सत्यमेव जयते

GOVERNMENT OF INDIA
OFFICE OF
SUPERINTENDING ENGINEER, DELHI CIRCLE-VI,
C.P.W.D., THYAGRAJ NAGAR, NEW DELHI.

NOTICE INVITING TENDER

N.I.T. No. : 24/SE/DC-6/V-Divn/2026-27

NAME OF WORK : Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).

ESTIMATED COST : Rs. 9,89,44,908/-

EARNEST MONEY : Rs. 19,78,898/-

TIME ALLOWED : 24 Months

NIT amounting to Rs. 9,89,44,908/- (Rupees Nine Crore Eighty Nine Lacs Forty Four Thousand Nine Hundred Eight only) having Pages No. 1 to 134 is hereby approved.

Assistant Engineer (Elect.)P
Delhi Circle-VI, CPWD
Thyagraj Nagar, New Delhi

Assistant Engineer (Civil)P
Delhi Circle-VI, CPWD
Thyagraj Nagar, New Delhi

Superintending Engineer
Delhi Circle-VI, CPWD
Thyagraj Nagar, New Delhi

INDEX

CENTRAL PUBLIC WORKS DEPARTMENT

Name of Work: Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).

NIT No. 24/SE/DC-6/V-Divn/2026-27 **Time :- 24 Months**

Sl. No.	Description		Page No.
1	**Index**		**1**
2.	**Part A**		2
3.	Information and Instructions for Contractors for e-Tendering		3-5
4.	Performa for Earnest Money Deposit Declaration		6
5.	CPWD – 6		7-12
6.	Information & Instruction for Bidders		13
7.	CPWD – 7		14-16
8.	Condition for upgradation work of quarters		17
9.	Form of Bank Guarantee for Performance Guarantee/ Security Deposit/ Mobilization Advance		18-19
10.	Office memorandum		20-39
11.	Annexure-D Letter Head of Contractor Site Inspection Undertaking		40
12.	**Part-B Major Component (Civil Work)**		41
13.	Performa of Schedule A To F		42-48
14.	Table -1 Testing Equipments and mandatory machinery, tools & plants to be provided by contractor at site as per Clause 10A & 18		49
15.	General Conditions		50-53
16.	Special Conditions		54-55
17.	Particular specifications & conditions for civil work		56-70
18.	Additional conditions for upgradation works		71-73
19.	Guarantee to be executed by contractor for removal of defects after completion in respect of water proofing works & Anti Termite Treatment and alluminium windows, doors. annexure-I, II & III		74-76
20.	Special conditions for procurement of steel		77-79
21.	List of Approved Make of Materials (for Civil Works)		80-82
22.	Schedule of Quantity (Civil Work)		83-108
23.	**Part – C Minor Component (Electrical Works)**		109
24.	Performa of Schedules for Electrical A To F		110-115
25.	Special conditions for association of agency for minor component (Electrical works) (Annexure – A to C)		116-120
26.	Terms & Conditions		121-123
27.	Technical Specification of LED Lights		124
28.	List of Preferred Make of Material for Electrical Works		125-126
29.	Schedule of work (Electrical Work)		127-133
30.	Financial Bid (Performa for Quoting the Rates)		134

Certified that this N.I.T. contains page 1 to 134 **(One Hundred Thirty Four Pages Only)**

Assistant Engineer(E)P **Assistant Engineer(C)P**

This N.I.T. is approved for **Rs. 9,89,44,908/-**

(Rupees Nine Crore Eighty Nine Lacs Forty Four Thousand Nine Hundred Eight only)

Vide NIT No. 24/SE/DC-VI/V-Divn./2026-27

Approved

SUPERINTENDING ENGINEER
Delhi Circle-VI, CPWD,
THYAGRAJ NAGAR, NEW DELHI

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(C) AE(E) EE(C) EE(E)

PART -A

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE
(Applicable for inviting open bids)

The Executive Engineer, "V" Division, CPWD, East Block-3, Level-5, R.K. Puram, New Delhi (Email ID: deleecv.cpwd@nic.in) on behalf of the President of India invites online percentage rate bids from approved and enlisted contractors of appropriate class (Building & Road category) in CPWD for the following work(s):-

S. No.	NIT No.	Name of Work & Location	Estimated Cost put to bid (Rs.)	Earnest Money	Stipulated Period of completion of work (in months)	Last date and time of on line submission of Bid and other Documents as specified in the bid document	Time & date of opening of tender/ bid
1	2	3	4	5	6	7	8
1.	24/SE/DC-6/V-Divn/2026-27	Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).	Estimated: -Rs. 9,89,44,908/- (Civil Work Rs. 8,69,80,621/- + Elect. Work Rs. 1,19,64,287/-)/-	Rs. 19,78,898/-	24 (Twenty Four) Months	3.00 PM On 25.11.2026	3.30 PM on 25.11.2026

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from the website https://etender.cpwd.gov.in. or www.cpwd.gov.in free of cost.
4. 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 Banker's Cheque or Fixed Deposit Receipts or/ and Bank Guarantee including e-Bank Guarantee (for balance amount as prescribed) from any of the Commercial Bank towards EMD in favour of Executive Engineer as mentioned in NIT, receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/ AE), CPWD and other documents as specified.

-**- To be Filled By EE

5. Those contractors who are not registered or have not updated their profile on the website mentioned above, are required to get registered / update their profile beforehand. The necessary training materials including the videos with step to step process are available on download section of https://etender.cpwd.gov.in.
6. 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 of https://etender.cpwd.gov.in.
7. On opening date, the contractor can login and see the bid opening process. After opening of bid he will receive competitor bid sheets.
8. Contractor can upload documents in the form of JPG format and PDF format.
9. Contractor must ensure to quote rate 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.
10. Contractor should quote the percentage above or below to two places of decimal only.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. The agency shall follow the standard operating procedure and guidelines scrupulously at the construction site to contain the outbreak of COVID-19 type situation if occurs during execution of work. 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 type situation and nothing extra shall be paid."

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

1. Insurance Surety Bond, Demand Draft/ Account Payee Banker's Cheque / FDR/ Bank Guarantee of any commercial Bank against EMD.
2. EMD receipt for deposition of original EMD to division office of any EE, CPWD.
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 under taking along with other bid documents.

   "If work is awarded to me, I/We shall obtain GST registration Certificate, as applicable, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by CPWD or GST department in this regard".
5. Valid Electrical Contractor License or undertaking that "I/We shall either submit valid electrical license for the execution of electrical work along with PG or associate an approved and eligible contractor of CPWD in appropriate class having valid electrical contractor license".
6. Undertaking for site inspection (Intending bidders must upload undertaking that they have inspected and examined the site and it's surrounding before submitting their bids, duly submitted as per **Annexure-D** on Page No. 40.
7. Copy of Pan Card.
8. ERP Training Certificate as per DG, CPWD OM No. DG/ Enlist. Rules/2023/10 dt 22.04.2024.
9. Any other document as specified in bid document.

EXECUTIVE ENGINEER
"V' DIVISION, CPWD,
R.K. Puram, NEW DELHI

Format of Receipt of deposition of original EMD

Receipt of deposition of original Bank guarantee as EMD (Receipt No…… / date……)

NAME OF WORK: Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).

1. NIT No. **24/SE/DC-VI/V-Divn./2026-27**
2. Estimated Cost: **Rs. 9,89,44,908/-**
3. Amount of Earnest Money Deposit: **Rs. 19,78,898/-**
4. Last date of submission of bid : **25.11.2026 upto 3.00PM**

*(**To be filled by Tender Inviting Authority/NIT approving authority at the time of issue of NIT and uploaded along with NIT)*

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

Signature, Name and Designation of EMD receiving officer alongwith Stamp

(# to be filled by EMD receiving EE/DDH)

CPWD-6 FOR e-TENDERING/BIDDING

Percentage Rate bids are invited on behalf of President of India from approved and enlisted contractors of appropriate class (Building & Road category) in CPWD for the following work(s):-

"Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works)".

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

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

1. This composite work is estimated to cost **Rs. 9,89,44,908/- (Civil Work Rs. 8,69,80,621/- + Elect. Work Rs. 1,19,64,287/-)/-** 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 (or other Standard Form as mentioned) which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.

3 The time allowed for carrying out the work will be **24 (Twenty Four) 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 Full 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 can be seen and downloaded from 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 Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of Executive Engineer, 'V' Division, CPWD, R.K. Puram, 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 inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE/AE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT. 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 of any scheduled bank having validity for six months or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders. Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be scanned and uploaded to the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in press notice shall have to be submitted by

the lowest bidder only along with physical EMD of the scanned copy of EMD uploaded 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.

8A. The bid submitted shall be opened at 03:30 PM on **25.11.2026**

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 document.

(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 bid opening authority.

(iv) 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.

10 The contractor whose bid is accepted will be required to furnish Performance Guarantee at specified percentage of the tendered amount as mentioned in Schedule E given as under and within the period specified in Schedule-F :

(a) PG Shall be 5% of the **Estimated Cost put to tender (ECPT) or contract amount whichever is higher**, or as prescribed from time to time, to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of **six months** beyond the date of completion of all contractual obligations as per GCC. ln case of contracts where supplementary agreement is drawn, the fresh pG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. The PG received against the original work shall be released as per contract conditions.

(b) A bid will be treated as abnormally low if the quoted bid amount is **lesser than 80%** ofthe estimated cost put to tender.

(c) **Requirement of Additional Performance Guarantee (APG):** In case of abnormally low bids as defined the above, the bidder shall be required to submit Additional Performance Guarantee (APG) in addition to the Standard Performance Guafantee (PG). The amount of Additional Performance Guarantee (APG) shall be equivalent to the difference between the 80% amount of ECPT and quoted amount is 0.7A then the amount of APG shall be 0.8A - 0.7A). The Additional Performance Guarantee (APG) shall be in the prescribed format of Performance Guarantee and has to be submitted within the time frame prescribed for submission of Performance Guarantee. The other terms and conditions of release etc. of APG shall be same as that of PG.

(As per O.M. No. DG/Manual-2024/20 dated 27.02.2026)

* To be filled by EE

This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10,000) or Deposit at Call receipt of any Scheduled Bank / Banker's cheque of any Scheduled Bank / Demand Draft of any Scheduled Bank / Pay order of any Scheduled Bank (in case guarantee amount is less than Rs 1,00,000) or Government Securities or Fixed Deposit Receipts of a Scheduled Bank or Bank Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO and ESIC, including Provident Fund Code Number if applicable and also ensure the compliance of aforesaid provisions by the sub-agencies, if any, engaged by the Bidder for the said work with in the period specified in Schedule-F.

In case, after opening of tender, the bidder withdraws or modify the bid during the validity of tender including extended validity if any or after award of work fails to sign the contract or after acceptance fails to submit performance guarantee along with requisite documents mentioned elsewhere in the NIT or fail to submit either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO and ESIC, including Provident Fund Code Number if applicable and also ensure the compliance of aforesaid provisions by the sub-agencies, if any, engaged by the Bidder for the said work before the due date indicated in Schedule-F, the bidder shall be suspended for one year and shall not be eligible to bid for CPWD tenders from the date of issue of suspension order as per undertaking given by bidder 'Form A'.

11 The description of the work is as follows: -

"Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works)".

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 bidder 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 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.

12 The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.

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 to 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 bidders 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 responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazette officer in the Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

16 No Engineer of gazette 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 previous 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 bids. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.

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

(a) The Notice Inviting bid, all the documents including additional conditions, specifications and drawings, if any, forming the bid as issued at the time of invitation of bid and the rates quoted at the times of submission of the bid and acceptance thereof together with any correspondence leading thereto.

(b) Standard CPWD Form-7, GCC 2023 (Maintenance work) as corrected/modified, amendments issued upto day previous to the last day of the online receipt of tender.

19 For Composite Bids

19.1.1 The Executive Engineer in charge of the major component will call bids for the composite work. The cost of bid document has been fixed with respect to the combined estimated cost put to tender for the composite bid.

