approved from the Engineer-in-charge, only on acceptance of sample work, contractor will be allowed to commence the work and sample is to be preserved by contractor till the whole work is completed. The quality of work should be confirmed to the approved samples.

11. The contractor shall note that the items of work in any room shall be undertaken at one time one after the other and completed at one stretch in time allowed for the same by the Engineer-in-charge and got noted by Junior Engineer-in-charge for the residents. Any items left over in any building shall be got done at his cost and risk without any further notice (other than one entry in the site order book) to the contractor after 4 days from the date of entry in the site order book.
12. The rooms/sites where the work is to be executed on any day shall be got approved from the representatives of the Engineer-in-charge at the site of work. No work shall be carried out in any room/site without the approval of the representative of the Engineer at the site of work. Such work carried out without the approval of the representative of the work shall be rejected and will not be measure and paid for.
13. Nothing extra shall be paid to the contractor for excess consumption of materials in case of material arranged by him.
14. The contractor shall have to remove all splashes after completing the work. In case the splashes are not removed by the contractor the same shall be got removed by the Engineer-in-charge and necessary recovery for the cost of removal of splashes shall be made from the contractor.
15. The contractor must take adequate precautions to ensure that no spillage of construction material/malba/building rubbish takes place on to the carriageway/ road. Failure to observe this will make the contractor liable to pay compensation @ Rs. 100/- (Rs. One Hundred only) per day, per metre length of each carriage way as affected by spill over of any construction material, subject to a maximum of 5% (Five percent) of the estimated cost of the work put to the tender. The decision of Engineer-in-charge in this regard, shall be final and binding on the contractor.
16. The temporary warning lamps shall be installed at all barricades during the hours of darkness and kept lit at all times during these hours.
17. No structural member shall be chased or cut without the written permission of the Engineer-in-Charge.
18. All materials obtained from Govt. stores or otherwise shall be got checked by the Junior Engineer-in-charge of the work on receipt of the same at site of work before use.
19. The contractor has to make his own arrangement for all T & P like ladders, gohree, sutli, empty containers, brushes, and paper, kuchies etc. required for work and nothing extra shall be paid for the same.
20. The work shall be taken up only after receipt of their respective materials.
21. The contractor shall have to get approved the brands/shades of dry distemper, oil bound distemper, synthetic enamel paint, plastic emulsion paint etc. from the Engineer-in-charge before supply of the materials.
22. Full quantity of stipulated/required Materials shall be brought to the site of work in original containers with the manufacturers seal intact.

23. The materials required for day's work shall be issued to the contractor or his authorised representative daily by the Junior Engineer-in-charge of the work. Any balance of the material left at end of the days of work and the empty containers shall be returned to the Junior Engineer. The day to day issue account of the materials shall be maintained by the Junior Engineer-in-Charge and shall be signed daily by the contractor or his authorised agent in token of receipt of the materials failing which no payment of bill shall be made to the contractor. The empty containers shall not be removed from the site of work without written orders of the Engineer-in-charge.

24. Defective work/sub-standard work or work not done according to the specifications of the contract shall be liable for summary rejection & shall not be measured and paid for. This shall be without prejudice to taking any other action against the contractor in accordance with the terms & conditions of contract.

25. The contractor shall depute his representative daily to the site of work. The name and signature of his representative attested by the contractor shall be intimated to the Engineer-in-charge.

26. No payment will be made to the contractor for damage caused by rains during the execution of the works and no claim on this account will be entertained.

27. It will be the responsibility of the contractor for damage caused by rains during the execution of the works and no claim on this account will be entertained.

28. Deviation in quantities shall be done only with prior written permission of the Engineer-in-charge. Deviation in quantities done on the order of other than the Engineer-in-charge shall not be measure and paid for.

29. No work shall be carried out over hidden items unless such hidden items have been measured and recorded and checked/test checked by JE/AE respectively. Payment for such hidden items shall not be made and paid later on.

30. To avoid disputes later on, contractor is advised to get the measurement recorded within a week's time and shall submit his bills as per relevant clause (7) of contract. Any dispute regarding measurement including work done shall be judged within a week's time failing which measurement, certified and recorded, shall be entertained.

31. No T&P shall be supplied by the department.

32. The EPF & ESI will also be deposited by directly by the contractor to the concerned authorities and same will reimbursed to the contractor after submitting original receipt to the department. An amount equal to as per percentage of rates of EPF & ESIC charges (as per SOP for CPWD works manual) will be withheld from each running bill on gross amount of work done and same will be released to the contractor after submitting original receipt to the department. The receipt should clearly indicate the name of work and list of works with their names, durations and other required information. In Case the contractor failed to submit the original receipt, the withheld amount will be submitted to the concerned authority as per law.

33. The contractor should submit a tentative programme of work within three days of the date of start of work. The contractor will have to work as per programme of the department. No claim what so ever will be entertained on this account.

34. All unserviceable / dismantled materials received of old material shall be deposited at Service Centre to the concerned Junior Engineer-in-charge and nothing extra shall be payable on this account.

35. The Contractor shall comply with the provisions of 'Construction and Demolition Waste Management Rules, 2016' as notified by the Ministry of Environment and Forest vide notification dated 29.03.2016 (available at web address www.moef.gov.in).

36. **Water Proofing Treatment**

a. The water proofing items shall be got done through the associated specialized firms after obtaining approval from Engineer-in-charge**.**

b. The contractor shall give **five years** performance guarantee in the prescribed proforma (specimen appended) for the water proofing treatment. In addition to security deposit of gross work done 10% (Ten percent) of the cost of these items shall be retained as security, to watch the performance of the work executed. However, half of this amount (withheld) shall be released after maintenance period of three years, after the completion of the work, if no defect comes to the notice. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within Seven days and, if not attended to, the same shall be got done by other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period shall inspect and examine the treatment once every year and make good any defect observed. However, the 10 % security deposit referred above can be replaced with bank guarantee of equivalent amount for relevant period.

Executive Engineer
SJHD, CPWD
New Delhi

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Minimum Quality Assurance Plan (for the work costing more than 10 lac)

1. Tests which are mandatory as per CPWD specification 2019 Vol I & II are to be carried out by the contractor. While deciding these criteria CPWD Specifications & Provisions of BIS Code and Standard Practices may be referred if not mentioned in the annexure mentioned above.
2. Field laboratory is to be set up at site and the field testing equipment's are to be arranged by the contractor.

3. Maintenance of Register of Tests –

(i) All the registers of tests 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 at the time of issue of award letter.
(ii) All Samples of materials including Cement Concrete Cubes shall be taken by Contractor jointly with JE in charge of work and out of this at least 50% samples shall be taken in presence of AE in charge. If there is no JE, all Samples of materials including Cement Concrete Cubes shall be taken by contractor in presence of AE in charge of work. All the necessary assistance shall be provided by the contractor. Cost of sample materials is to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site.
(iii) All the test in field lab setup at Site shall be carried out by the Engineering Staff deployed by the contractor in presence of JE-in-charge and at least 50% of tests in presence AE-in-charge. At least 10% of tests shall be carried out in presence of Executive Engineer.
(iv) All the entries in the registers will be made by the designated Engineering Staff of the contractor and same should be presented before JE/AE/Divisional Engineer for their review.
EEs/AEs/JEs shall conduct field testing of water at least once every three months or change in the source of water. The test results shall be recorded in the test registers, in addition to the mandatory laboratory testing of water samples.
Contractor shall be responsible for safe custody of all the test registers.

4. It is mandatory to the contractor to submit copy of all site registers with each Running Account Bill and Final Bill. These registers shall further be checked by AE(P) in Division Office and receipts of registers should also be acknowledged by Accounts Officer by signing the copies and register to confirm receipt in Division office.
If all the site registers are not submitted by contractor along with each R/A Bill & Final Bill, no payment shall be released to the contractor.

5. Maintenance of Material at Site (MAS) Register -
(i) All the MAS Registers including Cement and Steel Registers shall be maintained by Contractor which shall be issued to the contractor by Engineer-in-charge along with the award letter or issued in ERP.
(ii) The contractor shall get 100% test checked by JE or by AE if there is no JE after each entry of receipt of material at site in MAS register.
(iii) The contractor shall get MAS Register test checked by JE at least twice a week and at least once a week by AE. If JE is not available then MAS register must be checked by AE at least twice a week.
Cement register shall be got reviewed by Divisional Engineer at least once in a month. 27

7. 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:
   All laboratories are in the Government/semi-Government of Private sector Labs of all Government institutes, PSUs. IITs, NITs, Government Engineering colleges. Central and state Government research centres, centrally and state government funded laboratories comes under Government labs and shall be approved by the SDG/ADG of the region (Delhi Region.)
   The following laboratories Govt. /Semi Govt. approved for ADG(Delhi) Region for testing of material used in construction:

- NSIC Technical service Center (NTSC), Okhla, New Delhi
- Delhi Technological University (DTU), Delhi.
- Netaji Subhash University of Technology (NSUT), Delhi.
- National Test House (NTH), Ghaziabad
- Central Building Research Institute Roorkee.
- National Institute of Technology (NIT), Delhi.

However, if validity of above mentioned has/ is expired, then samples will not be sent there for testing. It will at discretion of Engineer-in-Charge to select the any of the lab mentioned above. 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.

8. QUALITY ASSURANCE / TESTING OF MATERIALS

The contractor shall establish a laboratory at site to rest the coarse, fine aggregate, water, sand, cement etc. to be used in construction.
With each Running Bill, the details of mandatory test carried out shall be submitted by the contractor.
Samples of materials required for testing shall be provided free of charge by the contractor.

9.0 Testing charges to be borne by contractor:

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 from the list of approved laboratories for testing as approved by ADG (Delhi).
However, if any ultrasonic pulse velocity / load testing or special testing is to be done for concrete whose strength is doubtful, the cost of the same shall be borne by the contractor.
In case there is any discrepancy in frequency of testing as given in list of mandatory tests and that in individual sub-heads of work as per CPWD Specifications higher of the two frequencies of testing shall be followed and nothing extra shall be payable on this account.

10. FIELD LABORATORY

The contractor has to establish field laboratory at site including all necessary equipments and skilled manpower for the Field Tests (As per General Index) at his own cost to have proper quality control.
For performing the above tests, the Field Testing Equipment's and Instruments (As per General Index) are to be arranged and maintained by the contractor. (DG/MAN/410 dated 22.10.2021)
Testing charges to be borne by contractor:
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 from the list of approved laboratories for testing as approved by ADG (Delhi).

LIST OF FIELD TESTS REQUIRED AT SITE LAB

- Particle size and shape
- Slump test
- Flakiness & Elongation Index tests
- Compressive strength (concrete or bricks) test
- Bulking of sand
- Silt content of sand
- Temperature measuring with thermometer with brass protected end 0-200 C
- TDS Meter
- Water test

FIELD TESTING EQUIPMENT AND INSTRUMENTS

A. Testing Equipment at Field Laboratories
(i) Balances 7kg to 10 kg. Capacity, Semi-self-indicating type-Accuracy 10 gm
(a) 500 gm. Capacity, Semi-self-indicating type Accuracy 1 gm
(b) Pan Balance – 5 Kg. Capacity, accuracy 10 gm.
(c) Weighing scale platform type 100kg capacity.
(ii) Sieves: as per IS 460-1962.

I.S. Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm complete with lid and pan.
IS Sieves – 200 mm internal dia(brass frame) consisting of 2.36 mm, 1.18 mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.
Sieve shaker capable of 200 mm and 300 mm dia sieves, motorized operated with timing switch assembly.

Equipment for slump test – Slump Cone, Steel Plate, tamping rod, steel scale, scoop.
Graduated measuring cylinders 200 ml capacity
Enamel trays (for efflorescence test for bricks and other tests) 29

300 mm X 250 mm X 40 mm
(b) Circular plates of 250 mm dia
(c) 600 mm X 450 mm X 500 mm
(d)450 mm X 300 mm X 40 mm.
ISI marked 150 X 150 X 150 mm concrete cube moulds as per site requirement – 18 Nos.
Graduated cylinder 1000 ml. Capacity.
Cube testing machine and slump cone.
Any other equipment for site tests as outline in BIS and as directed by the Engineer-in-charge
Water testing kits

B. Field Testing Instruments

- Steel tapes – 3 m
- Digital Vernier Calipers
- Digital Micrometer Screw 25 mm gauge
- A good quality plumb bob
- Spirit level minimum 30 cms long with 3 bubbles for horizontal vertical
- Wire gauge (circular type) disc.
- Foot rule
- Long nylon thread
- Pulse velocity meter
- Magnifying glass
- Screw driver 30 cms long
- Ball pin hammer, 100 gms
- Plastic bags for taking samples
- Digital Distance meter Leveling machine.
- Water testing kits

ANNEXURE-I

GUARANTEE 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 …….. between M/s _____ S/o _____ (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 effect 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 the work executed by him will remain structurally stable after the expiry of maintenance period prescribed in the contract for the minimum life of two years 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. _____

ANNEXURE-II

GUARANTEE TO BE EXECUTED BY CONTRACTORS FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS.

The Agreement made this _____day of _____Two thousand and_____between_____sonof_____ (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 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 and leak-proof for ten years from the date of giving of water proofing treatment.

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 after the maintenance period prescribed in the contract.

Providing that the Guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose.

a) Misuse of roof shall mean any operation which will damage proofing 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 the roof or construction adjoining to existing roof whereby proofing 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 defect being found render the building water proof to the satisfaction of the Engineer-in-charge at his cost 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 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 execute the water proofing 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 reason of any default 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 the parties.