19.1.2 The bid document will include following three components:-

Part A:- CPWD-6, CPWD-7 including schedule A to F for the major component of the work, Standard General Conditions of Contract for CPWD 2023(Maintenance work) as corrected/modified amendments issued upto day previous to the last day of the online receipt of tender.

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

Part C: Schedule A to F for minor component 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), General/specific conditions, specifications and schedule of quantities applicable to minor component(s) of the work.

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

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

19.1.4 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 no of EE's/DDH in charge of minor component of work. One such signed set of agreement shall be handed over to EE(E) in charge of minor component. EE of major component will operate part A and part B of the agreement, EE(E) in charge of minor component shall operate Part C along with Part A of the agreement.

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

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

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

19.1.8 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 relevant specialized 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.

19.1.9 The main contractor has to enter into MoU with agency(s) associated by him. Copy of such MoU shall be submitted to EE/DDH in charge of each relevant 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 MoU/agreement with the new contractor associated by him.

19.1.10 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.

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

(B) 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.

20 No advance payment is allowed in maintenance works, irrespective of the value of work.

21 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.

22 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.

.....
Signature of Divisional Officer
For & on behalf of President of India

INFORMATION & INSTRUCTION FOR BIDDERS

GENERAL

1.0 DEFINITIONS

1.2 In this document the following words and expressions have the meaning hereby assigned to them.

1.3 EMPLOYER: Means the President of India, acting through the **Executive Engineer, V-Division CPWD, New Delhi.**

1.4 Bidder: Means the individual, proprietary firm, firm in partnership, limited company private or public or corporation.

1.5 "Year" means "Financial Year" unless stated otherwise.

2.0 METHOD OF APPLICATION

2.1 If the bidder is an individual, the application shall be signed by him above his full type written name and current address.

2.2 If the bidder is a proprietary firm, the application shall be signed by the proprietor above his full typewritten name and the full name of his firm with its current address.

2.3 If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full typewritten name and current addresses or alternatively by a partner holding power of attorney for the firm. In the later case a certified copy of the power of attorney should accompany the application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.

2.4 If the bidder is limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a public Notary

3.0 FINAL DECISION MAKING AUTHORITY

The employer reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidder.

4.0 PARTICULARS PROVISIONAL

The particulars of the work given in Section I are provisional. They are liable to change and must be considered only as advance information to assist the bidder.

5.0 SITE VISIT

The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings and himself collect all information that he considers necessary for proper assessment of the prospective assignment.

C.P.W.D.- 7

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

STATE:- **Delhi** CIRCLE:- **Delhi Circle-VI**

BRANCH:- **B&R** DIVISION:- **'V' Division**

REGION:- **Delhi**

Percentage Rate Bid

Name of work **:-**

Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).

Scope of the tender :-

The scope consist of **Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).**

(i) Bids to be submitted online by **3.00 PM** on **25.11.2026**

(ii) To be opened online in presence of Bidders who may be present at **3:30 PM on 25.11.2026 in** the office of **Executive Engineer, "V" Division, CPWD, New Delhi.**

Issued to …….. Bid document made available on line to the agency.

Signature of the Officer issuing the documents on line uploading authority

Designation: **Executive Engineer, V-Division, CPWD, R.K. Puram, New Delhi.**

Date of issue…….

..*.. To be filled by EE

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, of 2023 (Maintenance Works) with upto date amendments to 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 in accordance with, such conditions so far as applicable.

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

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

A copy of earnest money deposit receipt of prescribed amount deposited in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank, is scanned and uploaded (strike out as the case may be). If I/We, fail to furnish the prescribed performance performance guarantee within prescribed period, I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/ We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in CPWD in future for ever. 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 Contractor** #

Witness: # **Postal Address** #

Address: #

Occupation: #

To be filled in by the contractor

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs ……*……..
(Rupees ……).
The letters referred to below shall form part of this contract agreement:

(a)

(b)

(c)

For & on behalf of President of India

Signature ……..

Dated: Designation …….

-*- To be filled by EE.

CONDITION FOR UPGRADATION WORK OF QUARTERS.

1.0(a) The work of upgradation, addition & alterations covered under this contract shall be carried out in the individual quarters. The quarters may be made available to the contractor for execution of work in piece meal/ in parts, and the contractor shall execute the work in these quarters made available to him and the contractor shall not claim anything extra over agreement rates, due to execution of works in piece meal manner.

1.0(b) Vacant quarters will be locked by the contractor at his cost and quarters will not be allowed to be occupied or used by him/his staff/his workers. In case any quarter found occupied unauthorised, a compensation @ **Rs 5000/- (Rupees Five Thousand Only)** per day per quarter shall be levied and the contractor will also be liable for action. Loss caused due to theft or any other causes, shall be made good by the contractor at his own cost.

1.0 (c) The contractor shall complete both civil & electrical works in a quarter handed over to the agency, at a time in complete shape before handing over to department.

1.0 (d) Any Qtr which will be handed over to the contractor for up-gradation will have to be completed within a period as under:-

Description	Type of Quarter	Time Required (in days) for upgradation of each quarter.	Deduction (non refundable) in case of failure to meet the timeline as mentioned in 3
1	2	3	4
(i) Quarters to be upgraded.	Type-IV(S)	75 days	**Rs. 1300/- (Rs. One Thousand Three hundred only) per quarter for each day of delay.**
	Type-V	75 Days	**Rs. 1500/- (Rs. One Thousand Five Hundred only) per quarter for each day of delay.**
	Type-VI	75 Days	**Rs. 2900/- (Rs. Two Thousand Nine Hundred only) per quarter for each day of delay.**

Note:

(i) No further notice shall be issued for deduction in case of failure to meet timeline.

(ii) In case rehabilitation / retrofitting is required apart from finishing/ upgradation, additional time of 15 days shall be given for completion of work.

On non-judicial stamp paper of minimum Rs. 100

(Guarantee offered by Bank to CPWD in connection with the execution of contracts)

Form of Bank Guarantee for Performance Guarantee/Security Deposit

1. Whereas the **Executive Engineer, V-Division, CPWD, R.K. Puram, New Delhi** on behalf of the President of India (hereinafter called "The Government") has entered into an agreement bearing number……..with .....(name and address of the contractor). ……. . (hereinafter called "the Contractor") for execution of work..... ... (name of work) ……. ..... The Government has further agreed to accept an irrevocable Bank Guarantee for Rs. ..... (Rupees ……..... only) valid upto ..... (date)..... as **Performance Guarantee/security Deposit** 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 rerating 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 of 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 or demand by the Government. Notwithstanding anything mentioned above, our liabilities under this guarantee is restricted to Rs…….(Rupees…….only) and unless a claim in writing is

lodged with is within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date……..

Witnesses:

1. Signature.....

   Name and address

   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.

No. 1(10)/T&PR/2016

Government of India
Directorate General
Central Public Works Department
Technical & Public Relations Unit

Tel No. 23061584 Email: dirtech-pr.cpwd@nic.in

105-A, Nirman Bhawan,
New Delhi, Dated: **27.01.2016**

OFFICE MEMORANDUM

Sub.: Directives of the Hon'ble Supreme Court and Hon'ble National Green Tribunal on air pollution from construction and demolition activity.

Attention is drawn to the Hon'ble National Green Tribunal earlier orders dated 4.12.2014 and 10.4.2015 in OA No. 21/2014 and OA No. 95/2014 and MoEF guidelines of 2010 regarding dealing with air pollution from construction and demolition sites. The directives in this regard are restated in the Annexure enclosed.

2. Hon'ble Tribunal had directed for mandatory strict adherence and compliance of above referred orders as well as MoEF guidelines 2010 while carrying out the construction activity.

3. Hon'ble Supreme Court, in a recent judgment has favoured imposing a fine of Rs. 50,000/- on a daily basis on construction sites for generating high levels of dust in Delhi and NCR. It has been directed by the apex court that EPCA may go around and check polluting construction sites with the help of the volunteers for strict compliance of its order.

4. Accordingly, all SDGs, ADGs, CEs, CPMs, PMs are enjoined upon to strictly comply with the directives of Hon'ble Supreme Court & Hon'ble NGT and MoEF guidelines 2010 to control air pollution at CPWD construction sites. Any laxity found or reported by the checking authorities in this regard shall be viewed seriously.

This issues with the approval of Director General, CPWD.

Encl. As above.

(S. P. Chaudhary)
Director (Tech & PR)

To (**through CPWD website**)

All SDGs, CPWD
All ADGs, CPWD
All CEs/CPMs/PMs, CPWD

Addition: NIL Correction: NIL Overwriting: NIL Deletion: NIL AE(C) AE(E) EE(C) EE(E)

Directives of Hon'ble National Green Tribunal in O.A. No.21 of 2014 and O.A. No. 95 of 2014 and MoEF guidelines 2010 on Air Pollution from Construction and Demolition activity.

(A) **NGT order dated 04.12.2014**:

- No government, authority, contractor, builders or any person would be permitted to store/dump construction material or debris on metalled road.
- Beyond the metalled road the area where such the construction material or debris can be stored shall be physically demarcated by officers of all the concerned Authorities/Corporation ensuring that it would not cause any obstruction to the free flow of traffic/inconvenience to the pedestrians. It should be ensured that no accidents occur on account of such permissible storage.
- Every builder, contractor or person shall ensure that the construction material is covered by tarpaulin and all other precaution should be taken to ensure that no dust particles are permitted to pollute air quality as a result of such storage. It shall also be ensured that appropriate protection measures are taken by raising wind breakers of appropriate height on all sides of the plot/area using plastic and /or other similar material to ensure that no construction material dust fly outside the plot area and it will be the builder/contractor responsibility to ensure that their activity does not cause any air pollution during course of construction and/or storage of material or construction activity. This condition shall be strictly adhered to by every builder, contractor, person or authority. In the event of default they shall be liable to be prosecuted under the law in force, as well as for causing environmental pollution and will be liable to pay compensation which would be determined by Tribunal in accordance with law.
- All the trucks or vehicles of any kind which are used for construction purposes/or are carrying construction material like cement, sand and other allied material should be fully covered. The vehicles should be properly cleaned, should be dust free and every necessary precautions is to be taken to ensure that enroute their destination, the dust, sand or any other particles are not permitted to be released in air/contaminate air. Any truck not complying with the above directions would not be permitted to enter NCR, Delhi.

(B) **NGT order dated 10.04.2015**:

- Every builder or owner shall put tarpaulin on scaffolding around the area of construction and the building. No person including builder, owner can be permitted to store any construction material particularly sand on any part of the street, roads in any colony.

- The construction material of any kind that is stored in the site will be fully covered in all respects so that it does not disperse in the Air in any form.
- All the construction material and debris shall be carried in the trucks or other vehicles which are fully covered and protected so as to ensure that the construction debris or the construction material does not get dispersed into the air or atmosphere, in any form whatsoever.
- The dust emissions from the construction site should be completely controlled and all precautions taken in that behalf.
- The vehicles carrying construction material and construction debris of any kind should be cleaned before it is permitted to ply on the road after unloading of such material.
- Every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris shall be provided with mask to prevent inhalation of dust particles.
- Every owner and or builder shall be under obligation to provide all medical help, investigation and treatment to the workers involved in the construction of building and carry of construction material and debris relatable to dust emission.
- It shall be the responsibility of every builder to transport construction material and debris waste to construction site, dumping site or any other place in accordance with rules and in terms of this order.
- All to take appropriate measures and to ensure that the terms and conditions of the earlier order and these orders should strictly comply with by fixing sprinklers, creations of green air barriers.
- Compulsory use of wetjet in grinding and stone cutting.
- Wind breaking walls around construction site.
- All the builders who are building commercial, residential complexes which are covered under the EIA Notification of 2006 shall provide green belt around the building that they construct. All Authorities shall ensure that such green belts are in existence prior to issuance of occupancy certificate.
- All builders shall ensure that C&D waste is transported in terms of this order to the C & D Waste site only and due record in that behalf shall be maintained by the builders, transporters and NCR of Delhi.
- Even if constructions have been started after seeking Environmental Clearance under the EIA notification 2006 and after taking other travel but is being carried out without taking the preventive and protective environmental steps as stated in this order and MoEF guidelines, 2010, the State Government, SPCB and any officer of any department as afore stated shall be entitled to direct stoppage of work.

(C) Environmental Impact Assessment Guidance Manual for Building, **Construction, Township** and area Development Projects of **February, 2010 envisages the following guidelines for mitigation measures in respect of dust control from Building, Construction projects**:

"Adopting techniques like, air extraction equipment, and covering scaffolding, hosing down road surfaces and cleaning of vehicles can reduce dust and vapour emissions. Measures include appropriate containment around bulk storage tanks and materials stores to prevent spillages entering watercourses."

The other measures to reduce the air pollution on site are:

- Sprinkling of water and fine spray from nozzles to suppress the dust.
- On-Road- Inspection should be done for black smoke generating machinery.
- Promotion of use of cleaner fuel should be done.
- All DG sets should comply emission norms notified by MoEF
- Vehicles having pollution under control certificate may be allowed to ply.
- Use of covering sheet to prevent dust dispersion at buildings and infrastructure sites, which are being constructed
- Use of covering sheets should be done for trucks to prevent dust dispersion from the trucks, implemented by district offices.
- Paving is a more permanent solution to dust control, suitable for longer duration projects. High cost is the major drawback to paving.
- Reducing the speed of a vehicle to 20 kmph can reduce emissions by a large extent.

  Speed bumps are commonly used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, it may be necessary to divert traffic to nearby paved areas.

  Material storages / warehouses — Care should be taken to keep all material storages adequately covered and contained so that they are not exposed to situations where winds on site could leadto dust / particulate emissions. Fabrics and plastics for covering piles of soils and debris is aneffective means to reduce fugitive dust.

(D) Copy of NGT orders dated 04.12.2014, 10.04.2015, copy of MoEF guidelines 2010 are available at the DPCC website "http//dpcc.delhigovt.nic.in".

****

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(C) AE(E) EE(C) EE(E)

[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, nagar palika, 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 the ACT.

(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 waste within its jurisdiction in accordance with the provisions of these rules and the local authority shall seek detailed 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 final clean up after completion of the construction and demolition

(3) seek assistance from concerned authorities for safe disposal of construction and demolition waste contaminated with industrial hazardous or toxic material or nuclear waste if any

(4) shall make arrangements and place appropriate containers for collection of waste and shall remove 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 either through 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 other State 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 and suggestions 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 use plan 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 of Panchayat 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 charge of the facility.

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 maintenance, 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 these 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

Schedule III

Timeframe for Planning and Implementation
[See Rule 13]

Sl. No.	Compliance Criteria	Cities with population of 01 million and above	Cities with population of 0.5-01 million	Cities with population of less than 0.5 million
1	Formulation of policy by State Government	12 months	12 months	12 months
2	Identification of sites for collection and processing facility	18 months	18 months	18 months
3	Commissioning and implementation of the facility	18 months	36 Months	36 months
4	Monitoring by SPCBs	3 times a year – once in 4 months	2 times a year – once in 6 months	2 times a year – once in 6 months

****The time Schedule is effective from the date of notification of these rules.***

FORM – I
See [Rule 7 (2)]
Application for obtaining authorisation

To,
The Member Secretary
_____Name of the local authority or Name of the agency :
appointed by the municipal authority

Correspondence address Telephone No. Fax No.	
Nodal Officer and designation (Officer authorized by the competent authority or agency responsible for operation of processing or recycling or disposal facility)	
Authorisation applied for (Please tick mark)	Setting up of processing or recycling facility of construction and demolition waste
Detailed proposal of construction and demolition waste processing or recycling facility to include the following Location of site approved and allotted by the Competent Authority. Average quantity (in tons per day) and composition of construction and demolition waste to be handled at the specific site. Details of construction and demolition waste processing or recycling technology to be used. Quantity of construction and demolition waste to be processed per day. Site clearance from Prescribed Authority. Salient points of agreement between competent authority or local authority and operating agency (attach relevant document). Plan for utilization of recycled product. Expected amount of process rejects and plan for its disposal (e.g., sanitary landfill for solid waste). Measures to be taken for prevention and control of environmental pollution. Investment on project and expected returns. Measures to be taken for safety of workers working in the processing or recycling plant. Any preventive plan for accident during the collection, transportation and treatment including processing and recycling should be informed to the Competent Authority (Local Authority) or Prescribed Authority	

Form-II
See [Rule (7) (3)]
Format for Issue of Authorisation to the Operator

File No.: _____
Date : _____
To,
_____
_____
_____

Ref : Your application number _____Dt. ……

The _____ State Pollution Control Board or Pollution Control Committee after examining the proposal hereby authorizes _____ having their administrative office at_____ to set up and operate construction and demolition waste processing facility at_____ on the terms and conditions (including the standards to comply) attached to this authorisation letter.

1. The validity of this authorisation is till _____. After expiry of the validity period, renewal of authorisation is to be sought.

2. The _____ State Pollution Control Board or Pollution Control Committee may, at any time, for justifiable reason, revoke any of the conditions applicable under the authorisation and shall communicate the same in writing.

3. Any violation of the provision of the construction and demolition Waste Management Rules,2016 shall attract the penal provision of the Environment (Protection) Act, 1986 (29 of 1986).

Date: (Member Secretary)
Place: State Pollution Control Board/
Pollution Control Committee

Form –III

See [Rule 8(2)]

Format of Annual Report to be submitted by Local Authority to the State Pollution Control Board

(i) Name of the City or Town…….
(ii) Population……
(iii) Name and address of local authority or competent authority
Telephone No : ……
Fax : …….
Email ID: …….
Website: ……..
(iv) Name of In-charge or Nodal Officer dealing with construction and demolition wastes management with designation ……

1. Quantity and composition of construction and demolition waste including any deconstruction waste

(a) Total quantity of construction and demolition waste generated during the whole year in metric ton

Any figures for lean period and peak period generation per day ……..
Average generation of construction and demolition waste (TPD)
Total quantity of construction and demolition waste collected per day
Any Processing / Recycling Facility set up in the city ……
Status of the facility

(b) Total quantity of construction and demolition waste processed / recycled (in metric ton)
Non-structural concrete aggregate :
Manufactured sand :
Ready-mix concrete (RMC) :
Paving blocks :
GSB :
Others, if any, please specify :

(c) Total quantity of Construction & Demolition waste disposed by land filling without processing (last option) or filling low lying areas

---

No of landfill sites used :
Area used :
Whether weigh-bridge : Yes / No
facility used for quantity estimation?

(d) Whether construction and demolition waste used in sanitary landfill (for solid waste) as per Schedule III: Yes /No

23 Storage facilities

(a) Area or location or plot or societies covered for collection of Construction and Demolition waste
(b) No. of large Projects (including roadways project) covered
(c) Whether Area or location or plot or societies collection is
Practiced (if yes, whether done by
Competent Authority or Local Authority or through Private Agency or Non-Governmental Organization) :

(d) Storage Bins : ----------
Specifications Existing Proposed
(Shape & Size) Number for future

(i) Containers or receptacle (Capacity) :
(ii) Others, please specify :
(e) Whether all storage bins/collection spots are
attended for daily lifting : Yes No
(e) Whether lifting of Construction & Demolition
Waste from Storage bins is manual or mechanical
(please tick mark) please specify mode : Manual Mechanical Others,
and equipment used (specify equipment)

3. Transportation----------
Existing Actually Required/Proposed number

Truck :
Truck-Hydraulic :
Tractor-Trailer:
Dumper-placers:
Tricycle :
Refuse-collector :
Others (Please specify) :

4. Whether any proposal has been made to improve Construction and Demolition waste management practices

5. Have any efforts been made to involve PPP for processing of Construction & Demolition waste : If yes, what is (are) the technologies being used, such as:

Processing / recycling Steps taken
Technology (Quantity to be processed)

Dry Process :
Wet Process :
Others, if any :
Please specify :

6. What provisions are available to check unauthorized operations of:

Encroachment on river bank or wet bodies :
Unauthorized filling of low line areas :
Mixing with solid waste :
Encroachment in Parks, Footpaths etc. :

7. How many slums are provided with construction and demolition waste receptacles Facilities:

8. Are municipal magistrates appointed for taking penal action for non-compliance with these rules: Yes No
[If yes, how many cases registered & settled during last three years (give year wise details)]

Dated: Signature of Municipal Commissioner

Form –IV

See [Rule (8)(3)]

Format of Annual Report to be submitted by the State Pollution Control Board / Committees to the Central Pollution Control Board

To,
The Chairman,
Central Pollution Control Board,
PariveshBhawan, East Arjun Nagar,
Delhi-110032

1. Name of the State/Union territory :

2. Name & address of the State Pollution Control Board/Pollution Control Committee :

3. Number of municipal authorities responsible for management of municipal solid wastes in the State/Union territory under these rules :

4. A Summary Statement on progress made by municipal authorities in respect of implementation of **Schedule III**] : Please attach as Annexure-I

5. A Summary Statement on progress made by municipal authorities in respect of implementation of **Schedule IV** : Please attach as Annexure-II

Date: Chairman or the Member Secretary
State Pollution Control Board/
Place: Pollution Control Committee

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 :

Annexure-D

Letter Head of Contractor

Site Inspection Undertaking

Date:……..……

To,

The Executive Engineer,
V-Division, CPWD,
R.K. Puram, New Delhi.

Name of Work: Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).

NIT No.:- 24/SE/DC-6/V-Divn./2026-27

I/we have inspected and examined the site and its surroundings is / are satisfied before submitting our bid 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 I/we may require and in general shall myself / ourselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect our bid. I/we shall be deemed to have full knowledge of the site whether I/we inspect it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. I/we shall be responsible for arranging and maintaining at our 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 I/we implie(s) that I/we have read this notice and all other contract documents and has made myself / ourself 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 us by the Government and local conditions and other factors having a bearing on the execution of the work.

Signature of Contractor with stamp

Part-B

Major Component

(Civil Work)

कार्यों' की अनुसूचियां PERFORMA OF SCHEDULES (A to F for Civil work)

अनुसूची 'क' SCHEDULE 'A'				
मात्राओं की अनुसूची (संलग्न) Schedule of quantities			As attached (Civil Work) **Page No. 83-108**	
अनुसूची 'ख' SCHEDULE 'B'				
ठेकेदार को निर्गत की जाने वाली सामग्रियों की अनुसूची Schedule of materials to be issued to the contractor Schedule				
क्रम. सं. S.No.	मद विवरण Description of item	मात्रा Quantity	जिस दर पर सामग्रियां ठेकेदार को प्रभावित होगी वह दर अंकों एवं शब्दों में Rates in figures & words at which the material will be charged to the contractor	निर्गत स्थान Place of Issue
1	2	3	4	5
-----NIL-------- *(Material required for the work shall be arranged by the Contractor)*				
अनुसूची 'ग' SCHEDULE 'C'				
ठेकेदार को भाड़े पर दिए जाने वाले औजार एवं संयत्र Tools and plants to be hired to the contractor				
क्रम. सं. S.No.	विवरण Description		भाड़ा प्रभार प्रतिदिन Hire charges per day	निर्गत स्थान Place of Issue
1	2		3	4
-----NIL-------- *(shall be arranged by the Contractor)*				
अनुसूची 'घ' SCHEDULE 'D'				
कार्य के लिए विशेष अपेक्षाएं/दस्तावेज, यदि कोई हों, की अतिरिक्त अनुसूची Extra schedule for specific requirements/documents for the work, if any.			**NIL**	
अनुसूची 'ड' SCHEDULE 'E'				
ठेके की सामान्य शर्तो का संदर्भ Reference to General Conditions of contract			General Conditions of Contract Maintenance Works 2023 as modified & corrected upto previous day of the last date of submission of the tender.	