IN WITNESS WHEREOF these presents have been executed by the Obligor_____ 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._____

SPECIAL CONDITIONS FOR CEMENT AND STEEL

CONDITIONS FOR CEMENT

a) Cement required for the work shall be procured by the contractor.

b) The contractor shall procure PPC conforming to IS: 1489 (Part-I) / OPC conforming to IS:8112as per **List of Preferred Makes for Civil Works.**

c) The supply of cement shall be taken in 50 kg bags / or in bulk for storage in cement silos for batching plant 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 relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not conform to their levant BIS codes, the same shall stand rejected, and it 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. Supply of cement shall be taken in 50 kg bags bearing manufacturer's name, or his registered trademarks if any and grade and type of cement as well as ISI marking. The packing of the cement bags shall be as per CPWD specifications 2019 with correction slips upto last date of submission of bid.

d) The cement shall be brought at site in bulk supply of approximately 20 tonnes or more as decided by the Engineer-in-Charge.

e) One nos. cement godowns, each of the capacity to store a minimum of 2000 bags of cement shall be constructed by the contractor at site of batching plant for which no extra payment shall be made.

f) 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 keys 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.

g) 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 cost the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor.

h) 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 General Condition of Contract 2020 and shall be governed by conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, work shall liable to be rejected. In case of excess consumption, no adjustment needs to make.

i) The cement brought to the 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.

j) 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 so within 3 days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor.

CONDITIONS FOR STEEL REINFORCEMENT

1. The contractor shall procure ISI marked TMT Bars of Fe 500D grade from the steel manufacturer such as SAIL, TISCON, RINL, Jindal Steel & Power Ltd. and JSW Steel ltd. Or their authorized dealer having valid BIS License for IS 1786-2008 (Amended – November 2012). If TMT bars of any dia of above-mentioned make is not available in market at any time then the contractor on producing non availability certificate from the manufacturers may procured TMT bars of that dia from Steel manufacture as per the following guidelines:

2. The Special Director General of Chandigarh region (Projects) of CPWD shall approve the steel manufactures subject to the guidelines for eligibility criteria and other technical parameters given below.
   Credentials for eligibility criteria & other technical parameters for steel manufacturer: The manufacturer should meet the following eligibility criteria:
   a) The Steel manufacture should have followed documentary evidence:
      i. Certificate of incorporation
      ii. Memorandum of articles of Association
      iii. Credit rating of the company from CARE/CRISIL/ICRA (the grading should not be C/D grade for minimum last3years)
   b) The Steel manufacturer must have following licenses and certificates:
      i. ISI certificate for billets (IS2830:2012)
      ii. ISI certificate for TMT Bars (IS1786:2008 (Amendment – 1 November2012)
   c) The Steel manufacturer should also preferably have the following licenses:
      i.ISO9001:2015
      ii. ISO 14001:2015
      iii. OHSAS 18001:2007
   d) The steel manufacturer should be using iron ore as the basic raw material. The entire gamut of iron and steel production is owned by the same company or its subsidiary company (ies) and the iron making capacity is sufficient matching the steelmaking capacity, adopting any of the refining technologies for manufacturing steel & TMT Bars as given under are eligible:
      i. BF-BOF route
      ii. COREX-BOF Route
      iii. DRI-EAF Route (Each Electric Arc Furnace should be 100 MT or more)
   e) Billets produced must be ISI marked (IS2830:2012)
   f) The TMT bars produced must be ISI marked (IS1786:2008)
   g) The steel manufacturer should have the following in house testing facilities (NABL Accredited):
      i. Computerized Universal Testing Machine
      ii. Spectrometer
      iii. Bend Re-bend facility as per IS: 1786:2008 (Amendment-1November 2012)
      iv. Raw material laboratory: Arrangement for testing Carbon, Sulphur & Phosphorous etc.
      v. Other testing facilities as specified in IS: 1786:2008 & IS: 2830:2012

3. Steel can also be procured from any particular steel manufacturer who has been Suomotto approved by the Special Director General of Chandigarh region (Projects),CPWD.

4. Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the

steel arranged by the contractor does not conform to the specifications, 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 or written orders from the Engineer-in-Charge to do so.

5. The steel reinforcement bars shall be brought to the site in bulk supply of 50 tonnes or more, or as decided by the Engineer-in-Charge.

6. The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and 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.

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

Size of bar	*For consignment below 100 tones*	*For consignment above 100 tonnes*
Under 10 mm dia bars	One sample for each25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10mm to 16mm dia bars	One sample for each35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16mm dia bars	One sample for each45 tonnes or part thereof	One sample for each 50 tonnes or part thereof

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

9. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel 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 consumption is less then theoretical consumption including permissible variations leading to under designing of the structure, the work shall be summarily rejected, otherwise recovery at rate so prescribed shall be made after ensuring structural soundness and stability. In case of excess consumption, no adjustment need to be made.

10. Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge.

11. The standard sectional weights referred to shall be as given in Table 5.4 in para 5.3.4 in CPWD Specification 2019 Vol.-I and will be considered for conversion of length of various sizes of TMT Bars in to standard weight. Record of actual sectional weights shall also be kept dia. And 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 conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be terms as Derived Actual Weight.

a) If the derived weight is less than the standard weight, then the Derived Actual Weight shall be accepted if it is within the following tolerances specified in IS:1786-2008, otherwise whole lot will be rejected. However, deductions shall be made for the difference in derived actual weight and standard weight at the rate mentioned in clause 10CA for TMT-500D reinforcement bars. Tolerance on nominal mass shall be in accordance with Table 5.4A of CPWDSpecification2019.

b) If the derived actual weight is found more than the standard weight, then nothing shall be paid extra for the difference in derived actual weight and standard weight.

12. The contractor shall submit original vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be used in the work. All consignment received at the work site shall be inspected by the Site staff along with the relevant documents before acceptance. The contractor shall obtain Original Vouchers and Test Certificates and furnish the same to the Engineer-in-Charge in respect of all the lots of steel brought by him from approved supplier to the site of work. The original vouchers and test certificates shall be defaced by the CPWD Site staff and Copy of Original vouchers and original test report shall be kept on record in the site office.

PARTICULAR SPECIFICATIONS

102.S.A **EARTHWORK:**

1.0 The work shall be done in accordance with CPWD Specifications 2019 – Volume-I & II and National Building Code 2016 with upto date correction slips upto last date of submission of bids.

1.1 All the major excavation shall be carried out by mechanical excavator. No extra payment shall be made for that.

1.2 The rates are inclusive for all depths & nothing extra shall be paid for additional lift etc.

2.0 CEMENT CONCRETE

The work shall be done in general as per CPWD Specifications 2019, Volume-I & II with date correction slip issued upto last date of submission of bid.

3. R.C.C./C.CWORK(DESIGNMIXCONCRETE):

3.1 The RCC work shall be done with Design Mix Concrete. Wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. The Design Mix Concrete will be designated based on the principles given in the latest IS: 456, 10262 & SP 23. The condition and specifications stated herein shall have precedence over all conditions and specifications stated in relevant I.S. codes/CPWD specifications. The concrete mix shall be designed for specified target mean compressive strength in order to ensure that the work test results do not fall below the acceptance criteria specified for the concrete mix. The Contractor shall design mixes for each class of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. The mix shall be designed with quantities of admixture / plasticizer proposed to achieve required workability & strength. The specifications mentioned here in below shall be followed for Design Mix Concrete.

The sources of coarse aggregate, fine aggregate & water to be used in concrete work shall be identified by the contractor & he will satisfy himself regarding their conforming to the relevant specification & their availability before getting the same approved by the Engineer- in-Charge.

3.2 **Coarse Aggregate**: As per CPWD Specifications 2019 – Volume-I & II with upto date correction slips upto last date of submission of bids.

3.3 **Fine Aggregate:** As per CPWD Specifications 2019 – Volume I & Vol. II with upto date correction slips upto last date of submission of bids.

3.4 **Water:** It shall confirm to requirements laid down in IS:456-2000 / CPWD Specifications 2019 – Volume I & Vol. II with upto date correction slips upto last date of submission of bids.

3.5 **Cement:** PPC shall be used for design mix concrete and shall conform to IS-1489 (Part I). However, if OPC/higher grade of cement is used by the contract or nothing extra shall be paid on this account.

3.6 **Admixtures / Plasticizers:** - The admixture shall confirm to IS: 9103, wherein required, the admixture of approved quality and approved make only shall be used to attain the required workability. Nothing extra shall be paid for use of admixtures.

3.7 **Grade of Concrete:** The compressive strength of various grades of concrete shall be given as below

Grade Designation	Compressive strength on 15 cm cubes minimum 7 days (N/mm^2)	Specified Characteristic Compressive Strength at 28 days (N/mm^2)	Maximum Water Cement Ratio	Minimum Cement to be used in (kg per cum)
M-10	As per design	10	0.50	220
M-15	As per design	15	0.50	240
M-20	As per design	20	0.50	300
M-25	As per design	25	0.50	330
M-30	As per design	30	0.45	340
M-35	As per design	35	0.45	350
M-40	As per design	40	0.45	360
M-50	As per design	50	0.40	380

NOTE: In the designation of a concrete mix letter M refers to the mix and the number of the specified characteristic compressive strength of 15 cm – cube at 28 days expressed in N/mm^2.

The contractor shall engage one of the following approved laboratories/ test houses at their own expenses for designing the concrete mix in accordance with relevant IS Codes and to conduct laboratory test to ensure the target strength and workability criteria for a given grade of concrete.

(a) The laboratories in the Government sector, Semi Government, All Govt. Institutions, Indian Institutes of technology, National Institutes of technology, Central and State research Centre, Centrally and state funded laboratories stand approved for testing

3.10 The various ingredients for mix design / laboratory tests shall be sent to the lab / test houses through the Engineer-in-Charge and the samples of such aggregates sent shall be preserved at site.

3.11 The contractor shall submit the report on design mix from any of above approved laboratories 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 design mix is approved.

3.12 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.

3.13 Trial Batches

(a) The designed mix proportion shall be checked for target mean compressive strength by means of trial batches.

(b) The quantities of materials for each trial mix shall be sufficient for at least six specimens (cubes)and the concrete required for carrying out work ability tests.

I The workability of Trial Mix No. 1 shall be measured and mix shall be carefully observed for freedom from segregation, bleeding and its finishing characteristics. The water content, if required, shall be adjusted corresponding to the required changes in the workability.

(d) With the modified water content, the mix pro-portions shall be recalculated by keeping with water cement ratio unchanged. The mix proportions, as modified, shall form the Trial Mix No. 2 and tested for the specified strength and workability.

I In addition, Trial Mix No. 3 and 4 shall be designed by keeping water contents same as that determined for trial mix 2 but varying the water cement ratio $\pm$ 10 percent of the specified value and tested for their design characteristics.

3.14 All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the contractor including redesigning of the concrete mix wherever required and directed by Engineer-in-Charge.

3.15 APPROVAL OF DESIGNMIX:

The mix design for a specified grade of concrete shall be done for a target mean compressive strength Tck = Fck + 1.65 S or Fck + X, whichever is higher

Where,

Fck= Characteristic compressive strength at 28 days.

S = Standard deviation which depends on degree of quality control.

X = factor based on the grade of concrete, as per Table 1 (IS:10262-2019

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 follows:

GRADE OF CONCRETE	STANDARD DEVIATION(S)
M-10	3.5
M-15	3.5
M-20	4.0
M-25	4.0
M-30	5.0
M-35	5.0
M-40	5.0
M-50	5.0

Minimum three sets of separate preliminary test shall be carried out for each trial batch of concrete mix. Each test shall comprise six specimens and only one test set of six specimens shall be made on any particular day. Out of the six specimens 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. While the design mix shall be approved only on the basis of test strength of 28 days. The design mix shall be considered satisfactory and approval if at least three preliminary test-sets individually satisfy the following strength and work ability criteria.

a. The average strength of each test sets is not less than the specified target means compressive strength (Tck).

b. The strength of any specimen cube is not less than0.85Tck.

c. The concrete mix is required degree of work ability and acceptance concrete finish.

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

3.17 FREQUENCY OFTEST:

The minimum frequency of sampling of concrete of each grade shall be one sample for every 50 cum or part thereof. At least one sample shall be taken from each shift. 90% of the total tests shall be done at the laboratory established at site by the contractor and remaining 10% in any laboratory mentioned in Para 3.9above.

3.18 STANDARD OFACCEPTANCE:

Acceptance criteria of design mix shall be in accordance with Para 5.8.3 of CPWD Specification 2019 Volume I.

3.19 For cast-in-situ (if required), the contractor has to arrange at site centering and shuttering as given in Proforma of Schedule before one month from stipulated date of start of work. Only M.S. centering / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine-ply shuttering as per site requirement may be used on specific request from contractor as approved by the Engineer-in-Charge. No extra payment shall be made on any of these grounds.

3.20 In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of R.C.C. shall be accordingly adjusted at the time of its centering, shuttering and casting for which nothing extra shall be paid to the Contractor.

3.21 As per general engineering practice, level of floors in toilet / bath, balconies shall be kept 15 mm lower than corridor/ adjacent rooms/general floors and shuttering should be adjusted accordingly and slabs should be laid with slope towards the drainage point. Nothing extra is payable on this account.