कार्य का नाम Name of Work :		
Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).		
कार्य की अनुमानित लागत Estimated cost of work :		**Total : Rs. 9,89,44,908/-** **Civil Work: Rs. 8,69,80,621/-** **Elect. Work: Rs. 1,19,64,287/-**
(i)	धरोहर राशि Earnest money	Rs. **19,78,898**/-
(ii)	निष्पादन गारंटी Performance guarantee	(a) PG Shall be 5% of the **Estimated Cost put to tender (ECPT) or contract amount whichever is higher**, or as prescribed from time to time, to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of **six months** beyond the date of completion of all contractual obligations as per GCC. ln case of contracts where supplementary agreement is drawn, the fresh pG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. The PG received against the original work shall be released as per contract conditions. (b) A bid will be treated as abnormally low if the quoted bid amount is **lesser than 80%** ofthe estimated cost put to tender. (c) **Requirement of Additional Performance Guarantee (APG):** In case of abnormally low bids as defined the above, the bidder shall be required to submit Additional Performance Guarantee (APG) in addition to the Standard Performance Guafantee (PG). The amount of Additional Performance Guarantee (APG) shall be equivalent to the difference between the 80% amount of ECPT and quoted amount is 0.7A then the amount of APG shall be 0.8A - 0.7A). The Additional Performance Guarantee (APG) shall be in the prescribed format of Performance Guarantee and has to be submitted within the time frame prescribed for submission of Performance Guarantee. The other terms and conditions of release etc. of APG shall be same as that of PG. **(As per O.M. No. DG/Manual-2024/20 dated 27.02.2026)**
(iii)	प्रतिभूति निक्षेप Security Deposit	2.5% of Tendered Value

अनुसूची 'च' SCHEDULE 'F'

सामान्य नियम एवं दिशानिर्देशः General Rules & Directions :	
निविदा आमंत्रण करने वाला प्राधिकारी Officer inviting tender -	Executive Engineer 'V' Division, CPWD, New Delhi
कार्य की मदों की मात्रा के लिए अधिकतम प्रतिषत जिससे अधिक निष्पादित मदों के लिए दरों का निर्धारण खण्ड 12. 2 और 12.3 के अनुसार होगा 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 relevant clause**

परिभाषायें:– Definitions:	
2 (v) भारसाधक इंजीनियर Engineer-in-Charge	Executive Engineer "V"- Division, CPWD, New Delhi
2(vi) स्वीकार कर्ता प्राधिकारी Accepting Authority	Superintending Engineer, Delhi Circle-VI, CPWD, New Delhi or successor thereof
2(x) अतिरिक्त और लाभों को पूरा करने के लिए सामग्रियों की लागत पर प्रतिशतता Percentage on cost of materials and labour to cover all overheads and profits	15%
दरों की मानक अनुसूची Standard schedule of Rates	Delhi Schedule of Rates 2023 (correction issued upto day previous to the last day of online receipt of tender) and Market Rate
2(xi) विभाग Department	Central Public Works Department
9(ii) मानक के.लो.नि.वि. ठेका फार्म ..... तक संशोधित और शोधित के.लो.नि.वि. फार्म 7 Standard CPWD Contract Form :	Standard CPWD Contract Form General Conditions of Contract 2023 (Maintenance Works) for CPWD Form – 7/8 as modified & corrected upto previous day of the last date of submission of the tender.
खण्ड Clause 1	
(i) स्वीकृति पत्र जारी होने की तारीख से निष्पादन गारंटी के प्रस्तुतीकरण के लिए अनुमत समय, दिनों में (i) **Time allowed for submission of Performance Guarantee alongwith requisite documents mentioned elsewhere in the NIT , Programme Chart (Time and Progress) and applicable Labour Licences, Registration with EPFO and ESIC or proof of applying thereof from the date of issue of letter of acceptance, and also ensure the compliance of aforesaid provisions by the sub-agencies, if any, engaged by the Bidder, in days**	07 Days
(ii) समय वृद्धि, दिनों में (ii) **Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above**	03 Days
खण्ड Clause 2 खण्ड 2 के तहत प्रतिकर निश्चित करने वाला प्राधिकारी Authority for fixing compensation under clause 2	Superintending Engineer, Delhi Circle - 6, CPWD New Delhi or successor thereof
Clause 2A Applicable clause/clause 2A लागू खण्ड 2/खण्ड 2क	No
खण्ड Clause 5 कार्य आरम्भ करने की तारीख की गणना के लिए स्वीकृति पत्र जारी होने की तारीख से दिनों की संख्या Number of days from the date of issue of letter of acceptance for reckoning date of start	**10 Days**

<table>
<tr><td colspan="2">लक्ष्य मील–पत्थर सारणी
Table of Mile-stones</td><td colspan="2">लक्ष्य नीचे दी गई सारणी अनुसार
As per Table given below</td></tr>
<tr><td>S. No.</td><td>Description of Milestone (Financial)</td><td>Time Allowed in months (from date of start)</td><td>Amount to be withheld in case of non achievement of Milestone</td></tr>
<tr><td>1</td><td>Gross work done 1/8th of Civil work</td><td>¼ of the total period</td><td rowspan="4">In the event of not achieving the necessary progress as assessed from the running payment, 1.25% of the tendered value of work will be withheld for failure of each milestone.</td></tr>
<tr><td>2</td><td>Gross work done 3/8th of Civil work.</td><td>½ of the total period</td></tr>
<tr><td>3</td><td>Gross work done 3/4th of Civil work</td><td>¾ of the total period</td></tr>
<tr><td>4</td><td>Completion of work done i/c testing etc. Complete.</td><td>Full period</td></tr>
<tr><td colspan="2">कार्य निष्पादित करने के लिए अनुमत्य समय
Time allowed for execution of work</td><td colspan="2">24 Months</td></tr>
<tr><td colspan="2">Authority to decide :-</td><td colspan="2"></td></tr>
<tr><td colspan="2">(i) Authority to convey the decision of shifting of milestone and extension of time.</td><td colspan="2">Executive Engineer
V-Division, CPWD
New Delhi or successor thereof</td></tr>
<tr><td colspan="2">(ii) Authority to decide rescheduling of mile stone and extension of time</td><td colspan="2">Superintending Engineer
Delhi Circle-6, CPWD
New Delhi or successor thereof</td></tr>
<tr><td colspan="2">(iii) Shifting of date of start in case of delay in handing over of site</td><td colspan="2">Superintending Engineer
Delhi Circle-6, CPWD
New Delhi or successor thereof</td></tr>
<tr><td colspan="2">खण्ड Clause 5
Applicable Clause5/Clasue5A</td><td colspan="2">Clause 5</td></tr>
<tr><td colspan="2">Clause 6 Computerized Measurement Book (CMB)/ Electronic Measurement Book (EMB) through CPWD ERP portal</td><td colspan="2">Applicable (EMB)</td></tr>
<tr><td colspan="2">खण्ड Clause 7
अंतरिम भुगतान के लिए पात्र होने के लिए अंतिम ऐसे भुगतान के बाद कुल भुगतान एकत्रित सामग्रियों के अग्रिमों के समायोजन सहित किया जाने वाला कुल कार्य
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</td><td colspan="2">Rs. 36.24 Lacs</td></tr>
<tr><td colspan="2">खण्ड Clause 7A
Whether Clause 7A shall be applicable</td><td colspan="2">Yes</td></tr>
<tr><td colspan="2">खण्ड Clause 8
Competent Authorities to inspect and issue completion certificate</td><td colspan="2">Engineer-in-charge</td></tr>
<tr><td colspan="2">खण्ड Clause 10 A
List of testing equipment to be provided by the contractor at site lab:</td><td colspan="2">Applicable
As per Table-1 (Page No. 49)</td></tr>
<tr><td colspan="2">खण्ड Clause 10 B</td><td colspan="2">Not Applicable</td></tr>
</table>

<table>
<tr><td colspan="2">खण्ड Clause 10C
Component of Labour expressed as percent of total value of work</td><td>Not Applicable</td></tr>
<tr><td colspan="2">खण्ड 10गग
खण्ड 10गग उन संविदाओं पर लागू होगा जिसमें कार्य समापन की अवधि, अगले कालम में दर्शायी गई अवधि से अधिक अनुबंधित है।
Clause 10CC Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in the next column
Applicable/ Not Applicable
Schedule of Component of materials, Labour etc. For price escalation.
Component of Civil</td><td>12 माह

12 Months

Applicable

expressed as percent of total value of work.</td></tr>
<tr><td>S.No.</td><td>Relevant component of Material/Labour for Price escalation</td><td>Percentage of total value of work</td></tr>
<tr><td>1.</td><td>Component of cement</td><td>15%</td></tr>
<tr><td>2.</td><td>Component of Labour</td><td>25%</td></tr>
<tr><td>3.</td><td>Civil component of other construction materials</td><td>55%</td></tr>
<tr><td>4.</td><td>Component of POL(Diesel)</td><td>0%</td></tr>
<tr><td>5.</td><td>Reinforcement steel bars/TMTbars/ structural steels (including strands and cables).</td><td>5%</td></tr>
<tr><td></td><td>Total</td><td>100% of civil work</td></tr>
<tr><td colspan="2">Clause 10D</td><td>Applicable</td></tr>
<tr><td colspan="2">खण्ड Clause 11 कार्य निष्पादन के लिए अनुपालन किए जाने वाले विनिर्देश
Specifications to be followed for execution of work</td><td>CPWD Specification 2019, Volume - I & Volume-II with correction slips issued upto day previous to the last day of online receipt of bids & Manufacturer’s Specifications.</td></tr>
<tr><td colspan="2">खण्ड Clause 12
Type of Work
The completion cost of agreement should not exceed 1.5 times of Tendered amount</td><td>Maintenance work</td></tr>
<tr><td colspan="2">Authority to decide Deviation:-</td><td></td></tr>
<tr><td colspan="2">(i) Upto 1.25 times of Contract Amount (With recorded reasons)</td><td>Engineer-in-charge</td></tr>
<tr><td colspan="2">(ii) Beyond 1.25 times upto 1.50 times of Contract Amount (With recorded reasons)</td><td>SE, DC-6 or successor thereof</td></tr>
<tr><td colspan="3">(Modified as per SOP - 2026)</td></tr>
<tr><td colspan="2">12.3 विचलन सीमा, जिसके परे खण्ड 12.2 तथा 12.3 भवन निर्माण कार्य के लिए लागू होंगे
12. 3 Deviation limit beyond which clause 12.2 & 12.3 shall apply for building work</td><td>No Limit</td></tr>
<tr><td colspan="2">खण्ड Clause 16
घटी हुई दरे निर्धारित करने की लिए सक्षम प्राधिकारी
Competent Authority for deciding reduced Rates</td><td>SE, Delhi Circle-6, CPWD New Delhi, upto 5% value of Agmt. Quantity beyond that with the approval of ADG (Delhi) .</td></tr>
<tr><td colspan="2">खण्ड Clause 17</td><td></td></tr>
</table>

खण्ड Clause 18 List of mandatory machinery, tools & plants to be deployed by the contractor at site:	As per Table – I. (Page No. 49)

Clause 19:-The Contractor shall obtain a valid license under the Contract Labour (R&A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid license until the completion of the work.

The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment & Conditions of Service) Act, 1979. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provisions of the building and other construction workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1966.

Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

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

Clause 25	
Settlement of Disputes by Conciliation and Arbitration :	
	For all claims in disputes.
1. Conciliator-	Additional Director General (Delhi)
2. Arbitrator Appointing Authority	Superintending Engineer, DC-6, CPWD, New Delhi
Place of Arbitration	New Delhi

Clause 31 The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work.