3.22 Production of Concrete

All concrete shall be produced using fully automatic weigh-batching plant of suitable capacity (not less than 30cum/hr.) conforming to IS:4925 with the arrangements for automatic dispensing of admixture and having facility of giving print out indicating weight / details of all ingredient of concrete in each lot/ batch and variations from the approved design mix if any.

The batching and mixing plants shall be dedicated plants for this project. Contractor shall make his own arrangements for the necessary infrastructure for installation of batching plant and other machineries.

Automatic batcher shall be charged by devices which when actuated by a single starter switch will automatically start the weighing operation of each material and stop automatically when the designated weight of each material is fed in the mixer. The batching plant shall have automatic arrangement for dispensing the admixture and shall be capable of discharging water in more than on stage.

A batching plant essentially shall consist of the following components:

- Separate storage bins for different sizes of aggregates, soil for cement, water storage tank.
- Batching equipment
- Mixers
- Control Panels
- Mechanical material feeding and elevating arrangements

The compartments of storage bins for aggregates shall be approximately of equal size. The cement compartment shall be centrally located in the batching plant. It shall be water tight and provided with necessary air vent, aeration fittings for proper flow of cement & emergency cut off gate. The aggregate and sand shall be charged by power operated centrally revolving chute. The entire plant from mixer floor upward shall be enclosed and insulated. The batch bins shall be constructed so as to be self-cleansing during draw- down. The batch bins shall in general conform other requirements ofIS:4925.

The batching equipment shall be capable of determining and controlling the prescribed amounts of various constituent materials for concrete accurately i.e. water, cement, sand, individual size of coarse aggregates etc. The accuracy of measuring devices shall fall within the following limits.

Measurement of Cement:	$\pm$ 2% of the quantity of cement in each batch
Measurement of Water:	$\pm$ 3% of the quantity of water in each batch
Measurement of Aggregate:	$\pm$ 3% of the quantity of aggregate in each batch
Measurement of Admixture:	$\pm$ 3% of the quantity of admixture in each batch

The batching and mixing plant shall have the provision of adjusting the plus / minus quantity of various ingredients in the next batch so that there is no variation in quantity of ingredients from design mix in a lot consisting of 5 to 6batches.

The mixer in the batching plant shall be so arranged that mixing action in the mixer can be observed from the operator's station. The mixer shall be equipped with a mechanically or electrically operated timing, signaling and metering device which will indicate and assure completion of the required mixing period. The mixer shall have all other components as specified in IS:4925.

Land for Temporary Use

The land for labour camps and batching plant shall be made available to the contractor in the proposed campus in consultation with Safdarjung Hospital authorities. The Engineer-in-Charge shall extend necessary help and issue necessary recommendations etc. to the concerned department for temporary allotment of land during construction period.

3.23 TRANSPORTATION, PLACING AND COMPACTION OFCONCRETE

a. Mixed concrete from the batching plant shall be transported to the point of placement by transit mixers and placed in position through concrete pumps and/or steel closed bottom buckets capable of carrying minimum 0.6 cumconcrete. In case the concrete is proposed to be transported by transit mixer, the mixing speed shall not be less than 4rev/min. of the drumnorgreater than a speed resulting in peripheral locity of the drum 70 m/minutes at its largest diameter. The agitating speed of the agitator shall be not less than 2 rev/min nor more than 6 rev/min of the drum. The number of revolutions of the mixing drum or blades at mixing speed shall be between70 to 100 revolutions for a uniform mix, after all ingredients, has been charged into the drum. Unless tempering water is added, all rotation after 100 revolutions shall be at agitating speed of 2 to 6 rev/min and the number of such rotations shall not exceed 250. The general construction of transit mixer and other requirement shall conform toIS:5892.

b. Incase concrete is to be transported by pumping; the conduit shall be primed by pumping a batch of mortar through the line to lubricate it. Once the pumping is started, it shall not be interrupted (if at all possible) as concrete standing idle in the line is liable to cause a plug. The operator shall ensure that some concrete is always there in the pump receiving hopper during operation. The lines shall always be maintained clean and shall be free of dents at all stages. Special precaution shall be taken that surrounding temperature during concreting shall not exceed 30 degrees centigrade.

c. Except where otherwise agreed to by the Engineer-in-Charge, concrete shall be deposited in horizontal layers to a compacted depth of not more than 450 mm. Unless agreed to by the Engineer- in-Charge, concrete shall not be dropped into place from a height exceeding 1.5metre. In order to avoid such situations chutes, tremie pipe or closed bottom buckets shall be used. These shall be kept clean and used in such a way as to avoid segregation. Slope of the chute shall be so adjusted that concrete flows without the use of excessive quantity of water. The delivery end of chute shall be as close as possible to the point of deposit. The chute shall be thoroughly flushed with water before and after each working period and the water used for this purpose shall be discharged outside the formwork. The concrete shall be compacted by using immersion type vibrators. When the concrete is being continuously deposited to a uniform depth along a member, vibrator shall not be operated within one meter of free end of the advancing concrete. Every effort shall be made to keep the surface of the previously placed layer of concrete alive so that the succeeding layer can be amalgamated with it by the vibration process. In case the concrete in underlying layer has hardened to such an extent that it cannot be penetrated by the vibrator but is still fresh (that is, just after initial set), un imposed bond shall be achieved between the top and underlying layer by first scarifying the lower layer before the new concrete is placed by systematically

and thoroughly vibrating the new concrete. The points of insertion of vibrator in the concrete shall be so spaced that the range of action overlap to some extent and the freshly filled concrete is sufficiently consolidated at all locations. The spacing between the dipping positions of vibrator shall be maintained uniformly throughout the surface of concrete so that concrete is uniformly vibrated. The vibrating head shall be regularly and uniformly inserted inthe concrete so that it penetrates of its own accord and shall be withdrawn slowly whilst running so as to allow redistribution of concrete in its way and allow the concrete to flow back into the hole behind the vibrator. The vibrator head shall be kept in one position till the concrete within its influence is completelyconsolidated. Vibration shall be continued until the coarse aggregate particle have blended into the surface but have not disappeared. The contractor shall keep at least one additional vibrator in serviceable condition to be used in the event of breakdowns and maintenance problems.

d. The vibrator head shall not be brought more than 200 mm near to the formwork as this may cause formation of water stagnations. The formwork shall be strong and great care shall be exercised in its assembly. It shall be designed to take up increased pressure of concrete and pressure variations caused in the neighborhood of vibrating head, which may result in excessive local stress on the formwork. The joints of the form work shall be made and maintained tight and close enough to prevent the squeezing out slurry or sucking in of air during vibration. The formwork to receive concrete shall be cleaned and made free from standing water, dust, etc. The contractor shall keep provision for screed and shutter vibrators at site.

e. No concrete shall be placed in any part of the structure until the approval of Engineer- in-Charge has been obtained. If concreting is not started within 24 hours of the approval being given, it shall have to be obtained again from the Engineer- in- Charge. Concreting shall be done continuously over the area between construction joints. Fresh concrete shall not be placed against concrete which has been in position for more than 30 minutes unless a proper construction joint is formed. When concreting has to be resumed on a surface which has hardened, it shall be roughened, swept, clean, thoroughly wetted and covered with a 13 mm thick layer of mortar composed of cement and sand in the same ratio as in the concrete mix itself. The 13 mm layer of mortar shall be freshly mixed and placed immediately before placing of new concrete.

f. Where concrete is not fully hardened, all latency shall be removed by scrubbing the wet surface with wire or bristle brushes. Care shall be taken to avoid dislodgement of particles of coarse aggregate. The surface shall then be thoroughly wetted, all free water removed and then coated with neat cement grout. Particular attention shall be given to corners and close spots.

g. In case of rejection of concrete on account of unacceptable compressive strength, governed by para “Standard of Acceptance” as above, the work for which samples have failed shall be redone at the cost of contractor. However, the Engineer-in-Charge may order for additional tests (like cutting cores, ultrasonic pulse velocity test, load test on structure on part of structure, etc) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The Contractor shall take remedial measures necessary to retain the structure as approved by the Engineer- in-Charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates.

4.0 SHUTTERING /FORMWORK:

a) The work shall be done in general as per CPWD Specifications 2019, Volume-I & II with date correction slip issued upto last date of submission of bid.

b) Only M.S. centering/shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, marine- ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor to be approved by the Engineer-in-Charge.

c) Double steel scaffolding having two sets of vertical supports shall be provided for external wall finish, cladding etc. The supports shall be sound and strong, tied together with horizontal pieces over which scaffolding platform shall be fixed. Scaffolding shall have steel staircase for inspection of works at upper levels.

d) Nothing extra shall be paid for the centering and shuttering, circular in shape whenever the form work is having a mean radius exceeding 6m in plan.

e) In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of R.C.C. shall be accordingly adjusted at the time of its centering, shuttering and casting for which nothing extra shall be paid to the Contractor.

f) As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept minimum 15 mm lower than general floors as required. Shuttering should be adjusted accordingly. Nothing extra is payable on this account. Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces required completing the shuttering panels. Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work.

g) The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust. Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.

h) For the execution of centering and shuttering, the contractor shall use propriety Reebole Chemical Mould release agent of FOSROC or equivalent as shuttering oil as approved by Engineer-in-Charge and nothing extra shall be paid on this account.

i) Concreting of upper floor shall not be done until concrete of lower floor has set at least for 10 days but form work and reinforcement can be taken up after the concrete has set at least for three days.

j) All existing formwork that fails to meet the specifications mentioned above or do not qualify to meet the minimum standards in the view of Engineer-in-Charge shall have to removed and stacked.

5.0 REINFORCEMENT:

a) The reinforcement shall be done as per CPWD Specifications 2019, Volume-I & II with correction slip upto last date of submission of bid.

b) **Reinforcement work** includes all operations including straightening, cutting, bending, welding, binding with annealed steel or welding and placing in position at all the floors with all leads and lift complete as per CPWD Specifications **2019**, Vol.-I &Vol.-II with correction slip upto last date of submission of bid.

c) The contractor shall provide approved type of support for maintaining the bars in position and ensuring required spacing and correct cover of concrete to reinforcement as called for in the drawings, spacer blocks of required shape and size. Chairs and spacer bars shall be used in order to ensure accurate positioning of reinforcement. To ensure proper cover, factory made round / rectangular type cover blocks will be used to avoid displacement of bars in any direction and nothing extra will be paid for that.

d) Reinforcement TMT bars of grade Fe 500 D or more to be used in this work.

e) Bar bending schedule:

The agency shall prepare bar bending schedule drawings as per approved structural drawings and submit to Engineer-in-Charge in advance for approval. The bar bending schedule shall conform to Indian Standard IS 2502-Code of Practice for Bending and Fixing of bars for Concrete Reinforcement. Before execution of work, five copies of these drawings each including for revision will be submitted to Engineer-in-Charge for approval. Keeping in view the quantum of the work, the BBS shall preferably be prepared with software and one person acquainted with preparing BBS with software shall be deputed at site to speed up the work. One software shall also be installed in the office.

6. **MASONARY WORK:**

a) The masonry shall be done as per CPWD Specifications 2019, Volume-I & II with correction slips upto last date of submission of bid.

b) AAC blocks masonry shall be of Grade I and of oven dry density 551-650 kg/cum. It shall be done with polymer modified adhesive mortar above plinth level except wet area sand parapet walls. Brick masonry with burnt clay F.P.S. (non modular) of class designation 7.5 shall be done in foundation, wet area sand parapet walls with cement mortar.

The RCC band shall be provided at sill level and at lintel level over throughout the wall. This thickness of the band shall be approved by the Engineer-in-Charge or as specified in drawing. The RCC band shall be provided in full width of external wall masonry including thickness of XPS board to increase the strength and compatibility. Autoclave Aerated Concrete Block masonry shall be provided with polymer modified adhesive mortar

7.0 STEELWORK:

Steel work in general shall be carried out as per CPWD Specifications 2019, Volume-I & II with correction slips upto last date of submission of bid.

Stainless steel generally shall be Grade 1.4301 (SS 304) or 1.4401 (SS 316). Lower grades shall not be used. Surface finish of all the stainless-steel materials will be in 240 grit satin finish / matt finish. All stainless-steel material will have to be coated by a solution of Inox to avoid finger in prints and avoidance of settlement of environment / atmospheric dust.

Stainless steel railing, both sides in staircase and ramp with double handrail shall be used for barrier free accessibility requirements with adequate SS balusters, runner set Casper approved architectural drawing.

Height of stainless-steel railing in balconies, parapets and similar locations shall not be less than 1200 mm. Stainless steel railing shall be provided with adequate SS balusters, runners etc. as per approved architectural drawing.

Fixing shall be done by stainless steel expansion bolts of approved size and make as per Engineer-in-Charge and welding to be done by using organ welding rods and the surface being duly finished and cleaned by K2 passivation, which is nitric acid plus floric acid solution treatment by which the chances of corrosion will be eliminated and any burn out makes on the metal will also be eliminated.

Stainless steel grade 304 wire gauge with wire of dia 0.50 mm and average width of aperture 102.S mm in both directions shall be used in wire gauge shutters for doors and windows. In Academic Block windows fibre mesh wire gauge shall be used. Wherever M.S. grill provided in window, weight of grill in each window should not be less than 12kg/sqm.