Clause 32

Requirement of Technical Representative(s) and recovery Rate

S. No.	Minimum Qualification of Technical Representative	Number (of Major+Minor Component	Minimum experience (years)	Designation Technical Staff	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 32 (i)	
					Figures	Words
2	Graduate Engineer Graduate Engineer Or Diploma Engineer	1 1+1	5 (and having experience of one similar nature of work) 2 or 5 respectively	Project Manager Project Planning / Quality/ Billing Engineer	Rs. 25000/- per month Rs.15000/- per month per person	(Rupees Twenty Five Thousand per month) (Rupees Fifteen Thousand per month per person)

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

Clause 38

(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	
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.	2.5% plus only & nil on minus side
c)	Steel Reinforcement and structural steel sections for each diameter, section and category.	2% plus/minus
d)	All other materials.	Nil

Table-1

LIST OF TESTING EQUIPMENT AND MANDATORY MACHINES, TOOLS & PLANTS TO BE PROVIDED BY CONTRACTOR AT SITE AS PER CLAUSE 10A & 18

S. No.	Equipment	Numbers
1	Weighing scale platform type 100 Kg capacity digital, 10 Kg.	1
2	Graduated glass measuring cylinder	2
3	Sets of sieves of 450mm internal dia for coarse aggregate [100mm, 80mm, 40mm; 2mm; 12.5mm,10mm,4.75mm complete with lid and pan)10mm; 4.75mm complete with lid and pan]	1
4	Sets of sieves of 200mm internal dia(Brass Frame) for fine aggregate [4.75mm; 2.36mm; 1.18mm; 600 microns; 300 microns & 150 microns, with lid and pan]	1
5	Sieve Brushes and sieve shaker capable of 200mm and 300mm dia sieves, manually operated with timing switch assembly	1
6	Hot air oven temp. Range 50°C to 300°C- sensitivity 1 degree	1
7	Digital thermometer up to 150°C	2
8	Measuring jars 100ml, 200ml, 500ml	2 Nos each size
9	Spatula 100mm & 20mm with long blade wooden handle	3
10	Digital Micrometer least count. 0.01mm	2
11	GI tray 600x450x50mm, 450x300x40mm, 300x250x40mm	1 No each
12	Motorized sieve shaker	1
13	Hammer 1lb& 2lb	1 each
14	Hacksaw with 6 blades	2
15	Metallic Measuring tape (5 metre and 30 metre)	2 each
16	Depth gauge 2 cm	2
17	Concrete mixer	1
18	Diesel generator	1
19	Needle Vibrator	1

A. RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Sl. No	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor.	
		Excess beyond permissible variation	Less use beyond the permissible variation
1	Cement (OPC)	NIL	Not Permitted
2	Cement (PPC)	NIL	Not Permitted
3	Reinforcement Bars (TMT) 500		
	(a) Primary Manufacturer	NIL	Not Permitted
	(b) Secondary Manufacturer	NIL	Not Permitted.
4	Structural steel	NIL	Not Permitted

GENERAL CONDITIONS

1. The Contractor shall make his own arrangements for electricity required for the execution of the work and nothing extra shall be paid for the same. However, for electrical connection, Engineer-In-Charge shall recommend the application of the Contractor to concerned Local authorities, if so desired by the Contractor. Necessary fees and i/c consumption charges shall be paid by the contractor directly to the department concerned. In case the authorities fail to sanction the electric connection or delay the sanction of electric connection, the contractor shall make his own arrangements by providing diesel generators of adequate capacity at his own cost. He shall also make his own arrangement for obtaining telephone connections for his own use.
2. 1% (One percent) Water Charges shall be recovered from the gross amount of the work done, if water is supplied by the department/client department.
3. All the materials will be arranged by the Contractor himself. If any material is issued by the department, the Contractor shall bear all incidental charges for cartage, storage and safe custody of such material.`
4. The Contractor shall quote the rates for each item in figures and words accurately so that there is no discrepancy in rates written in figures and words and totals. In case of discrepancy, procedure specified in the Contract document of CPWD shall be followed.
5. All materials shall only be brought at site as per programme finalized with the Engineer-in-Charge. Any pre-delivery of the material, not required for immediate consumption shall not be accepted and thus not paid for.
6. Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items in the schedule of quantities, the work shall generally be carried out in accordance with the "CPWD Specifications 2019, Vol. I & II with up to date correction slips **issued upto last day of online receipt of bids, Manufacturer's Specifications** and instructions of Engineer-In-Charge. Wherever CPWD Specifications are silent, the latest IS Codes / Specifications shall be followed.
7. A 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.
8. The rates for all items of work shall, unless clearly specified otherwise, include cost of all labour, material, tools and plants and other inputs involved in the execution of the item.
9. The contractor(s) shall quote all-inclusive rates against the items in the schedule of quantities and nothing extra shall be payable for any of the conditions and specifications mentioned in the tender documents unless specifically specified otherwise.
10. Unless otherwise specified in the Schedule of Quantities, the rates for all items shall be considered as inclusive of pumping / bailing out water, if necessary, for which no extra payment shall be made.
11. The rate for all items, in which the use of cement is involved, is inclusive of charges for curing.
12. The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities, drawings etc. (FPS units wherever indicated are for guidelines only)
13. Any legal or financial implications resulting out of disposal of earth shall be the sole responsibility of the Contractor. Nothing extra shall be paid on this account.
14. All the hidden items such as water supply lines, drainage pipes, conduits, sewers etc. are to be properly tested as per the design conditions before covering.
15. The contractor shall indemnify the Govt. against any claims or obligations arising out of any damage to adjacent property, structure or to building work done by him.

Licenses:-

(i) The Contractor shall pay to the Municipal, Police or other authorities all the fees etc. that may be required by law, obtain requisite licenses for temporary constructions, enclosures and pay all fees/taxes and charges which shall be leviable on account of his obligations in executions of the Contract. No claim will be entertained on this account.

(ii) All licensing fees, Royalty charges for property rights etc. shall be paid by the Contractor direct to the authorities concerned. No claim will be entertained on this account.

17. **In the event of tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act 1932.**
18. In case Services like Water Supply, Sewer line or other Services are encountered during excavation / earthwork, and if such Services are required to be shifted, the Contractor is bound to carryout the shifting operation as per guidance / instructions and with the approval of the Engineer-In-Charge. However, necessary payments shall be made in this regard as per provision of the agreement.
19. The Water Supply Installations,Internal Sanitary Installations and Drainage work etc. shall be carried out in the manner complying in all respects with the requirements of relevant byelaws of the Local body under the jurisdiction of which the work is to be executed or as directed by the Engineer in Charge and nothing extra shall be paid on this account.
20. Existing drains, Cables, Pipes, Overhead wires, Sewer lines, Water lines and similar Services encountered in the course of execution of work shall be protected against the damages by the Contractor at his own expense. The Contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.
21. Contractor shall take all precautionary measures to avoid any damage to adjoining property/ building. All necessary arrangements shall be made on his own cost by the Contractor.
22. The Contractor shall be responsible for the Watch and Ward / Guarding of the relevant provision of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building part is physically handed over to the client department. No extra payment shall be made on this account.
23. The order of preference in case of any discrepancy as indicated under Conditions of Contract given in the "General Conditions of Contract for Central P.W.D. Works, 2023(Maintenance) may be read as the following:-

i. Description/Nomenclature in Schedule of Quantities.
ii. Particular Specifications and Special Conditions.
iii. Relevant Drawings.
iv. CPWD Specifications, 2019 Vol-1 & Vol-II with upto date correction slips **issued up to day previous to the last day of online receipt of bids.**
v. Relevant Indian Standard Specifications of B.I.S.
vi. Manufacturer's Specifications
vii. Sound Engineering Practice.

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.

24. The Contractor shall take all precautions to avoid accidents by exhibiting caution boards day and night. The contractor shall be responsible for all damages and accident due to negligence on his part and no claims shall be entertained in this regard.
25. No foreign exchange shall be made available by the department for the purchase of equipments, plants, machinery, material of any kind or other items required to be carried out in execution of work.
26. **If due to exigency of work, the work is required to be carried out in more than one shift or during night then Contractor will be bound to execute the work accordingly and arrange the T & P and labour etc. No extra claim on this account shall be entertained.**
27. The Contractor shall be bound to follow the instructions and restrictions imposed by the local Administration/Police authorities on the working and/or movement of labour, materials etc. and if due to stated instructions and restrictions it lead to less/restricted working hours or suspension of work or any detours in movement of vehicles then nothing extra shall be payable.
28. The Contractor shall also be required to follow the rules & restrictions imposed on working /movement/stacking of materials by the local competent authority at all times. Nothing extra shall be payable on this account.

29. Any damage caused by the Contractor to the existing building/installations/roads/boundary walls shall be made good by him (the Contractor) at his own cost.

30. Site is located in sensitive and high security & VVIP area, where movement and routes are restricted. The Contractor shall have to apply for passes well in advance for carrying out the work. No claim whatsoever shall be entertained for any loss on this account. Some restrictions may be imposed by the Security staff/ Delhi police on the working and for movement of labour, materials etc.

(i) The movement of trucks and vehicles shall be regulated in accordance with rules and regulations as approved by competent authority.

(ii) The contractor shall be bound to follow all such restrictions / instructions and nothing extra shall be payable on this account.

(iii) No claim whatsoever will be entertained by the department on account of any, restrictions (including temporary suspension of work) imposed by the security agencies in execution of work.

(iv) In respect of Original/Maintenance/repair or renovation works etc. where the labour have an easy access to the individual houses/Office Complex, the Contractor shall issue identity cards to the labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. AE/JE will display a list of Contractors working in the Colony/Blocks/office Complex on the notice board in the colony/office and also at the Service Centre, to apprise the residents/Client about the same.

31. Before start of work, the Contractor keeping in view that the space available is limited, shall furnish a construction yard layout, specifying area for construction, positioning of machinery, material yard, cement and other storage, steel fabrication yard, site laboratory, water tank, conveyers belt, etc. and seek formal approval of the Engineer-in-charge. No space will be available at site of work for the fabrication of steel / aluminum work grating, railing, etc. The contractor should make his own arrangement for the same in his workshop. Nothing shall be paid for the carriage of such manufactured items from workshop to site of work. The Contractor shall not stack building material / malba on NDMC land or road or on the land owned by any other authority and in case of failure to do so, he shall face penal action as per the rules, regulation and bye-laws of the said body or authority. The Engineer-in-Charge shall be at liberty to recover the amount due but not paid to the concerned authorities on account of the above from any amount due to the Contractor including amount of the security deposit or retention money in respect of this Contractor or any other Contract.

32. No labour huts shall be kept at the site of work. Tenderers shall quote their rates accordingly and nothing extra shall be paid on this account.

(a) The contractor shall take all necessary measures for the safety of traffic during construction and provide, erect and maintain such barricades, including signs, marking, flags lights and flagman 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.

33. **Integrated Programme Chart:-**

The contractor shall prepare an integrated programme chart for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier and submit the same for approval to the Engineer-in-Charge within three days of the award of the Contract.

In such case, the Contractor will have to deploy the necessary T&P, labour and other resources accordingly and complete the work in Phased manner. No extra claim will be entertained in this regard.

33.1 The programme chart should include the following:

a) Descriptive note explaining sequence of various activities.

b) Network (PERT/CPM/Bar Chart)

c) Programme of procurement of materials by the Contractor.

d) Programme of procurement of machinery/ equipments having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the

Contractor & Time schedule of the requirement of materials to be supplied by the department.

e) Time schedule of the requirement of materials to be supplied by the Department.

33.2 If at any time, it appears to the Engineer-in-Charge that the actual progress of the work does not conform to the approvedprogramme referred above, the Contractor shall produce a revised programme showing the modifications to the approved programme to ensure completion of the work within the stipulated time for completion.

33.3 The submission for approval by the Engineer in Charge of such programmes or the furnishing of such particulars shall not relieve the Contractor of any or his duties or responsibilities under the Contract. This is without prejudice to the right of the Engineer in Charge to take action against the Contractor as per terms and conditions of the agreement.

33.4 In order to adhere to the Committed Program and requirement of allottes, the work shall be carried out in more than one shift and Contractor will deploy the resources accordingly. No extra claim on this account shall be entertained. Contractor should give advance notice in writing to Engineer-in-charge for doing any work in odd hours and arrange permission accordingly. Contractor shall arrange for transportation of CPWD site staff to their residences, in case the site staff is required to stay beyond office hours or during odd hours.