LIST OF APPROVED MAKES OF MATERIALS

1. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material or engaging any of te specialized agencies. The Contractor shall make a detailed submission with catalogues and proposed specifications, as well as full details of the works executed by the specialized agency, as specified.
2. Unless otherwise specified, the brands/makes of the material as specified in the item nomenclature, in the list of approved materials attached in the tender and in the particular specifications shall be used in the work.
   In case of non-availability of the brands specified in the contract the Contractor may be allowed to use alternate equivalent brand of the material by Engineer-in-Charge with the prior approval of NIT Approving Authority subject to submission of documentary evidence of non – availability of the specified brands by contractor. The necessary cost adjustments on account of above change shall be made for the same.
3. Final approval of the brand to be used shall be discretion of Engineer-in-Charge. The brand used shall be one of the brands specified in the list of approved materials attached in the agreement

FOR CIVIL ITEMS/ WORKS

Sl. No.	Materials	Approved make
1.	**Glazed Ceramic tiles**	Nitco, Kajaria, Somany, Johnson, Varmora, Asian granite, RAK, Oasis, Qutone.
2.	**Chequered Tiles**	Nitco, Modern, Ultra, K.K. Manhole, Unistone, Varmora
3.	**Rectified Tiles**	Rectificado of Kajaria, Johnson, Somany, Varmora, Asian granite, Qutone.
4.	**Terrazzo Tiles/Mosaic Tiles**	Nitco, Bharat, NTC Modern or equivalent, Unistone, K.K. Manhole
5.	**Vitrified Tiles (Double charge)**	Rivera, Asian Tiles, Kajaria, Somany, Nitco, Johnson, RAK, Oasis Varmora, Qutone.
6.	**Clay Tiles**	Kenjai, Johnson or equivalent
7.	**Porcelain Tiles**	Asian, Century, Johnson or Asian Granito
8.	**Glass Mosaic Tiles**	Italia, Opio or equivalent
9.	**Manglore Tiles**	Manglore Tiles
10.	**Tile Adhesive as per IS: 15477**	Ferrrous, Somany (Easy Fix), MYK Laticrete, Pidilite, CICO, Fosroc, Choksey
11.	**Bathroom C-P and S.S. Fittings and Accessories**	Kingston, Prima, Jaquar (Continental series), Marc, Kohler, Grohe, Player, Prima Ess Ess, Polyplast, Toyo. – Except for items specified in schedule of quantity.
12.	**Bathroom Fixtures**	Hindware, Jaquar, Cera of 1st quality, Perryware, Prima, Polyplast, Toyo. – Except for items specified in schedule of quantity.
13.	**Kitchen Sink (Steel)**	Neelkanth, Marc of 1st quality, Nirali, Allex, Jayna, Polyplast
14.	**Kitchen Sink (Fire Clay)**	Parsuram, Sanfire, Padmini &Hindware, Parryware, Cera of 1st quality
15.	**PVC Tank**	Sintex, Unitank, Uniplast, Gangakalash, Lotus,

		SPL, Polycon
16.	**Plastic seat cover for English W.C.**	Commander, Cuckoo, Diplomant, Hindware, Polyplast, Somany Except for items specified in schedule of quantity.
17.	**PVC Cistern**	Commander, Duralite, Coral, Hindware (Slimline), Hindustan Pearl, Polyplast, Prayag. – Except for items specified in schedule of quantity.
18.	**P.T.M.T. Fittings**	Prayag Prima, Poly Plast. & Pearl.
19.	**PVC Pipe & Fittings**	Supreme, Jindal, AKG, Finolex, Prince, SFMC, Diplast, Prakash.
20.	**A.C. Sheet (Plain / Corrugated)**	Lotus, Uppal, ACC, Manglore, Everest India Ltd.
21.	**GI Sheet**	Sail, TATA, Jindal.
22.	**Fibre Glass Sheet**	Simcryl of Simba Fibre Glass Company of specified thickness
23.	**Meta Colour Sheet**	Meta Colour Sheet Pvt. Ltd.
24.	**G.I. Fittings**	Unik, ICS, UK, Surya, KS, AMCO, AVR, NVR, RR
25.	**AnodisedAluminium Hardware (Heavy Duty) Aluminium Fittings**	Hardima, Everite, Sigma, Argent, Classic make
26.	**Vitreous China Sanitary ware**	Hindware, Parry ware, Cera, Toyo, Except for items specified in schedule of quantity.
27.	**Fireclay Sinks & Drain Boards**	Parryware, Hindware, CeraSunfirePrasuram
28.	**Acrylic Exterior Paint (1st Quality)**	Asian Paints: Apex Ultima, Nerolac: Excel Total Super, Berger: Long life7, ICI Dulux : Weather Shield Max,
29.	**Water-Proof Cement Paint (1st Quality)**	Berger Paints (Durocem), Asian Paints (Gattucem), Snowcem India Ltd. (Snowcem Plus), ICI India Limited Jenson &Nickolsen (Robbiacem)
30.	**Synthetic Enamel Paint (1st Quality)**	Asian Paints: Apcolite Premium Gloss Enamel, Nerolac: Synthetic Hi gloss, Berger: Luxol Hi gloss, ICI Dulux: Gloss Synthtic enamel
31.	**Acrylic emulsion paint (1st Quality)**	Asian Paints: (Premium Interior Emulsion Paint), Nerolac: Beauty Gold, Berger: Rangoli Total Care, ICI Dulux: Super Cover,
32.	**Paint - Two-tone velvet/ Preimistic Pearl finish**	Asian paint, UltraTech (UTTPL): (Damascus/Alba/ Palmyra), Armour Coat: (Perlata), Nova Color : (R-Stone fondo), Neel Gagan Pigments
33.	**Paint -Textured Exterior Paint**	Asian Paints, Nerolac Luxture, Berger Paints
34.	**POP**	J.K., Laxmi, Birla, Asian Paint, Sakarni, Shree Ram, Adhar Shree, Decotouch
35.	**Exterior Putty/ Wall Putty**	Birla (Birla Putty), J.K. (J.K. wall putty), Berger (Burger wall putty), Asian Paint (Truecare wall putty), Home Pride

36.	**Oil bound washable/ Acrylic distemper**	Bison acrylic of Berger, Nerolac Beauty of GoodlessNerolac, Tractor brand of Asian Paint, Maxilite of ICI Paint, Aqualin of Acro Paints Ltd.,
37.	**Steel Primer/ Wood Primer**	ICI India ltd., Nerolac, Berger, Asian Paints
38.	**Cement primer**	Nerolac, Berger (BP white), Asian (Decoprime WT), ICI (White primer)
39.	**Bitumen**	Indian Oil, Hindustan Petroleum, Bharat Petroleum
40.	**APP Sheet**	Bitumen Co. Ltd., Roflex, STP, Dermabit, Apex, MAKPHALT
41.	**G.I. Pipes**	Tata, Jindal-Hissar, Bhushan, Prakash Surya
42.	**uPVC Pipes & CPVC Pipes**	Supreme, Prince, Finolex, Astral
43.	**MS Pipe & Tubes**	Electro Steel, Tata, Jindal (Hisar), parkash Steel Tubes, Appolo, ITC, Surya , Kirloskar.
44.	**Centifugally Cast (spun) iron Pipes**	NECO, RPMF, RIF, SKF.
45.	**Centrifugally Cast (spun) Iron Pipes (Class LA)**	Electro Steel, SKF, RIF, Neco, RPMF.
46.	**R.C.C. pipes – (NP-2)**	Lukshmi, Sood & Sood, jain& Co.
47.	**Steel Reinforcement**	SAIL, Tata Steel, RINL, JSPL, JSW
48.	**Precoated Profile Sheet**	Essar, Tata, Bhushan, JSW, Jindal.
49.	**Nuts, Bolts and Screws,(Steel)**	Kundan, Priya, Atul, Puja, GKW/WUERTH
50.	**M.S. Section**	Tisco, Jindal, Sail, Tata
51.	**MS Rolling shutters**	Rama rolling shutters, jyoti rolling shutters, Anand industries
52.	**G.I./Stainless Steel Wire Mesh**	Sterling Enterprises, Trimurty Welded Mesh, Tiger Brand.
53.	**Locks/ Latch**	Godrej, Harrison, Plaza, Dorma, Golden, Yale, Dorset.
54.	**Dash- Fastners**	Hilti, Fischer, Canon, Bosch, WUERTH.
55.	**Hydraulic Door Closer/ Floor Spring**	Hardwyn, Godrej, Dorma, Hafele,Yale, Dorset.
56.	**Laminates**	Formica, Decolam, Merino, Greenlam, Century
57.	**Veneered/ Prelaminated Particle Board**	Kitlam, Duro, Merino, Century, Veer, Green Penelmax, Action Tesa, Greenpanel.
58.	**Flush Door Shuttes (Decorative/ Non-Decorative)**	Kitlam, National, Swastik, Jayna, Duro, Merino, Century ply, Greenlam and Jayna Doors of Jain wood Industries, Jain Doors Pvt. Ltd./Orion Doors, Greenpanel.
59.	**FRP/PVC Doors (Shutters and Chowkhats)**	Fibreways technology, Shiv Shakti Fibreudhyog, JaindoorPvt. Ltd., Jayna Doors of Jain wood Industries, Jain Doors Pvt. Ltd. Rajshree, syntax, FRP Bhatt, Ashoo Model Arts, Selected Product

		Co.
60.	**Ply wood/ Board (Commercial or teak ply) etc.**	Duro, National, Kit Ply, Greenply, Century, Jayna, Greenpanel.
61.	**Laminated wooden flooring**	Pergo, Vista, Virgin, Juncker, Greenpanel
62.	**Factory made Panelled& wire gauge wooden door/ window shutters**	JaindoorPvt. Ltd., Panchkula, M/s NewJagdamba Doors, Rajpura, Jayna, Goyla, Kutty
63.	**Aluminium Sections (all types)**	Jindal, Hindalco, Indalco,
64.	**Aluminium composite panel sheet**	Alucobond, Alston, Reynoarch, Aludecor, Alomax/Virgo.
65.	**Friction Stay Hinges**	Earl-Bihari, Hardwyn, Dorma, Hettich
66.	**EPDM Gasket**	Hanu, Anand.
67.	**Paver Blocks &Kerb stones**	NITCO, Unitile, Dalal, Hindustan Tile, KK, Unistone, UltraTuftek, K.K. Pvt. Ltd., Surendera
68.	**Pre-cast Cement Concrete slab**	K.K, Modern, NITCO, Advent, NTC, Hindustan, Dalal
69.	**Float Valve**	Prayag Prima, Poly Plast, Pearl.
70.	**Ball Valves**	Zoloto, IBP, Arco, Prima
71.	**Gun metal valves**	Leader Zoloto, Sant, Annapurna, Prima, Polyplast,
72.	**Brass stop Cock & bib Cock**	Zoloto, Sant, L & K, Leader, Jainko, PRIMA, Polyplast
73.	**Stone Ware Pipe & Gully Traps**	Perfect, Parry, Hind, Anand
74.	**C.I. Valves**	Kirloskar, IVS, Burn, Annapurna, Deepak Valve
75.	**C.I. manholes Covers**	B.C. RIF, NECO, Kajeco, SKF
76.	**Steel fibre re-inforced concrete manhole covers and grating**	K.K. Manholes, Pragati Concrete, Dalal.
77.	**Tempered Glass/ Glass Pane/Lacquered glass**	Saint Gobain, Asahi , Gold Plus
78.	**Bevelled Edge Mirror**	Atul, Saint Gobain, Modiguard, Golden fish, Jolly
79.	**White Cement**	J.K. White, Birla White
80.	**OPC**	ACC, Ultratech, Ambuja, Vikram, Birla, JK, Binani, Shree Ultra, Shree Cement Ltd.,J.P., Rewa& Cement Coporation of India.
81.	**Stainless steel work**	Connect Architectural Products Pvt. Ltd., Jindal Stainless Steel Ltd., ICICH Industries, Essal, Dorma, D Line, Kitch ,Geze
82.	**Fire Rated Door**	Shakti Hormann, Pacific, Supreme Metwood, Sukriti or equivalent
83.	**Fire Rated Stainless Steel**	Geze, DORMA, Dorset or equivalent
84.	**Fire Rated Glass**	Saint Gobain, Schott or equivalent

85.	**Draperyrod,venetion blinds**	Mac, vista or equivalent
86.	**Poly-SulphideSealent**	Pidillite, Tuffseal, Choksey Chemicals
87.	**Damp Proof Compound**	Dr. Fixit, Impermo, Duraseal, Acco-Proof or equivalent
88.	**Water Proofing material**	Penetron, Tikidan, Sterling Technotrade
89.	**Crystalline Water Proofing Compound**	Penetron Admix @ 0.80% dosage, Kryton KIM @ 2.00% dosage, Xypex, C2000 Admix @ 2.00% dosage.
90.	**Injection Grouting**	Pidilite (Dr. Fixit), Sika, FosrocChocksey,Dura Build, Endura, CICO, MAKPHALT
91.	**Nonmetalic Surface Hardner**	MC Deritop F.H. or equivalent
92.	**Epoxy mortar/ Admixtures**	Fosroc, MBT, Sika, CICO, BASF, MC BAUCHEMIE, CHOCKSEY, Wurth, MAKPHALT
93.	**URINAL SENSOR (AUTOMATIC)/ELECTRIC OPERATED**	Kingston, Prima, Jaquar, Marc, Kohler, Ess Ess. – Except for items specified in schedule of quantity.
94.	**Modular Kitchen Accessories**	Stallion or Sparkle Top, Hitech kich.
95.	**False Ceiling** **(i) Board** **(ii) Hanging System/Grid system**	Armstrong, "GYP Board" of Gypsum India Gypsum India, Saint Gobin, Boral, Laffarge, Diamond Ceiling, Hi Steel, Tranquil, R.K Ceiling,
96.	**Mineral Fibre False Ceiling**	Armstrong, GYPTECH, Diamond Ceiling or equivalent, R.K Ceiling
97.	**Metal False Ceiling**	Armstrong, Sanit Gobin, GYPTECH, HI-STEEL
98.	**GRG False Ceiling**	Diamond Ceilings, GYPTECH, Saint Gobain, USG Boral, R.K Ceiling
99.	**Calcium Silicate False Ceiling**	Aerolite, HIWX/GYPROCK, Hilux, Armstrong, GYPTECH, R.K Ceiling
100	**Steel work with hot finished welded type tubes for tabular trusses**	Applo, Jindal, ITC, TATA, Bhushan, SAIL India Ltd., RINL (VIZAG)
101	**Patch fitting for frameless glass doors**	Hardwyn, Closma, Dorma.
102.	**Ready mixed concrete**	ACC, Ultratech, Ambuja, Vikram, Birla, JK, Binani, Shree Ultra, Shree Cement Ltd., M/s Shri Ram Ready Mix Concrete Pvt.Ltd. ,V.K.Ready Mix Concrete Pvt. Ltd, RMC India, Lafarge, M/s NDCON Constrcution., M/s Antritech Private Limited.
103.	**PVC antibacterial flooring**	LG Hausys, Radon Med-Tech, OEM.