34. The agency shall comply with the Orders and Guidelines of NGT MoEF and instructions regarding Disposal of Waste,as applicable from time to time and mentioned.

35. All malba / rubbish /silt / waste / garbage / etc. generated during execution shall be collected on daily basis by the Contractor / Agency to the specified common disposal point and nothing extra shall be paid on this account. After the accumulation of full Tractor load of the said malba the same shall be disposed of by the Contractor / Agency to the authorized municipal dhalao / dumping ground. In case malba/rubbish/silt/waste/garbage etc generated are not removed or disposed off within three days from the written instruction by the Engineer-in-Charge or his authorized representive staff/supervisory staff (JE/AE), a sum of Rs. One Thousand per day shall be recovered from the Contractor / Agency.

36. The Contractor will be required to pay GST, as applicable, to the Government and all other Applicable taxes. Nothing extra will be paid on this account.

37. The Agency shall stack all building material in proper way and at appropriate space so that thereis no Hindrance for Occupants/Guests of Institute and movement of vehicles.

38. Agency shall provide proper safety Measures like Safety tape, Barricade and Red Lamp during night. Nothing extra is payable in this regard.

39. The Agency shall cover the existing structures/items in the work area with curtain/cloth for avoiding dust during execution of work. Nothing extra is payable in this regard.

40. The Agency shall provide Silent Generator, if required at site.

41. Work is to be executed in the premises as mentioned in the name of work of the tender document. Proper and due care is to be taken for maintaining the proper decorum in the premises by the Manpower employed by the Contractor so as to have least disturbance to the allottees/occupant in the building & nearby building. Also, Contractor should erect/provide necessary Barricades/Screens as per direction of Engineer-in-Chargeto protect the surroundings/premises from the Air pollution, by enclosing the work area. Nothing extra will be paid in this regard. The rates quoted by the Contractor are deemed to be inclusive of all leads and lifts. No extra claim whatsoever will be entertained in this regard.

42. The agency may require to errect necessary crane/builder's hoist required for carrying out various operations/works. Nothing extra shall be payable on this account.

43. Work will be executed mostly in odd hours& round the clock as per the convenience of the client. In addition to that agency shall have to work round the clock on Saturdays, Sundays& Holidays, if needed. Nothing extra shall to paid to the agency in such situations.

44. Contractor shall give mobile no. of agency and their site Engineers and staffs to the CPWD officials for quick communication/directions for the work. Nothing extra shall be paid on this account.

45. The work will be assigned at 4 to 5 hours notice telephonically/verbally and the contractor have to arrange material &labour for attending the complaints/work & will complete the work promptly as per the convenience of client.

SPECIAL CONDITIONS

1 **The lowest bidder shall engaged specialized agency with the approval of Engineer-in-charge for execution of specialized works.**

2 1% (One percent) water charges shall be recovered from the gross amount of the work done, if same is supplied by the department.

3 All materials obtained from Govt. stores or otherwise shall be got checked by the Engineer-in-charge or his authorized representative of the work on receipt of the same at site of work before use.

4 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.

5 The contractor shall have to get approved the brands/shades of Acrylic Distemper, Synthetic Enamel Paint, Plastic Emulsion Paint etc. from the Engineer-in-charge before execution of same.

6 Materials shall be brought to the site of work in original containers with the Manufacturers seal intact.

7 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.

8 Before the commencement of work, the contractor shall prepare one sample as instructed by the Engineer-in-charge for approval of the Engineer-in-charge. After the sample is approved by the Engineer-in-Charge, the contractor shall be allowed to commence the work and the quality of work shall confirm to the approved sample.

9 Before the commencement of work, the contractor shall draw up a programme in consultation with the Engineer-in-charge for the execution of work so as to inform the occupants of the office flat/quarter at least on week in advance regarding the execution of the work.

10 In case the office rooms/quarter/flats are not made available to the contractor according to the programme, the contractor shall not be entitled for any claim for idle labour or any other claim on any account what-so-ever.

11 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.

12 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.

13 The entire work shall be carried out in close co-operation and Co-ordination with all other agencies working in the building. The Contractor (s) shall not be entitled to any compensation on account of temporary stoppage of work due to other construction.

14 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.

15 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.

16 Scrapping shall be shown to the Assistant Engineer and got approved and test checked by him prior to Painting or other finishing work.

17 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.

18 The contractor should write their correct postal address on the application for tender papers. In case it is found that the address given in their application is not correct and as a consequence of the same if any registered letter sent through postal authorities is received back by the department undelivered to the contractor, the contractor shall be fully responsible for all the consequence and by such letter sent through registered post shall be deemed to have been delivered to him.

19 Full quantity of material or quantity approved by Engineer-in- Charge such as paint plastic emulsion paint, Acrylic distemper etc. shall be deposited in sealed contained in advance and get it checked by Engineer-in-Charge before use.

21 The site may be made available to the Contractor for execution of work in piece meal/ in parts, and the Contractor shall execute the work in the portion made available to him and the Contractor shall not claim anything extra over agreement rates, due to execution of works in piece meal manner.

22 No labour huts shall be allowed inside the campus of above said work. The Contractor shall arrange for the stay of labours outside the campus including transport and nothing extra shall be payable on this account.

22. In the event of prolongation of agreement due to delay or reduction in the scope of work, no claim on a/c of reduction in the scope of work, loss of business, loss of profit consequently, overheads and any type of interest etc. will be entertained.

23. The space for store of material shall be provided by the department at AGV Complex, New Delhi as per availability of space and on approval of AGV Complex, New Delhi authorities.

24. Entry of vehicle carrying material in AGV Complex, New Delhi shall be permitted from 6.00 AM to 11.00 PM and work will not be permitted on Sunday & Holiday.

25. The malba/debris need to be removed from the site on daily basis, otherwise, if any authority imposes any fine then it shall be recovered from the contractor.

PARTICULAR SPECIFICATIONS & CONDITIONS FOR CIVIL WORKS

1. General

1.1 Unless otherwise specified in the schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all lifts & all heights, floors including terrace, leads and depths and nothing extra shall be payable on this account. Centering, shuttering, however if required to be done for RCC beams, RCC floor slabs and landings only for centering heights greater than 3.5m, shall be measured and paid for separately.

1.2 Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to bylaws and municipal body / corporation where CPWD Specifications are not available.

1.3 The contractor shall give performance test of the entire installation(s) as per the standing specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test,

1.4 Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been included in the items and nothing extra shall be payable For RCC work, only factory made round type cover blocks shall be used. For Brick work, unless otherwise specified FPS bricks shall be used in all items of work. The classification of bricks brought by the contractor shall conform to the CPWD Specifications.

1.5 The work shall be carried out in accordance with the Architectural drawings and Structural drawings, to be issued from time to time, by the Engineer-in-Charge. Before commencement of any item of work, the contractor shall correlate all the relevant Architectural and Structural drawings issued for the work and satisfy himself that the information available there from is complete and unambiguous. The discrepancy, if any, shall be brought to the notice of the Engineer-In-Charge before execution of the work. The contractor alone shall be responsible for any loss or damage occurred by the commencement of work on the basis of any erroneous and or incomplete information resulting in infructuous hours.

1.6 Other agencies will also simultaneously execute and install the works of internal electrical installations, sub-station / generating sets, air-conditioning, lifts, etc. for the work and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at the time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.

1.7 Sampling and testing

1.7.1 All materials and fittings brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-charge, which shall be preserved till the completion of the work. If a particular brand of material is specified in the item of work in Schedule of Quantity, the same shall be used after getting the same approved from Engineer-In-Charge. Wherever brand / quality of material is not specified in the item of work, the contractor shall submit the samples as per Approved list of brand names given in the tender document / Particular Specifications for approval of Engineer-In-Charge. For all other items, not having approved make list in the tender documents, The Materials and Fittings carrying ISI Mark shall be used with the approval of Engineer-In-Charge. Wherever ISI Marked Material / Fittings are not available, the contractor shall submit samples of materials / fittings manufactured by firms of repute conforming to relevant specifications or IS codes and use the same only after getting the approval of Engineer-In-Charge. To avoid delay, contractor should submit samples as stated above, well in advance so as to give timely orders for procurement. If any material, even though approved by Engineer-In-Charge is found defective or not conforming to Specifications shall be replaced / removed by the contractor at his own risk & cost.

1.7.2 The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material / work beyond set-out tolerance limit shall be summarily rejected by the Engineer-in-charge & contractor shall be bound to replace / remove such Sub-Standard / defective work immediately at his on cast.

1.7.3 BIS marked materials except otherwise specified shall be subjected to Quality test besides testing of other materials as per the specifications described for the items/material. Wherever BIS marked materials are brought to the site of work, the Contractor shall furnish Manufacturer's test certificate or test certificate from approved testing laboratory to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and / or the work done.

1.7.4 BIS marked items (except Cement & Steel) required on the work shall be got tested. Only important tests, which govern the quality of the product, shall be carried out. The frequency of such tests shall be 25% of the frequency specified in the CPWD Specifications 2019 vol I & II with upto date correction slips.

For certain items, if frequency of tests is not mentioned in the CPWD Specifications then relevant IS code shall be followed and tests shall be carried out @ 25% of the frequency specified therein. Wherever Tender Documents/CPWD Specifications/relevant BIS codes do not specify the frequency of tests, the same shall be carried out as per direction of the Engineer in charge.

1.7.5 All the materials obtained from Govt. Store or otherwise shall be got checked by the Engineer in Charge or his authorized supervisory staff, on receipt of the same at site before use.

1.7.6 All materials which are specified to be tested at the Manufacturer's work shop shall satisfactorily pass the tests in presence of the authorized representative of Engineer in charge before being used in this work. In case all requisite testing facilities are not available at the Manufacturer's premises, such testing shall be conducted at laboratory approved by the Engineer in charge. The charges for such testing shall be borne by the Contractor.

1.7.7 **Approved laboratories with priority order as given below :-**

Samples of various materials required for testing shall be provided by the contractor free of cost. Testing of materials to be used in the work shall be carried out through laboratories of Government Departments / Government Institutions / Semi-Government Organizations / All Government Institutions, Indian Institutes of Technology (IITs), National Institutes of Technology (NITs), Central and State Research Centres, and other Central or State funded laboratories, which are approved by the SDG/ADG of the Region. Testing may also be carried out through NABL-accredited or BIS-approved private laboratories, subject to approval of the SDG/ADG of the Region.

All testing charges, if any, shall be borne by the contractor. Any other expenditure required to be incurred for collection of samples, packing, transportation, conveyance, or incidental charges shall also be borne entirely by the contractor.

1.7.8. The contractor has to establish field laboratory at site and employ skilled manpower for the following tests and as per clause 10 A of Schedule F (Civil Component) at his own cost.

- Particle size distribution and shape.
- Ten percent fine value
- Aggregate Impact Test
- Surface Moisture test
- Slump Test
- Flakiness and Elongation Index tests.
- Rebound Hammer test, if required by Engineer-in-Charge.
- Bulking of sand
- Silt content of Sand
- Thermometer with brass protected end (0-1000 C) if required by Engineer-in- Charge.

1.8 The Contractor should remove from site, the net surplus earth only on the direction of Engineer-in-Charge. If he disposes earth more than the surplus quantity and earth is required later to be brought from outside, the Contractor shall be liable to supply at site the such required quantity of earth of required quality at his own cost and nothing shall be paid on this account. The quantity of the surplus earth to be disposed off from the site shall be worked out on the basis of levels to be

taken before and after the excavation. The decisionof the Engineer-in-Charge regarding the quantity of net surplus earth shall be final & binding. Nothing extra shall be payable to the Contractor for stacking the excavated earth.

1.9 Equipments like Excavators/Mixers, Vibrators, Generators etc. shall be allowed to be moved away from the site when, in written opinion of Engineer-in-Charge, the same are no longer required at site, of work.

1.10 All the equipments shall be brought, installed and commissioned at site of work at least one week before their actual planned use at site.

1.11 All the item of works related to foundation and plinth includes the work of basements also.

1.12 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 measured and paid for.

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

2. CONDITIONS FOR CEMENT:

2.1 The Contractor shall procure Portland Pozzolana Cement 43 Grade conforming to 25:1489 (Part-1) as required in the work, from reputed Manufacturers of Cement, as Specified in the list of Approved Makes.

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

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

2.3 The cement godown of the capacity to store a minimum of 200 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. Double lock provision shall be made to the door of the cement godown. The key of one lock shall remain with the Engineer in Charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.

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

2.5 The day to day actual issue/receipt 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 the procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein.

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

3. STEEL FOR REINFORCEMENT:

3.1 The contractor shall procure Steel reinforcement TMT bars of grade Fe500Dfrom Primary Producers such as SAIL TISCO or RINL as approved by Ministry of Steel. In case of non-availability of Steel from Primary Producers the NIT approving authority may permit use of TMT reinforcement bars procured from Secondary Producers. In such cases following action is to be taken by NIT approving authority:

a) The grade of steel such as Fe-500D or other grade to be procured is to be specified as per Tempcore, Thermex, Evon Turbo & Turbo Quench.
b) The secondary producers must have valid BIS licence to produce HSD bars conforming to I.S. 1786:2008. In addition to BIS licence, the secondary producers must have valid licence from either of the firms Tempcore, Thermex, Evcon Turbo & Turbo Quench to produce TMT bars.
c) The TMT bars procured from primary producers shall conform to manufacturer's specifications.
d) The TMT bars procured from secondary producers shall conform to the specifications Tempcore, Thermex, Evcon Turbo & Turbo Quench as the case may be.
e) TMT bars procured either from primary producers or secondary producers, the specifications shall meet the provisions of I.S. 1786:2008. pertaining to Fe-500D grade of Steel as specified in the tender.

3.2 The steel reinforcement shall be brought to the site in bulk supply of 10 tonnes or as decided by the Engineer in Charge.

3.3 The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent 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. The cement work to be applied to prevent corrosion. The nothing extra shall payable on this account.

3.4 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 section at random at frequency not less than that specified below:-

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

3.5 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 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption, no adjustment need to be made.

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

3.7 In the event of it being discovered that after the completion of the work the quantity of steel used is less than the quantity ascertained after allowing variation on the minus side as per clause 42, the quantity of the respective item of the steel to be paid for, shall be decreased by the quantity of steel not so used. Decision of Engineer in Charge in regard to the theoretical quantity of steel which should have been actually used as per the schedule shall be final and binding on the contractor.

3.8 The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The testing charges shall be born by contractor.

4. SPECIAL CONDITIONS FOR FLY ASH CONCRETE IN PAVEMENT CONSTRUCTION

1. The CPWD specification 2019 Vol. I & II upto date correction slips shall be followed for preparation, mixing, transportation, placing of concrete, except mix of the concrete which shall be as specified under the relevant item.
2. Ready mix fly ash concrete from RMC produceronly shall be procured. Firm of RMC producer shall be got approved from Engineer-in-charge before taking mass supply. The RMC producer should have experience of handling fly ash Concrete.
3. Fly ash for use in OPC shall conform to IS 3812: 2003 -Pulverized Fuel Ash Specifications. Fly ash shall be Pulverized ash extracted from flue gases by any suitable process such as by cyclone separator or electrostatic precipitator. The concrete supplier shall furnish a notarized certificate from the fly ash marketer at the time of submittal of concrete mix design for approval indicating conformance with these requirements. Also a copy of most recent chemical analysis shall be provided.
4. At no time during the course of project will a change of fly ash source (plant) be permitted without the prior written approval of the Engineer in charge
5. The fly ash concrete pavement (after initial setting) shall be flooded for 14 days for curing.
6. Alternate panels of 3X3 Metre size shall be cast as per the CPWD specifications. The Joints shall be machine cut as per the nomenclature of the item in the panel sizes 3X3 Metres after it has set.
7. The contractor shall arrange for the full length side shuttering and no joints shall be permitted in the shuttering between the panels.
8. Details for broom finish shall be as per the drawing and details or as directed by the Engineer-in-charge.

5 RCC WORK :

5.1 The cover blocks, wherever used, for proper cover & to avoid displacement of reinforcement bars shall be manufactured in factory nothing extra shall be paid for providing such cover blocks in the work.

5.2 Nothing extra shall be paid for the centering & shuttering circular in shape wherever the form work is having a mean radius exceeding 6m in plan.

6 STEEL WORK :

6.1 The standard sectional weights referred in CPWD Specifications 2019 Vol. I & II (with uptodate correction slips) shall be considered for conversion of length of various sizes of Mild Steel/CTD/TMT bars into weight.

However, the average sectional weight of each diameter shall be arrived on the basis of samples of each lot from steel received at site. In case the actual weight of steel is less than the standard co efficient given in CPWD Specification but is within the tolerance limit of acceptance, the same (actual weight) shall be taken into account for working out the variations between the actual and standard co efficient & contractor shall be paid for the actual weight of steel in this case.

However, nothing extra shall be payable in case the actual weight of steel is more than the standard coefficient mentioned above in para 22(i).

6.2 The rate of T/L iron frame shall include the cost of materials &labour of the following:-

M.S. tie of 10 mm dia. bar shall be welded to M.S. frames at the bottom to keep the frames in correct position. The tie shall be embedded in floor concrete. No tie shall be necessary for window frames.

(b) M.S. frame for doors shall have 4 Nos. M.S. lugs 15 x 3 mm., 10 cm long, welded to each vertical member of the frame.

(c) The M.S. plate cramps 15 x 6 mm thick for holding arrangements shall be provided and welded as per site conditions.

(d) All welded steel work shall be tested for quality of weld as laid down in IS 822 before actual erection.

6.3 Steel windows/ventilators to be provided in the work shall be from ISI approved manufacturers or from the firms approved by the Engineer in charge.

7. FLOORING :

The Granitestones,Marble, Kota stone, Chittor stone, Jaisalmer stone, white sand stone and black Cuddapah or any other stones mentioned in the tender document and as directed by Engineer in Charge shall be executed as per patterns and cuttings or patterns of various combinations of marbles/granite/stones shown in the architectural drawings and or as directed by Engineer in Charge. Nothing extra shall be payable on this account.

Samples of Marbles/Stones/Granites etc. shall be deposited well in advance with the Engineer in Charge for approval. Approved samples should be kept at site with the Engineer in Charge and the same shall not be removed except with the written permission of Engineer in Charge. No payment whatsoever shall be made for these samples.

The granite/stone/marble mentioned herein shall conform to the requirements given in CPWD specifications 2019, Volume I & II. (with up-to-date correction slips)

7.1 **Marble / Granite flooring**:

These will be read in addition to the specifications of marble flooring given in CPWD specifications 2019, Volume I & II. (With up-to-date correction slips)

7.1.1 The sample shall not be of size less than 600 mm x 600 mm or as decided by the Engineer-in-charge.

7.1.2 The samples shall be fully supported by the details of the quarry and location.

7.1.3 The contractor shall use necessary pigments to match the colour of the marble with pointing/jointing. The pigments shall be got approved, from the Engineer in Charge prior to commencement of flooring item.

7.1.4 Samples for sand blasted granite shall be produced separately. Sand blasting shall be carried out after the selection of the basic granite sample.

7.2 The rate of items of flooring is inclusive of providing sunken flooring in bathrooms, kitchen etc. and nothing extra on this account is admissible. The Granite/marble stone flooring in treads and risers of stair case is to be laid in single piece. Nothing extra shall be paid on these accounts.

7.2.1 The measurement shall be made for finished work of flooring.

8.0 WATER SUPPLY AND SANITARY INSTALLATIONS :

The contractor shall submit completion plans for water supply, internal sanitary installations and building drainage work on drawings prepared preferably through computers (1 original copy plus 3 Photostate) on suitable scales to show the general arrangement and desired details. In case the contractor fails to submit the completion plans as aforesaid, security deposit shall not be released.

8.1 **General requirements**

8.1.1 Sanitary fixtures shall be of the best quality and shall be of approved make and manufacture (wherever specified) as defined in the item of work or defined any where in this document otherwise shall be as mentioned in the CPWD specifications failing which the same shall be of ISI mark duly approved by the Engineer-in-Charge.

8.1.2 All fixtures and fittings shall be provided with all such accessories as are required to complete the item in working condition whether specifically mentioned or not in the Schedule of Quantities, specifications, elsewhere in this tender document & drawings. The quoted rates shall be deemed to be all-inclusive for a complete item fit for use including all materials, labour, T&P, specials, equipments, testing & commissioning etc. Accessories shall include proper fixing arrangement, brackets, nuts, bolts, screws and required connection pieces. All the accessories shall be of the quality and make as per manufacturer's specifications except otherwise specified in specifications, schedule of quantities and elsewhere in this tender document. Nothing extra whatsoever shall be payable on aforesaid account.

8.1.3 Fixing screws shall be half round head chromium plated brass screws with C.P. washers where necessary or otherwise as provided in the item.

8.1.4 Porcelain sanitary ware shall be glazed vitreous china of first quality free from warps, cracks and glazing defects and shall conform to I.S. 2556-1967.

8.1.5 All fittings and fixtures shall be fixed in a neat workmanlike manner true to required level and heights and in accordance with the manufacturer's recommendations and directions of Engineer-in-charge. Care shall be taken to fix all inlet and outlet pipes at correct positions.

8.1.6 All holes or chases shall be properly made good by C.C 1:2:4 (in brick wall) or the concrete mix of RCC element as directed by the Engineer-in-Charge. Nothing extra shall be payable on this account.

8.1.7 Wherever M.S. clamps are required to be anchored directly to brick walls, concrete slabs, beams, walls or columns, nothing extra shall be payable for making good the same.

8.1.8 The soil waste and vent pipes & its related fitting shall conform to IS 3989-84 with latest amendments.

8.1.9 Nothing extra for providing and fixing CP Brass caps/extension pieces wherever required for CP Brass fittings shall be paid beyond the rates payable for corresponding CP Brass fittings.

8.2 **Urinals with infra-red No-touch flushing system**

8.2.1 Urinals shall be half stall white glazed vitreous china of size as specified in Schedule of Quantities.

8.2.2 Half stall urinals shall be provided with 15 mm dia C.P. spreader, 32 mm dia C.P. domestic waste and C.P. cast brass bottle trap with pipe and wall flange, and shall be fixed to wall by cutting necessary chases, fixing C.I. brackets and C.I. wall clips as recommended by manufacturer, and making good the surface as directed by Engineer-in Charge all complete.

8.2.3 Drain pipes shall be G.I. pipes concealed in wall chase but with chromium plated bends at inlet and outlet or as given in Schedule of Quantities. Cost of the G.I. drain pipes concealed in wall shall be paid for separately.

8.2.4 Urinals shall be flushed with No-touch electric operated automatic infra-red flushing system operated by a solenoid valve. The infra-red unit shall be vandal proof type with no exposed screw.

8.2.5 Urinals shall be measured by numbers.

8.2.6 Rate for providing and fixing of urinals shall include all items and operations stated in the respective specifications except G.I. drain pipes as mentioned above and Schedule of Quantities to provide a complete item fixed for use and nothing extra is payable. Quoted rates above shall be inclusive of cutting required holes and chases and making good the same, C.P.brass screws, nuts, bolts and any fixing arrangements required and recommended by manufacturer including testing and commissioning.

8.3 **Pig Lead**

The pig lead to be used in jointing 150mm, 100 mm, 75 mm, 50 mm S&S centrifugally pipe joints shall not be less than 1.76 kg., 0.98 kg., 0.88 kg and 0.77 kg. per joint respectively.

However, in case of less use of pig lead by more than 5% the quantity of pig lead used less than the quantity specified above shall be recovered from the contractor at market rate to be determined by Engineer in Charge whose decision in the matter will be final.

9 ALUMINIUM DOORS, WINDOWS, VENTILATORS ETC. GLAZING SPECIFICATIONS:-

The work in general shall be executed as per the CPWD specifications supplemented by the following:-

The work shall be carried out through an approved firm, who shall furnish all materials, labour, accessories, equipment, tool and plant and incidentals required for providing and installing powder coated aluminium doors, windows, claddings, louvers and other items as per architectural drawings.