104.	**Thermoplastic paint**	CBM, CMS, Reliance Thermoplastic, SN Industries, OSCAR Thermoplastic and any other approved by Engineer-in-Charge having monthly production capacity of 1000 MT and registered with Directorates of Industries of India within house quality assurance facility.
105.	**Tactile Tiles**	Johnson, Pelican ceramic industries Pvt. Ltd.
106.	**Full Body homogeneous heavy duty vitrified tile**	Johnson, Kajaria, Orientbell, Somany, Nitco, Varmora, Qutone
107.	**MAZZA AC PIPE**	A Infrastructure Ltd, Apurva Vinimay Pvt Ltd, Kanoria Sugar Gen. Mfg. Company
108.	**WPC/PVC door shutters, window and frame**	"Rajshri" from MS Rajshri Plywood, Alstone, KAKA or equivalent approved makes as per direction Engineer-in-Charge.
109.	**Polycarbonate sheet**	GE Lexan, Danpalon, Polygal, Lexan
110.	**Grab bar**	Euronics, Jaquar, Kohler
111.	**uPVC Doors & Windows**	Fenesta, Duroplast, Supreme, Encraft
112.	**Acoustic wall paneling**	Armstrong, Gyptech, Anutone
113.	**High Pressure Laminates**	Archidply, Century, Marino, Greenlam, Alstone
114.	**Water proofing coating (Polyurethane, polyurea, acrylic cementious, SRI coating, Food grade expoxy coating, coaltar epoxy, silicone water repellent coating, Atactic Polypropylene Polymer)**	Pidilite (Dr. Fixit), Sika, Fosroc, CICO, Nerolac Perma, MAKPHALT, Asian Paint
115.	**Tensile Fabric**	SERGE FERRARI , MEHLER , SATTLER PRO-TEX GmbH
116.	**Epoxy based corrosion protection**	IPSS, VECTOR, FOSROC
117.	**Shear keys**	IPSS, SIKA, FOSROC
118.	**Zinc Anode**	IPSS, VECTOR, Krishna Conchem
119.	**Non metallic composite Carbon fiber wrapping system**	FYFE/ Enwrap / Nexcarbon
120.	**Rockwool and Spray over deck Insulation**	ROCKWOOL, Lloyd Insulation, Loin Insulation, NGP Industries

Note:-

1. ***In addition to above preferred makes any equivalent make of above-mentioned items in preferred make list shall be allowed subject to approved from ADG (RD), CPWD, New Delhi and in the discreation of Engineer-in-charge*.**
2. **Unless otherwise specific specified, the makes mentioned in the nomenclature of concerned item will prevail over the list of makes specified above.**
   The contractor shall provide the materials as per the make or Brand indicated above. When two or more alternative brands have been mentioned, the brand to be finally used shall be decided by the Engineer-In-Charge. The contractor shall obtain the approval of Engineer-in-charge for the alternative brands, before the actual execution of items

Executive Engineer
SJHD, CPWD,
New Delhi

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/CON/ Maintenance 2023/18
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 Maintenance Works

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

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(P)/SJHD

(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

चन्द्रपाल यादव (सी.एण्ड एम.)
(Chander Pal) SE (C&M)

अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/17(1)/2026/ Maintenance 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)

DPCC-U022/8/2026-EIA-DELHI POLLUTION CONTROL COMMITTEE I/149972/202

Through email/Speed Post

DELHI POLLUTION CONTROL COMMITTEE
Department of Environment
(Govt. of NCT of Delhi)
3rd Floor, Block-I, DMRC IT Park Building
Shastri Park, Delhi-110053
(visit us at website : http://dpcc.delhi.gov.in/)

File No. DPCC-U022/8/2026/EIA/ 1061-1073 **Dated:11.05.2026**

OFFICE ORDER

Subject: Mandatory Use of High-Density Dust Screens (Green Nets) at Construction and Demolition Sites in the NCT of Delhi.

In view of significant contribution of construction and demolition activities towards dust, due to $PM_{2.5}$ and PM_{10} concentrations, the CAQM has issued directions to control dust pollution generated by the C & D activities in the NCT and the NCR region. An OM was issued on 06.3.2026 stipulating the guidelines for dust pollution control and SOP for carrying out inspection of C and D projects. The two compliances w.r.t. provision of green net are listed as under:

- Tarpaulin or green-net on scaffolding around the area under construction and the building should be provided.
- Construction and Demolition material and waste should be properly stored/ contained/ duly covered with tarpaulin or green net at the construction site.

However, no specification for the green net has been specified/prescribed for effective dust pollution control. Therefore, in order to achieve an effective control on dust emissions from the C & D activities, the minimum thickness/size of the Green net shall be 100 GSM.

1. स.अ. (II)
2. स.ले.अ
3. का.अधी.
4. रोकडिया
5. स्थापना
6. वि.लि.

का.अधि 15/5/26

CE(HQ) Circulate to all

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(P)/SJHD

SCHEDULE OF QUANTITY						
Name of Work : Repair/renovation of 3nos type-II, 4nos type-III & 3nos type-IV staff quarters at west kidwai Nagar, Safdarjung Hospital, Delhi. (SH: Civil work).						
S No	**Description of Item**	**Quantity**		**Rate**	**Unit**	**Amount**
1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					
1.1	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources: 4 graded stone aggregate 20 mm nominal size derived from natural sources).	4	cum	7878.50	cum	31514.00
1.2	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	10	cum	6518.60	cum	65186.00
2	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	2	cum	11505.50	cum	23011.00
3	Centering and shuttering including strutting, propping etc. and removal of form for					
3.1	Shelves (Cast in situ)	23	sqm	927.25	sqm	21327.00
4	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.					
4.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	275	kg	107.85	kg	29659.00
5	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :					
5.1	cement mortar 1:4 (1 cement : 4 coarse sand)	55	sqm	905.05	sqm	49778.00

6	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of any colour and shade					
6.1	Area of slab upto 0.50 sqm	10	sqm	5413.50	sqm	54135.00
6.2	Area of slab over 0.50 sqm	33	sqm	5136.30	sqm	169498.00
7	Extra for fixing marble /granite stone, over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive, including cleaning etc. complete.	38	metre	568.55	metre	21605.00
8	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	432	sqm	1267.95	sqm	547754.00
9	Providing and fixing chromium plated brass curtain rod having wall thickness of 1.25mm with two chromium plated brass brackets fixed with C.P. brass screws and PVC sleeves etc., wherever necessary complete :					
9.1	25 mm dia	165	nos	525.55	Each	86716.00
10	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :					
10.1	300x16 mm	58	nos	303.25	each	17589.00
10.2	250x16 mm	40	nos	260.60	each	10424.00
11	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :					
11.1	250x10 mm	58	nos	115.15	each	6679.00
11.2	150x10 mm	40	nos	82.55	each	3302.00

12	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :					
12.1	125 mm	58	nos	66.25	each	3843.00
12.2	100 mm	200	nos	59.55	each	11910.00
13	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.					
13.1	Twin rubber stopper	58	nos	72.35	each	4196.00
14	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete.					
14.1	Double strip (horizontal type)	160	nos	39.70	each	6352.00
15	Providing and fixing factory made Fiberglass Reinforced plastics (F.R.P.) chajja 4 mm thick of required colour, size and design made by Resin Transfer Moulding (RTM) Machine Technology, resulting in void free compact laminate in single piece, having smooth gradual slope curvature for easy drainage of water and duly reinforced by 2 nos vertically and 1 nos horizontally 50x2 mm thick M.S. flat with 12 mm in built hole for grouting on the existing wall along with the 50 mm flanges duly inserted and sealed in the wall complete in one single piece casted monolithically, including all necessary fittings . The FRP Chajja should be manufactured using unsaturated Polyester resin as per IS: 6746, duly reinforced with fibre glass chopped strand mat (CSM) as per IS: 11551 complete with protective Gel coat U/V coating on Top for complete resistance from the extreme of temperature, weather & sunlight (Only plan area of chajjas shall be measured for making payment).	100.00	sqm	5207.45	sqm	520745.00

16	Providing and fixing factory made uPVC glazed/wire mesh windows/doors comprising of lead free uPVC multi-chambered frame, sash and mullion/coupler (where ever required) extruded profiles having minimum wall thickness of 1.70 mm for Series R1 and R2 profiles and 2.10 mm for Series R3 and R4 profiles conforming to EN: 12608 in any shape, colour and design duly reinforced with galvanized mild steel section made of required shape & size as per CPWD Specification, uPVC extruded glazing beads, interlocks and Inline sash adaptor (where ever required) of appropriate dimension, EPDM gasket, hardware, SS 304 grade fasteners of minimum 8 mm dia with countersunk head, comprising of matching polyamide PA6 grade sleeve for fixing frame to finished wall as per IS 1367 : Part 1 to 14, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame, sash & mullion (if required) shall be mitred cut and fusion welded/mechanically jointed duly sealed at all corners, including drilling of holes for fixing hardware and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of approved size and quality, all complete as per approved drawing conforming to CPWD specification & direction of Engineer-in-Charge. Section of steel reinforcement and cross sections of uPVC profiles to be as per design approved by Engineer-in-Charge.						
16.1	Three track panels sliding window with two glazed & one wiremesh panels with Aluminium channels for roller track, wool pile, nylon rollers with SS 304 body.						
16.1.1	Using R2 series with frame (70 mm & above) x (40 mm & above) & both glazed and fly screen sash (25 mm & above) x (50 mm & above) with zinc alloy (zamak) powder coated touch locks with hook.(Height upto 1.2 meter)	38	sqm	10993.55	sqm	417755.00

17	Providing and fixing factory made uPVC glazed/wire mesh windows/doors comprising of lead free uPVC multi-chambered frame, sash and mullion/coupler (where ever required) extruded profiles having minimum wall thickness of 1.70 mm for Series R1 and R2 profiles and 2.10 mm for Series R3 and R4 profiles conforming to EN: 12608 in any shape, colour and design duly reinforced with galvanized mild steel section made of required shape & size as per CPWD Specification, uPVC extruded glazing beads, interlocks and Inline sash adaptor (where ever required) of appropriate dimension, EPDM gasket, hardware, SS 304 grade fasteners of minimum 8 mm dia with countersunk head, comprising of matching polyamide PA6 grade sleeve for fixing frame to finished wall as per IS 1367 : Part 1 to 14, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame, sash & mullion (if required) shall be mitred cut and fusion welded/mechanically jointed duly sealed at all corners, including drilling of holes for fixing hardware and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of approved size and quality, all complete as per approved drawing conforming to CPWD specification & direction of Engineer-in-Charge. Section of steel reinforcement and cross sections of uPVC profiles to be as per design approved by Engineer-in-Charge.					
17.1	Fixed window/ventilator with mullion/transom.					
17.1.1	Using R2 series with frame (39 mm & above) x (39 mm & above) & mullion (39mm & above) x (60mm & above) . (Height upto 1.2 metre)	40	sqm	8765.40	sqm	350616.00
18	Providing and fixing stainless steel soft closing spring hinges at 0 degree hinges (hydraulic type) of approved make/brand to cupboard shutters with full threaded steel screws including making necessary recess in board and finished etc. complete as per direction of Engineer-in-charge.	96	nos.	272.00	each	26112.00
19	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.					

19.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	1820.00	kg	172.60	kg	314132.00
20	Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm2), counter sunk head, comprising of 10 m dia polyamide PA 6 grade sleeve, including drilling of hole in frame , concrete/ masonry, etc. as per direction of Engineer-in-charge.					
20.1	10 x 120 mm	264	nos	170.95	each	45131.00
21	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc., complete.	80	sqm	1096.55	sqm	87724.00
22	Providing and laying Vitrified tiles in floor in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently and easily.					
22.1	Double charge vitrified tile polished finish of size					
22.1.1	Size of Tile 600 x 600 mm	420	sqm	1553.45	sqm	652449.00
23	Providing and laying Vitrified tiles in floor in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet for placing the tiles gently					

	and easily.					
23.1	Glazed Vitrified tiles Matt/Antiskid finish of size					
23.1.1	Size of Tile 600 x 600 mm	76	sqm	1464.85	sqm	111329.00
24	12 mm cement plaster of mix :					
24.1	1:6 (1 cement: 6 coarse sand)	630	sqm	343.65	sqm	216500.00
25	Distempering with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gram/litre, of approved manufacturer and of required shade and colour all complete to achieve even shade and colour					
25.1	New work (two or more coats) over and including water thinnable priming coat with cement primer having VOC content less than 50 gram/litre	2100	sqm	185.65	sqm	389865.00
26	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	2100	sqm	156.05	sqm	327705.00
27	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	1330	sqm	25.15	sqm	33450.00
28	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :					
28.1	One or more coats on old work	260	sqm	102.80	sqm	26728.00
29	Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq.meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground, all complete as per direction of Engineer-in-Charge.					
29.1	With cement mortar 1:4 (1cement: 4 coarse sand)	150	sqm	560.50	sqm	84075.00

30	Dismantling W.C. Pan of all sizes including disposal of dismantled materials i/c malba all complete as per directions of Engineer-in-Charge.	10	nos	134.10	each	1341.00
31	Dismantling 15 to 40 mm dia G.I. pipe including stacking of dismantled pipes (within 50 metres lead) as per direction of Engineer-in-Charge.					
31.1	a) Internal Work- Exposed on wall	220	Mtr	3.25	Mtr	715.00
32	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.					
32.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	14	cum	2434.25	cum	34080.00
33	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.	2	cum	3551.25	cum	7103.00
34	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :					
34.1	Of area 3 sq. metres and below	120	nos	367.20	each	44064.00
34.2	Of area beyond 3 sq. metres	11	nos	502.75	each	5530.00
35	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.					
35.1	For thickness of tiles 10 mm to 25 mm	650	sqm	73.40	sqm	47710.00
36	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	43	sqm	266.45	sqm	11457.00
37	Dismantling of flushing cistern of all types (C.I./PVC/Vitrious China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	10	nos	112.05	each	1121.00
38	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	1057	sqm	54.65	sqm	57765.00
39	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	110	cum	263.95	cum	29035.00

40	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :					
40.1	W.C. pan with ISI marked white solid plastic seat and lid	10	nos	6515.55	each	65156.00
41	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:					
41.1	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap	10	nos	1879.20	each	18792.00
42	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS : 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :					
42.1	Kitchen sink without drain board - 610x510 mm bowl depth 200 mm	10	nos	4940.80	each	49408.00
43	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to Eureopean type W.C. of quality and make as approved by Engineer - in - charge.	10	nos	349.15	each	3492.00
44	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.					
44.1	Flexible pipe					
44.1.1	32 mm dia	20	nos	119.55	each	2391.00
45	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	10	nos	1607.95	each	16080.00
46	Providing and fixing soil, waste and vent pipes :					
46.1	100 mm dia					
46.1.1	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	120	metre	1180.75	metre	141690.00
47	Providing and fixing plain bend of required degree.					
47.1	100 mm dia					
47.1.1	Sand cast iron S&S as per IS : 3989	10	nos	570.05	each	5701.00

48	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.					
48.1	100x100x100 mm					
48.1.1	Sand cast iron S&S as per IS - 3989	17	nos	925.70	each	15737.00
49	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :					
49.1	100 mm inlet and 100 mm outlet					
49.1.1	Sand cast iron S&S as per IS - 3989	30	nos	1996.50	each	59895.00
50	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.					
50.1	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	11	nos	708.95	each	7798.00
51	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making good the walls etc.					
51.1	20 mm nominal outer dia Pipes	220	metre	537.60	metre	118272.00
52	Providing and fixing brass bib cock of approved quality :					
52.1	15 mm nominal bore	10	nos	353.25	each	3533.00
53	Providing and fixing uplasticised PVC connection pipe with brass unions :					
53.1	45 cm length					
53.1.1	15 mm nominal bore	40	nos	97.75	each	3910.00
54	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :					
54.1	100 mm diameter	11	nos	193.95	each	2133.00
55	Providing lead caulked joints to spun iron or C.I. pipes and specials, including testing of joints but excluding the cost of pig lead :					
55.1	100 mm diameter pipe	70	nos	496.40	each	34748.00
56	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.					
56.1	15 mm nominal bore	40	nos	798.95	each	31958.00
57	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to					

	IS:8931.					
57.1	15 mm nominal bore	20	nos	670.45	each	13409.00
58	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931					
58.1	15mm nominal bore	80	nos	574.30	each	45944.00
59	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	140	nos	74.80	each	10472.00
60	Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks, including stacking of pipes at site lead up to 50 metre:					
60.1	100 mm diameter C.I. pipe	120	mtr	332.50	mtr	39900.00
61	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : (a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours. (b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	33	sqm	617.05	sqm	20363.00
62	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid door/window/ Clerestory windows & other Frames / Chowkhat comprising of virgin PVC polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) fabricated with joints after applying PVC solvent cement and screwed with full body threaded star headed SS screws having minimum frame density of 750 kg/cum, screw withdrawal strength of 2200 N (Face) & 1100 N (Edge), minimum compressive strength of 58 N/mm2, modulus of elasticity 900 N/mm2 and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire					

	retardant and fixed in position with M.S hold fast/lugs/SS dash fasteners of required dia and length complete as per direction of Engineer-In-Charge. (M.S hold fast/lugs or SS dash fasteners shall be paid for separately). Note: For WPC solid door / window frames, minus 5mm tolerance in dimensions i.e. depth and width of profile shall be acceptable.					
62.1	Variation in profile dimensions on plus side shall be acceptable but no extra payment on this account shall be made.Frame size 45 x 70 mm	196	metre	705.85	metre	138347.00
63	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid decorative type flush door shutter of required size comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum, screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength of 50 N/mm2, modulus of elasticity 850 N/mm2 and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant. WPC to be laminated with PVC foil of minimum 14 microns thick of approved design pasted with hot melt adhesive on both faces of shutter and fixed stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In-Charge. (stainless steel butt hinges and necessary S.S screws shall be paid for separately).					
63.1	30 mm thick.	152	Sqm	4764.20	Sqm	724158.00
64	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid board one side white color and other side of board laminted with PVC foil of minimum 14 micron thickness of approved design pasted with hot melt adhesive for cup boards, work stations and bathroom/ kitchen cabinet etc. of required sizes comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder! rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/mm2, modulus of					

	elasticity 850 N/mm2 and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixing with stainless steel piano hinges/soft close clip on concealed hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In- Charge. (Note: stainless steel piano hinges/soft close clip on concealed hinges and necessary S.S screws shall be paid separately)					
64.1	18 mm thick	206	Sqm	2992.90	Sqm	616537.00
				Total		**7198539.00**
	Modified Estimated Cost after using Correction factor on DSR 023 on account of GST 0.973					7004178.00
	Add Cost Index on DSR Items @ (-)4.03%					282268.00
				Total =		**7286446.00**
65	Providing and fixing CP Brass health faucet with flex tube & stand (Make Prima Code-PHF -4307/ Cera/ Kingston or equivalent) complete as approved by Engineer-in-charge.	10	nos	1077.55	Each	10776.00
66	Providing and fixing stainless steel 0.8 litre liquid soap dispensar (5.5x10x18.5 centimeters) of approved quality and colour.	11	nos	706.00	each	7766.00
67	Providing and fixing 6 mm thick frameless toughened glass in UPVC window and door of approved brand and manufacture, including fixing arrangement and making all complete as per direction of Engineer-in-charge.	50	sqm	1998.55	sqm	99928.00
68	**Credit to work for dismantled items received from sites as per direction of Engineer in charge.**					
68.1	Galvanized Iron items.	550	kg	-32.00	kg	-17600.00
68.2	Brass & CP Brass items i.e bib cock/stop cock/angle cock etc. similar item.	22	kg	-510.00	kg	-11220.00
68.3	MS Sections, welded wire mesh and other similar MS items.	550	kg	-35.00	kg	-19250.00
68.4	Flush door shutters	510	kg	-12.00	kg	-6120.00
				Total =		**7350726.00**

Note: In case the overall percentage rate quoted by the agency is below the applicable Schedule of Rates, such rebate/percentage below the Schedule of Rates shall not be applicable on all credit items, and the rates of such credit items shall be treated as at par with the corresponding Schedule of Rates, unless specifically provided otherwise in the contract conditions.

Executive Engineer
SJHD, CPWD,
New Delhi

Part C

(Electrical WORK)

PROFORMA OF SCHEDULES

SCHEDULE 'A'			
Schedule of quantities	**E&M Work**	**:**	Attached

SCHEDULE 'D'	
Extra schedule for specific requirements/documents for the work, if any:	**NIL**

SCHEDULE 'E'		
Reference to General Conditions of contract: -		General Conditions of Contract (GCC)– Maintenance Work -2023 amended/modified up to last date receipt of tender i/c extension, if any
Name of Work:-		Repair/ Renovation of 3 nos. type-II ,4 nos. type-III & 3 nos. type-IV staff quarters at West Kidwai Nagar, Safdarjung Hospital New Delhi (SH: Electrical work).
Estimated cost of work:-		**Estimated Cost: Rs. 2066893/-**
(i) Earnest Money		**As per major component of NIT**
(ii)	Performance Guarantee:-	**As per major component of NIT**
(iii)	Security Deposit :-	**As per major component of NIT**

SCHEDULE 'F'				
General Rules & Directions: -				
Officer inviting tender:-		**As per major component of NIT**		
Definitions:				
2 (vi)	Engineer-in-Charge	(i)	Electrical work	Executive Engineer (E), SJHED CPWD, New Delhi
2 (viii)	Accepting Authority	Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi or his successor thereof.		
2 (x)	Percentage on cost of materials and labour to cover all overheads and profits.	15%		
2 (xi)	Standard schedule of Rates	**Elect.**	i) DSR 2025 (E&M) works (All above with withup to date correction slipsamended/modified up to last date receipt of tender i/c extension, if any)	
2 (xii)	Department	Central Public Works Department		
8 (ii)a	Standard CPWD contract form	GCC Maintenance work-2023, CPWD form 7 as modified and corrected up to date amended/modified up to last date receipt of tender i/c extension, if any)		

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, in days.	**As per major component of NIT**
(iii) Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount beyond the period as provided in (i) above.	**As per major component of NIT**

Clause 2	
Authority for fixing compensation under clause 2.	**As per major component of NIT**

Clause 2A	
Whether Clause 2A shall be applicable	No

Clause 5			
Number of days from the date of issue of letter of acceptance for reckoning date of start :			**As per major component of NIT**
Mile stone(s) as per table given below:			
Sl. No.	Description of Milestone (Physical)	Time allowed in days (From date of start)	Amount to be with-held in case of non-achievement of milestone.
---------- Not applicable ----------			
Time allowed for execution of work :			**As per major component of NIT**
Authority to decide:			
(i)	Authority to convey the decision of shifting of mile stone & extension of time		Executive Engineer (E), SJHED CPWD, New Delhi or his successor thereof
(ii)	Authority to decide rescheduling of milestones & extension of time		Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi or his successorthreof
(iii)	Shifting of date of start in case of delay in handing over of site		Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi or his 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	Full Site of Work	NA
Part B	Portions with encumbrances	Nil	NA
Part C	Portions dependent on work of other agencies	Nil	NA

Clause 5A	
Whether Clause 5 shall be applicable	Not Applicable

Clause 6	
Electronic Measurement Book (EMB)	
Mode of measurements	Electronic Measurement Book (EMB) (EMB initiated by contractor through ERP Portal)

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. 12.40 Lakh (Electrical work) Or Mutually Agreed by Engineer-in- charge and Agency

Clause 7A	
Whether Clause 7A shall be applicable	Yes

Clause 8	
Competent authority to inspect and issue completion certificate (Electrical Work)	Executive Engineer (E), SJHED, CPWD, New Delhi

Clause 10A	
List of testing equipment to be provided by the contractor at site lab.	As per requirement of site and direction of Engineer-in-charge.

Clause 10B(i)	
Whether Clause 10B(i) shall be applicable	Not Applicable

Clause 10C	Applicable		
Component of labour expressed as percent of value of work	Electrical work	For CMC & Day to Day Maintenance	
		For other works	

Clause 10CC			
Whether Clause 10CC shall be applicable	Not Applicable		

Clause 11	
Specifications to be followed for execution of work	
1. Electrical works:	a) CPWD General Specifications for Electrical work Part I Internal - 2023, amended upto date.
	b) CPWD General Specifications for Electrical work Part II External -2023, amended upto date.

खण्ड **Clause 12** (As per DG OM No. DG/CON/Maintenance 2O23/O3 dt. 18-12-2023 as amended up to date

Type of work:	**Maintenance works**

The Completion cost of any agreement for maintenance works including works of up-gradation, aesthetic, special repair, addition/alteration should not exceed two times the contract amount. **Deviation up to 1.25 times of Contract amount shall be approved by Engineer-in-Charge with recorded reasons. Deviation beyond 1.25 times up to 1.50 times of contract amount shall be approved by SE/CE (as applicable) with recorded reasons.In exceptional case, ADG/SDG (as applicable) shall have power to approve the deviation beyond 1.50 times up to 2.0 times of Contract amount with recorded reason and take suitable corrective action.**	
खण्ड **Clause 12.2 & 12.3** Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work and other maintenance works.	No Limit

Clause 16 Competent Authority for deciding reduced rates. (Shall be limited upto 5% of the Contract Value.)	Superintending Engineer, DC-X, CPWD, R.K. Puram, New Delhi.

Clause 18		
List of mandatory machinery, tools & plants to be deployed by the contractor at site	:	**Electrical works:** 1. Earth Tester 2. Megger 500 V 3. Line Tester 4. Test Lamp 5. Die &Vice 6. Chase Cutting Machine 7. Crimping Tools 8. Tong Tester and /or as per requirement at site / as per the contract provisions and as per direction of Engineer-in-charge.

Clause 19

Clause 19 C	…….. Authority to decide penalty for each default	Engineer – in - charge
Clause 19 D	…….. Authority to decide penalty for each default	Engineer – in - charge
Clause 19 G	…….. Authority to decide penalty for each default	Engineer – in - charge
Clause 19 K	…….. Authority to decide compensation for each default	Engineer – in - charge

Clause25

Settlement of Disputes by Conciliation and Arbitration

(a)	Conciliator: -	ADG (RD), CPWD, New Delhi or his successor.
(b)	Arbitrator:-Appointing Authority	Superintending Engineer, DC-10, East Block-1, Level-7, CPWD, R.K. Puram New Delhi or his successor.
(c)	Place of Arbitration:	New Delhi

Clause 32

"Requirement of Technical Representative (s) and Recovery Rates"

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 32(i) (Rs per month per person)	
						Figures	words
1	Graduate Engineer or Diploma Engineer	Electrical/ Mechanical 1	Project Manager cum Planning/ quality/Site/Billing Engineer	2 or 5 respectively	1	15,000/-	Rupees Fifteen Thousand only

Note:

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(P)/SJHD

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

d. 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.

Clause 38 (Electrical works)			
(i)	(a)	Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates **2025** printedby CPWD with up to date correction slips	
(ii)	Variations permissible on theoretical quantities:		
	a)	Cement for works with estimated cost put to tender not more than Rs. 25 Lakh	NA
		For works with estimated cost put to tender more than Rs 25 Lakh	NA
	b)	Bitumen for all works.	NA
	c)	Steel Reinforcement and structural steel sections for each diameter, section and category.	NA
	d)	Paints & Chemicals	NA

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GENERAL TERMS & CONDITIONS

1.0 All the works shall be carried out as per CPWD General Specification for Electrical Works, Part-I 2023 amended up to date and should also comply with relevant provisions of the Indian Electricity Rules and Acts as applicable, amended up to date.

1.1 The contractor is advised to visit the site of work to have an idea of the execution of the work; failure to do so shall not absolve their responsibility to do the work as specified in agreement.

Rates:

1.2 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 (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 be supplied by the contractor, watch and ward of all materials (including those supplied by the department, if any) for the work at site etc.

Taxes and Duties:

1.3 Being an indivisible works contract GST & other Taxes not payable separately.

1.4 The 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.

1.5 No mobilization advance shall be paid for the work, unless otherwise stipulated in tender papers for any individual works/ composite work.

Completeness of Tender

1.6 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, whether such items are specifically mentioned in the tender documents or not.

Works to be arranged by the department:

1.7 Unless and otherwise specified in the tender documents, the following works shall be arranged by the Department:

(i) Supply of materials to the contractor as stipulated in the tender documents.

(ii) Storage space for all equipment, components and materials for the work

Works to be done by the contractor:

1.8 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 foundations bolts.

(ii) Cutting and making good all damages caused during installation and restoring the same to their original finish.

(iii) Sealing of all floor openings provided by him for pipes and cables, from fire safety point of view, after laying of the same.

(iv) Painting at site of all exposed metal surfaces of the installation other than pre-painted items like fittings, fans, 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.

(v) Testing and commissioning of completed installation.

Storage and Custody of Materials:

1.9 The contractor has to make his own arrangement for the storage of the material at site & necessary watch and ward of the electrical installation during the execution of work till the same is handed over to the department. No extra payment will be made on this account. The storage space shall however be arranged by the department at site, if available.

1.10 The main contractor shall arrange for proper storage of the electrical fans and fittings at site and that double lock system shall be arranged for the fans and fittings after receipt at site until the time they are taken for installation. The contractor shall however be responsible for proper storage and safe custody of the same till their installation and handing over to the department.

Electric Power Supply and Water Supply:

1.11 Power and water supply will be arranged by the contractor at the site for installation purpose. However, for testing purpose after complete installation of the electrical items, electricity supply will be made available free of cost to the contractor. Contractor will take due care to ensure safety of electrical installation during execution of work.

1.12 All tools and tackles required for handling of equipments 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.

Payment Terms:

1.13 Unless otherwise specified in the additional condition of the contract, the payment shall be made as per the relevant clauses of form PWD 7/8 forming part of the tender documents.

Co-ordination with other agencies:

1.14 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 his work. Recessed conduit and other works, which directly affect the progress of building work, should be given priority.

Care of buildings:

1.15 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 costs, all unwanted and waste materials arising out of his work, from the site.

Structural Alterations to Buildings:

(i) No structural member in the building shall be damaged / altered, without prior approval from the competent authority through the Engineer-n-charge.

(ii) Structural provisions like openings, cutouts, if any, provided by the department for the work, shall be used. Where these required modifications, or fresh provisions are required to be made, such contingent works shall be carried out by the contract at his cost.

(iii) All such openings in floors provided by the department 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.

(iv) 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.

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.

2 Drawings:

(i) The work shall be carried out in accordance with the drawings and the tender documents and also in accordance with modification thereto from time to time as approved by the Engineer-in-charge.

(ii) All wiring diagrams shall be deemed to be 'Drawings' within the meaning of the term as used in Clause 11 of the conditions of contract (PWD 7 or PWD 8). They shall indicate the main switch board, the distribution boards (with circuit numbers controlled by them), the runs of various mains and sub mains and the position of all points with their controls.

(iii) All circuits shall be indicated and numbered in the wiring diagram and the points shall be given the same number as the circuit to which they are electrically connected.

(iv) After award of the work, the firm will be required to submit the drawings for the proposed work including layout plan, conduit routes etc. Work will be carried out as per the approved drawings.

3 Conformity to IE act, IE Rules, and standards:

All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 1910 and Indian Electricity Rules, 1956 amended up to date (Date of call of tender unless specified otherwise). List of rules of particular importance to electrical installations under these General Specifications is given in Appendix C for reference.

4 General requirements of components:

Quality of material: All materials and equipments 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.

5 Inspection of materials and equipments:

5.1 Materials and equipments to be used in the work shall be inspected by the departmental officers. Such inspection will be of following categories:

(i) Inspection of materials / equipments to be witnessed at the Manufacturer's premises in accordance with relevant BIS /Agreement Inspection Procedure.
(ii) To receive materials at site with Manufacturer's Test Certificate(s)
(iii) To inspect materials at the authorized dealer's go downs to ensure delivery of genuine materials at site.
(iv) To receive materials after physical inspection at site.

5.2 Adequate care to ensure that only tested and genuine materials of proper quality are used in work shall be ensured by firm. The firm shall ensure that:

(i) Material will be ordered & delivered at site only with the prior approval of the department to ensure timely delivery.
(ii) As and when the order is placed for the fittings/ fixtures, cables, switchgears, poles, rising main, other main items etc, its copy shall be endorsed to the CPWD Engineer-in-charge.
(iii) The firm will be required to procure material like electrical fittings & fans, exhaust fans, MCB's & DB's, switches & sockets, wires & cables, conduits and switchgears, rising mains, poles , outdoor fittings etc. directly from the manufacturer/ authorized dealers to ensure genuineness & quality and as per the approved makes only. Proof in this regard shall be submitted by the contractor if required by the department.
(iv) Inspection at factory or at go down, as required, shall be arranged by the firm for a mutually agreed date.
(v) Delivery of material shall be taken up only with the consent of department, after clearance of the material.
(vi) Department shall reserve the right to waive inspection in lieu of suitable test certificate, at its discretion.

5.3 Similarly, for fabricated equipments, 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.

6 Ratings of components:

6.1 All components in a wiring installation shall be of appropriate ratings of voltage, current and frequency, as required at the respective sections of the electrical installations in which they are used.

6.2 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.

7 Conformity to standards:

7.1 All components shall conform to relevant Indian Standard Specifications wherever existing. Materials with ISI certification mark shall be preferred.

7.2 Relevant Indian Standards including amendments or revisions thereof up to the date of tender acceptance shall be applicable in the respective contracts for respective items, firm to ensure its compliance.

8 Interchange ability:

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.

9 Workmanship:

9.1 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.

9.2 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 instruction of Engineer-in-charge and other senior officers of the Department during the progress of work.

9.3 Use of quality materials: Only quality materials of reputed make as specified in the tender will be used in work.

10 Testing:

All testes prescribed in this General Specification, 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.

11 Commissioning on completion:

After the work is completed, it shall be ensured that the installation is tested and commissioned.

12 Completion plan and completion certificate:

12.1 For all works completion certificate after completion of work as given in Appendix –E of CPWD Specification shall be submitted to the Engineer-in-charge.

12.2 Completion plan drawn to a suitable scale in tracing cloth with ink indicating the following, along with three blue print copies of the same shall also be submitted.

(i) General layout of the building.

(ii) Locations of main switchboard and distribution boards, indicating the circuit numbers controlled by them.

(iii) Position of all points and their controls.

(iv) Name of work, job number, tender reference, actual date of completion, names of Division/ Sub-division and name of the firm who executed the work with their signature.

13 Guarantee

The installation will be handed over to the department after necessary testing and commissioning. The installation will be guaranteed against any defective design / workmanship. Similarly, the materials supplied by the contractor will be guaranteed against any manufacturing defect, inferior quality. The guarantee period for LED fixtures will be 5 years and for other items a period of 12 months for work done from the date of handing over to the department. Installation/ equipments or components thereof shall be rectified/ repaired to the satisfaction of the Engineer-in-charge

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ADITTIONAL TERMS AND CONDITIONS

1. The work shall be carried as per CPWD general specification for electrical works 2023 (Internal) & part-II. (External) as amended up-to-date and in accordance to the Indian Electricity Rules 1956 and Indian Electricity Act 2003 as amended up-to-date and as per the instructions and satisfaction of the Engineer-in –charge.
2. The material shall be procured only from the manufacturers & their authorized dealers & documentary proof for such procurement & supply shall be produced by the contractor. Contractor has to produce original bill/challan to the Engg.-in-charge.
3. The department reserves the right to send such materials to the manufactures authorized test laboratory to verify the genuineness & quality of the product.
4. All materials to be used on the work shall be got approved from the Engineer-in-charge before installation at site and the rejected material is to be removed from the site immediately.
5. The work shall be progressed with the progress of civil work. As such, the contractor doing electrical works shall work in close coordination with casting of the slabs, erection of the walls etc. as required. No claim of the contractor shall be entertained by the department for the idle labour.
6. The contractor shall be responsible for any damage done to the building of electrical installations during the execution of the work. Damage, if any shall have to be made good by the contractor at his own cost otherwise the same shall be got rectified made good at the risk & cost the contractor.
7. Bad work-man-ship will not be acceptable and defect shall be rectified at contractor's cost to the satisfaction of the Engineer-in-charge.
8. The site shall be cleared of malba, debris caused by working at site by the electrical contractor without any extra cost to the department.
9. Cement for the work is to be arranged by the contractor & nothing extra shall be paid by department on this account.
10. Earthing and all hidden items of work shall be invariably done in the presence of Engineer-in-charge or his authorized representative.
11. The contractor has to intimate the name of his authorized representative, who will be receiving instructions in his absence. The contractor / his authorized representative is bound to sign the site order book as and when required by the Engineer-in-charge and to comply with the instructions therein.
12. The contractor shall make his own arrangement at his own cost for electrical tools and plants required for the work. No T & P will be issued by the department.
13. The contractors are advised to visit the site before quoting this tender to apprise himself about the site environment and other conditions.
14. Materials not specified in the attached list of APPROVED MAKES may be got approved from the Engineer In-charge before use on work. Decision of competent authority shall be final in this respect.
15. The entire installations 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 installations may be taken over in parts but the decision on the same shall rest with Engineer-in-charge which shall be binding on the contractor.
16. The contractor shall use electrically operated "Chase cutters" for cutting chases to lay / fix conduits and other electrical fixtures / accessories in the wall. Nothing extra shall be paid for the same.
17. The copper conductor insulated cables of sizes above 1.5 sq. mm. shall be stranded and terminals provided with crimpled lugs. Nothing extra shall be paid on this account.
18. To facilitate drawing of wires 16/18 SWG GI fish wire be provided alongwith laying of recessed conduit for which no separate payment shall be made.

19. Wiring shall be done only by the looping system. Phase / live conductors shall be looped at the switch box. For point wiring, neutral wire / earthwire looping for the 1st point shall be done in the switch box, and neutral / earth looping of subsequent points will be made from point outlets.
20. No joints in wiring shall be permitted anywhere, except in switch box or point outlets, 'where jointing of wires will be allowed with use of suitable connector.
21. The wiring throughout the installation shall be such that there is no break in the neutral wire except in the form of linked switchgear.

    Only FRLS wires up to 1100V Grade shall be used in wiring.
    Colourcoding :-

Following colour coding shall be followed in wiring :-

Phase :	Red/Yellow/Blue (phase wiring)
Neutral :	Black
Earth :	Green

Termination of circuit into switchboard :-
Circuit will consist of phase / neutral /earth wire. Circuit will terminate in a switch board (first tapping point, where from point wiring starts) in following manner :-
Phase wire terminated in phase connector
Neutral wire terminated in neutral connector
Earth wire terminated in earth connector.

The switch board will have phase neutral and earth terminal connector blocks to receive phase / neutral / earth wire.

22. The cover of all junction boxes shall be of White Bakelite sheet.
23. Tenderer shall submit a sample board, incorporating in it the samples of Engineer-in-charge before commencement of work. No extra payment shall be given for the same.
24. The MCBDB's shall be of the same make as that of MCB's.
25. The connection, inter-connection, earthing and inter-earthing shall be done by the contractor where ever required to be done for energization of the installation and nothing extra shall be paid on this account.
26. The entire installation including submain, electrical points, light & power points shall be tested and properly recorded for submission to Engineer-in-charge irrespective of availability of normal power supply from Electric Supply company and actual load, as fans, fixture and meter board are not within the scope of this contract and shall be provided by the other agency through other contract at the appropriate time.
27. The entire system of metallic conduit work, including the outlet boxes and other metallic accessories, shall be mechanically and electrically continuous by proper screwed joints, or by double cheek nuts at terminations. The conduit shall be continuous when passing through walls or floor.
28. A protective conductor shall be laid inside the conduit between metallic switch boxes & distribution switch board and terminated into proper earth lugs / terminals. Only PVC insulated copper conductor cable of specified size shall be allowed. The protective conductor shall be terminated properly using studs, earth terminal, blocks etc. including in ceiling rose or the case may be.
29. All hardware, fastening material viz. nuts, bolts, washers and screws etc. to be used on work shall be of Zinc/cadmium plated iron.
30. All the material should be ISI marked where ever not specified, if ISI marked material is not available it should be confirming to BIS specification amended upto date.
31. Any Accident/mishappening related to worker deputed by contractor at site shall be the responsibility of contractor.

32. The contractor shall have to furnish the insulation test report, earth report, alongwith all required details of electrical load on the prescribed proforma for the electric connection from Supply Company.
33. The person employed for the work has no right to claim the employment in the department. Such type of claim shall be borne by the contractor.
34. The work will also be carried out at different locations in piece meal manner, as and when required.
35. The dismantle material if any other than credit dismantle material shall be handed over to the JE(E)-in-charge.
36. **Nothing extra shall be paid on account of dismantling of existing old PVC aluminum / copper wire, conduit, GI box of different sizes with switch sockets, MCCB and DB's with MCB, Fans & Fittings, Geysers etc. i/c removal of garbage/ malba from site and making good the same. The contractor shall quote the rates accordingly.**

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LIST OF APPROVED MAKES OF ELECTRICAL MATERIALS

1.	Wires/Cable	:	Polycab / Havells / RRKabel / BCH / KEI / Finolex /Plaza / PI Square / Rallison/ Lumino
2.	Modular Switch/ Socket, Fan Regulator, Data socket outlet, telephone socket outlet, Modular plate / GI Box & other accessories / Bell push / Blanking plate	:	Legrand / North West/ MK Electric/ Crabtree / Anchor /Schneider
3.	Phenolic laminated sheet	:	Hylem / Super Hylem / Formica (White colour ISI marked)
4.	Steel conduit and accessories	:	AKG / BEC / NIC (ISI marked)
5.	BLDC Ceiling Fan	:	Havells / Orient / Usha
6.	Ceiling Fans / Wall Fans / Fresh Air /Air Circulator Fan / Exhaust Fans	:	Usha / Crompton / Havells / Orient / Khaitan / Almonard
7.	LED Fitting / Flood light / Street light / Post Top / LED downlighter / LED Batten	:	Philips / LT / Regent / Neri / Halonix / Crompton / Orient
8.	MCB, MCB DB, Contactor & other switchgear	:	ABB / Schneider/ Siemens / LK / Legrand
9.	MCCB (Ics = 100% Icu)	:	Schneider (NSX) / LK (D-Sine) / Siemens (3VL) / ABB (Tmax) / Legrand (DPX3)
10.	SMDB	:	Havells / BCH / ABB / HPL
11.	CAT6 / CAT6A Cable / Patch panel / Patch cord / IO Socket / RJ-45 Connector	:	Derwiser / Nexans / Siemon / Systimax
12.	GSS Sheet	:	TATA / Jindal (Hisar) / SAIL
13.	Glass fibre / Nitrile Insulation	:	Supreme / Armaflex / K-Flex
14.	Class “O” Al. insulation foil	:	Supreme / Armaflex / K-Flex
15.	Geyser	:	Racold / Crompton / Havells /V-Guard
16.	Emergency LED light	:	Lifeguard / Impulse / Ceasefire
17.	Polyvinyl Chloride (PVC) / UPVC Pipe		Astral / Supreme / Finolex / Prince
18.	Insect Killer	:	Avro / Fonda / Rita
19.	Hi wall Split AC	:	Toshiba / Mitsubishi Electric / O-General / Hitachi / Panasonic / Haier / LLOYD
20.	Grille, Diffuser & Damper	:	Airflow /Ravistar /Cariyare
21.	Photo thermal detector / Manual call point / Horn cum storbe	:	Bosch/Notifier/Siemens / Hochiki /Simplex / ASES / Edward
22.	Fire alarm armoured cable	:	Polycab/Havell’s/R.R.Cable/Finolex / Lumino
23.	DWC Pipe and accessories (Only ISI marked product to be used)	:	Rex / Duraline /AKG / Gemini / Prince
24.	Refrigerant Piping	:	Rajco / Mandev / Camipro / Jindal / Mexflow
25.	Brass compression gland and Al. lugs	:	Dowells/Jainson /Braco /Comet
26.	Paint / Primer	:	Asian / Berger / Dulex / Nerolac
27.	Voltmeter, Ammeter, multi function meter, selector switch, CT, indicating light	:	L&T / Schneider / Siemens / Kaycee (Selector switch)
28.	Control fuse	:	Eaton / C&S / Siemens
29.	Ceiling rose	:	Havells / Anchor / Cona
30.	Pole box	:	Sintex / Stanelec / Hensel

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(P)/SJHD

31.	Call bell	:	Anchor / Cona/ Havells /Legrand / Dura
32.	Any other item not mentioned above	:	As approved by Engineer in charge

Note :- The decision of Engineer-in-charge regarding the model of make shall be final and binding based on the prevailing model at the time of execution.

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Schedule of Work

Name of Work: Repair/ Renovation of 3 nos. type-II ,4 nos. type-III & 3 nos. type-IV staff quarters at West Kidwai Nagar, Safdarjung Hospital New Delhi (SH: Electrical work).

S.No	Description of item	Qty		Rate	Unit	Amount
1	Rewiring for light point/ fan point/ exhaust fan point/call bell point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable and 1.5sq.mm FRLS/HFFR PVC insulated copper conductor single core cable as earth wire in existing surface/ recessed steel/PVC conduit including dismantling as required.					
1.1	Groupa A	40	Point	687	Each	27480.00
1.2	Group B	20	Point	752	Each	15040.00
2	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable in surface/ recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable etc. as required.					
2.1	Group A	100	Point	1440	Each	144000.00
2.2	Group B	46	Point	1684	Each	77464.00
3	Wiring for twin control light point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS/HFFR PVC insulated copper conductor single core cable etc .as required.	43	Point	2242	Point	96406.00
4	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.					
4.1	20 mm	1160	Mtr	254	P/Mtr.	294640.00
4.2	25 mm	470	Mtr	289	P/Mtr.	135830.00
5	Supplying and drawing following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as					

	required.					
5.1	3 x 1.5 sq. mm	460	Mtr	104	P/Mtr.	47840.00
5.2	3 x 4 sq. mm	700	Mtr	222	P/Mtr.	155400.00
5.3	3 x 6 sq. mm	350	Mtr	326	P/Mtr.	114100.00
5.4	6 x 4 sq. mm	120	Mtr	424	P/Mtr.	50880.00
6	Supplying and fixing call bell/ buzzer suitable for single phase, 230 V, complete as required.	19	Nos	112	Each	2128.00
7	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 25 A modular socket outlet and 25 A modular SP MCB, "C" curve including connections, painting etc. as required.	60	Nos	807	Each	48420.00
8	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc. as required.					
8.1	1 or 2 Module (75mmX75mm)	76	Nos	354	Each	26904.00
8.2	3 Module (100mmX75mm)	96	Nos	384	Each	36864.00
8.3	6 Module (200mmX75mm)	83	Nos	462	Each	38346.00
8.4	12 Module (200mmX150mm)	23	Nos	614	Each	14122.00
9	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	36	Nos	402	Each	14472.00
10	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
10.1	5/6 A switch	313	Nos	121	Each	37873.00
10.2	15/16 A switch	179	Nos	176	Each	31504.00
10.3	3 pin 5/6 A socket outlet	313	Nos	136	Each	42568.00
10.4	6 pin 15/16 A socket outlet	179	Nos	219	Each	39201.00
10.5	Telephone socket outlet	33	Nos	168	Each	5544.00
11	Supplying of decorative wall bracket fitting of colour Brush Bronze & White, material Metal body, Diffusir of PPCP, Nickel with brushed brass Electro-plating, Lamp base E27/B22, i/c 9-12 W LED Bulb having Lumens: 810-1260, CCT:2700K, Base cap:E27/B22, wiring with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable i/c loop earthing etc.	43	Nos	1240	Each	53320.00

12	Installation, Testing, Commissioning of wall bracket /ceiling fittings of all sizes and shapes containing upto two GLS/CFL/LED lamps per fitting, complete with all accessories including connections etc. as required.	43	Nos	151	Each	6493.00
13	Supplying of 200mm PVC body exhaust air fan, 1 phase, 230V, 50 Hz, Power Consumption upto 65W, Air delivery more than 850m3/Hr i/c wiring with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable i/c loop earthing etc.	20	Nos	1619.00	Each	32380.00
14	Supplying of 300mm metal body exhaust air fan, 1 phase, 230V, 50 Hz, Power Consumption upto 65W, Air delivery more than 850m3/Hr i/c wiring with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable i/c loop earthing etc.	10	Nos	3835.00	Each	38350.00
15	Installation, Testing and Commissioning of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.					
15.1	Upto 450 mm sweep	30	Nos	556	Each	16680.00
16	Supplying and drawing following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.					
16.1	2 X 10 sq. mm + 1 X 6 sq. mm earth wire	200	Mtr	289	P/Mtr.	57800.00
17	Supplying and fixing of mirror light fitting of Warm White colour, material Metal and Acrylic, wood finsh body,Power wattage upto 12W wiring with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable i/c loop earthing etc.	17	Nos	2830	Each	48110.00
18	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
18.1	Single pole	240	Nos	285	Each	68400.00
18.2	Double pole	20	Nos	696	Each	13920.00

19	Brush Less Direct Current (BLDC) Fan without Remote Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal(Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, suitable for operation with regulator for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 0C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply, Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.					
19.1	1200mm, service value ≥ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	36	Nos	2695	Each	97020.00
20	Supplying, installation, Testing & Commissioning of LED Recessed/surface Down lighter (Round/ square/ Rectangular) SMD type of following body material with PMMA and prismatic diffuser and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -5 0C to 40 0C centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10%, P. F.≥0.95, IP20, CRI >80, UGR (Unified Glare Rating) <19, Flicker free (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), life time of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin), SDCM(Standard Deviation Color Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing Complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥120 <135 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS					

	shall be submitted.. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded aluminium Body including trim.					
20.1	18 watt	50	Nos	942	Each	47100.00
21	Supplying, installation, Testing & Commissioning of LED surface mounted Batten light of following body material and construction as per IS : 10322 with driver (Replaceable) as per the requirement with Driver efficiency >85%, Operating voltage AC 140- 270 Volt, frequency 50/60 hz, Operating temp range -5 0C to 40 0C, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% , P. F.≥0.95, IP20, CRI >80, Flicker free (flicker should be below 5 %), life time (LED,Driver & electrical circuitry), of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin), SDCM(Standard Deviation Colour Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥120 <135 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded aluminium Body (Thickness > 1.20 mm)					
21.1	18- 22 Watt	46	Nos	734	Each	33764.00
22	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)					
22.1	16 way, Double door	10	Nos	3367	Each	33670.00
22.2	12 way, Double door	10	Nos	2871	Each	28710.00

23	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface/ recess, complete with testing and commissioning etc.as required.					
23.1	For 14 way, Double door SPN MCBDB	10	Nos	990	Each	9900.00
23.2	For 10 way, Double door SPN MCBDB	10	Nos	895	Each	8950.00
24	**Buyback for old/ assorted material including dismentaling**					
24.1	Copper wire	5	kg	-800	Each	-4000.00
24.2	MS conduit	30	kg	-20	Each	-600.00
24.3	Switch/Socket	1000	Nos	-2	Each	-2000.00
24.4	SP MCB	150	Nos	-3	Each	-450.00
24.5	DP MCB	10	Nos	-5	Each	-50.00
24.6	Ceiling Fan	20	Nos	-300	Each	-6000.00
24.7	Batten light	40	Nos	-20	Each	-800.00
24.8	Down lighter	40	Nos	-20	Each	-800.00
24.9	Assorted DB	20	Nos	-500	Each	-10000.00
				Grand Total Rs.		**2066893.00**

वरिष्ठ नक्शानवीस (वै)
स.ज.अ.वै.मं., के.लो.नि.वि.
नई दिल्ली

सहायक अभियंता (वै) (यो.)
स.ज.अ.वै.मं., के.लो.नि.वि.
नई दिल्ली

कार्यपालक अभियंता (वै)
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नई दिल्ली