The agency shall be got approved from Engineer in Charge before execution. The architectural drawings of the Deptt. and these specifications cover the major requirements and are for guidance only, required fastenings, accessories, features, and all other items which are not mentioned specifically therein, but are necessary to make a complete installation shall be provided by the Contractor at his cost.

9.1 General:-

Aluminium doors, windows etc. shall be of sizes, section as per details as shown in the drawings. The details shown on the drawings indicate generally the sizes of components parts and general standards. These may be varied slightly to suit the standard adopted by the manufacture. Before

proceeding with manufacturing, the contractor shall prepare and submit complete manufacturing and installation drawings for approval of the Engineer-in-Charge and no work shall be performed until the approval of these drawings is obtained.

9.2 Shop Drawings:-

The contractor shall submit the shop drawings of doors, windows, louver, cladding and other aluminium work, to the Engineer-in-Charge for his approval. The shop drawing shall show full size and sections of doors, windows etc., thickness of metal (i.e. wall thickness) details of constructions, sub frame/rough ground profile, anchoring details hardware as well as connection of windows, doors and other metal work to adjacent work. Samples of all joints and methods of fastening and joining shall be submitted to the Engineer-in-Charge for approval well in advance of commencing the work.

9.3 Samples:-

Samples of doors, windows, louver etc. shall be fabricated, assembled and submitted to Engineer-in-Charge for his approval. They shall be of size types etc. as decided by Engineer-in-Charge. All samples shall be provided at the cost of the contractor.

9.4 Sections:-

Aluminium doors and windows shall be fabricated from extruded sections of profiles as detailed on drawings. The sections shall be extruded by the manufacturers approved by the Engineer-in-Charge. The aluminium extruded sections shall conform to BIS designation IIE/IIV 9 WP alloy, with chemical composition and mechanical properties, strength and durability. The permissible dimensional tolerance of the extruded sections shall be such as not to impair the proper and smooth function/operation and appearance of doors and windows.

9.5 Fabrication:-

Door, windows etc. shall be fabricated to sizes in factory and shall be of section sizes, combinations and details as per architectural drawings. All doors, windows etc. shall have mechanical joints. All members shall be accurately machined and fitted to form hairline joints prior to assembly. The joints accessories such as cleats, brackets, etc. shall be of such material as not to cause any bimetallic action. The design of the joints and accessories shall be such that the accessories are fully concealed. The fabrication of door, windows etc. shall be done in suitable sections to facilitate easy transportation, handling and installation. Adequate provision shall be made in the door and window members for anchoring for support and fixing of hardware and other fixtures as approved by the Engineer-in-charge.

9.6 **Anodizing (This specification is applicable to Aluminium sections anodized wherever mentioned in schedule of quantities.):-**

9.6.1 The anodizing shall be done by specialised firm who shall be got approved from the Engineer-in-charge.

9.6.2 The anodizing operation shall be done after cutting the members to requisite sizes before the final assembly. Aluminium sections shall be anodized as per IS : 7088-1973. Anodizing to be as per grade AC 15 and not less than 15 microns thick when measured as per IS 6012, and electro colour with colour fastness rating No. 8 of IS 1888-1882. Colour anodizing would be done only by electro colour process. No visual variation in colour shall be permitted. The tenderer shall clearly indicate the shade variation tolerance as measured by standard equipments.

9.6.3 The anodic coating shall be properly sealed by steam or by boiling in deodorized water as per IS 1868 and or IS 6057. Sealing quality shall be tested in accordance with the relevant standards. Nothing extra shall be paid for above.

9.6.4 The contractor shall satisfy himself by 100% checking in the factory that the thickness of the anodic coating is found to be minimum 15 microns and sealing quality appropriate every where. The testing shall be done by EDDY CURRENT METHOD as per IS 6012 for thickness. If any material is found substandard, this shall be totally rejected. Requisite tests shall also be required to be carried out at site as instructed by the Engineer-in-Charge and the contractor shall arrange all the equipments required for these tests at site. Nothing extra shall be paid for above.

9.6.5 All anodized aluminium works shall conform to relevant IS standards relating to materials, workmanship, fabrications, finishing, erection, installation etc. In this connection IS codes including IS 1868-1982, IS 1948-1961, IS 7088-1973, 6012-1970, IS 740-1975 are considered relevant and applicable.

9.6.6 A thick layer of clear transparent lacquer based on methacTenderderrylates or cellulose saturate shall be applied on the anodized sections, before they are brought at site. The lacquer shall be removed after installations are complete or as an alternative, the exposed surface of the aluminum sections shall be provided with gummed paper tape protective. After fixing and assuring of proper functioning of doors, windows etc. such protective layer shall be cleaned out/removed. Nothing extra shall be paid for above.

9.6.7 Required No. of tests as per relevant I.S. Codes shall be carried out.

9.7 Protection of Finish:-

All aluminum members shall be wrapped with approved self adhesive non-staining PVC tapes before they are brought to site. All care shall be taken to ensure surface protection during transportation, storage at site and installation. The tape protection shall be removed as installation.

9.8 Handling and Stacking:-

Fabricated material shall be protected against any damage during transportation. Loading and unloading shall be carried out with utmost care. On receipt of materials at site, they shall be carefully examined to detect any damaged pieces. Arrangements shall be made for expeditious replacement of damaged pieces, parts Materials found to be acceptable on inspection shall be repacked in crates and stored safely.

In the case of composite windows and doors, different units are to be assembled first. The assembled composite units should be checked for line, level and plumb before final fixing is done. Units may be assembled at their final location as situation warrants.

The contractor shall be responsible for assembling composite, bedding and filling the groove with polysulphide sealant inside and outside, at transoms and mullions, placing the doors, windows etc. in their respective opening. After the door/windows have been fixed in their correct assigned position, the open hollow sections abutting masonry concrete shall be filled up with approved polysulphide densely packed and finished neat.

The contractor shall be responsible for doors, windows etc. being set straight, plumb, level and for their satisfactory operation after fixing is complete.

9.9 Installation:-

Just prior to installation, the doors, windows etc. shall be uncrated and stacked on edge on level bearers and supported evenly. The frame shall be fixed into position with hard wood backing, true to line and level using adequate number of expansion machine bolts, anchor fasteners of approved size and manufacture and in an approved manner. The holes in concrete/masonry members for housing anchor bolts shall be drilled with an electric drilling machine.

The door/windows assembled as shown on drawings shall be placed in correct final position in the opening and marks made on concrete members at jambs, sills and heads against the holes/provided in frames for anchoring. The frame shall then be removed from the opening and laid aside. Neat holes with parallel sides of appropriate size shall then be drilled in the concrete members with an electric drilling machine at the marking to house the expansion bolts. The expansion bolt shall then be inserted in the holes, struck with a light hammer till the nut is forced into the anchor shell. The frame shall then be placed in final position in the opening and anchored to the support through cadmium plated machine screws of required size threaded to expansion bolts. The frame shall be set in the opening by using wooden wedges at supports and be plumbed in position. The wedges shall invariably be placed at the meeting points of glazing bars and frame.

9.10 Fittings:

Hinges, stays, handles, tower bolts, locks and other fittings shall be stainless steelfittings conforming to the required specifications.

9.11 EPDM Gaskets:

Contractor shall provide and install EPDM gaskets of approved size and profile at all locations as shown and as required to render the doors windows completely air tight and weather tight. The samples of EPDM gaskets/neoprene gaskets shall be got approved from Engineer in Charge before procurement.

9.12 Mastic Cement:

The gaps between frames and supports and also any gaps in the door and windows section shall be raked out as directed and filled with mastic cement of approved colour and make to ensure complete water tightness. The mastic cement shall be of such colour and composition that it would

not stain the masonry/concrete work, shall received paint without bleeding, will not sag or run and shall not set hard or dry out under any conditions of weather.

9.13 The various tests on aluminum sections shall be conducted in accordance with the CPWD specification and the relevant IS Codes. The testing charges shall be born by the agency.

9.14 Acceptance Criteria

The aluminum sections shall conform to the provisions of relevant items of work of the schedule of quantities.

9.15 Measurement: Measurements shall be as per CPWD specifications payment by weight shall be made for aluminum sections including beading only. All fixing angles, fittings and fixtures such as handles etc. shall not be included in the weight to be paid. For payment purposes only actual weight of sections shall be taken into account. If however the sectional weight of any aluminium section is higher than the permissible variation then the weight payable shall be restricted to the weight of section including permissible variation.

9.16 Rates:

9.16.1 The rates of item shall include the cost of materials, labour required in all the above operations.

9.16.2 The rates shall include the cost of hinges but shall exclude cost of fixing angles and fittings.

10.0 WATER PROOFING:

The work in general shall be executed as per CPWD specifications:-

10.1 The water proofing compound used in integral water proofing treatment shall satisfy all the requirements indicated in IS:2645 and shall be got tested before its use.

10.2 Total quantity of the water proofing compound required shall be arranged only after obtaining the prior approval of the Engineer in Charge in writing. Materials shall be kept under double lock and key and proper account of water proofing compound used in the work shall be maintained. It shall be ensured that the consumption of the compound is as per specified requirements.

10.3 The finished surface after water proofing treatment for floor in sunken portion shall have minimum slope of 1 in 48 unless otherwise decided by the Engineer in Charge.

10.4 Before commencement of treatment on terrace, it shall be ensured that the outlet drain pipes/spouts have been fixed and the spout openings have been eased and rounded off properly for easy flow of water

10.5 Contractor shall associate himself with specialized firms as per NIT Conditions for the work relating to Water Proofing Treatment. The work of water proofing shall start only after written approval of specialized agenyby the Engineer-in-Charge. However, the entire responsibility for the quality of this treatment and its efficiency shall however, rest with the main contractor only.

10.6 The contractor shall ensure that the basement of the building shall be absolutely water tight and seepage/leak free. In case any seepage/leakage etc. is noticed the contractor shall make it water tight & seepage/leak proof at his own cost.

(a) Water proofing treatment with APP sheet on terrace buildings shall also cover as per below condition mention at S. No. 10.8.

10.7 Expansion Joints:

PVC water stops shall conform to IS:12200 (Code of practice for provision of water stop at Transverse contraction joints in masonry and concrete dams).

10.7.1 Construction Joints:

The contractor shall give his proposal for location and treatment of construction joints. The construction joints shall be provided only at places and in the manner as approved by Engineer-in-Charge.

Except where shown otherwise on the drawing, reinforcement shall continue through construction joints.

The foreign matter and laitance shall be cleaned properly by compressed air before starting further work.

10.8 GUARANTEE BOND

Five years Guarantee bond in prescribed Performa attached as Annexure – I herewith shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability/liabilities under the guarantee bond. However, the sole responsibilityabove efficiency of water proofing treatment shall rest with the main contractor.

Separate guarantee bonds shall be submitted by the contractor for different type of water proofing work.

Ten per cent of the cost of water-proofing work shall be retained as security deposit and the amount so withheld would be released after five years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another agency at the risk and cost of contractor.

The security deposit against this item of work shall be in addition to the security deposit mentioned elsewhere in contract form.

a. All the materials, fixtures, fittings etc. shall be of the best quality and shall be of approved make and manufacture (wherever specified) as defined in the item of work or defined any where in this document otherwise shall be as mentioned in the CPWD specifications failing which the same shall be of ISI mark duly approved by the Engineer-in-Charge.

11.0 Door shutters frames of M.S. tube.

11.1 The M.S. Tube shall be hot fusion welded type of steel grade ST 32. The door shutter frames shall be factory manufactured as per drawings & specifications.

11.2 Vertical styles, toprail and bottom rail shall be of size 25 mm x 50mm of tube thickness 1.25mm.

11.3 Lock rail shall be of size 25 x 75mm of tube thickness 1.25mm.

11.4 The shutter frames shall be made of tubes which have been cut to length & mitered. The corners shall be welded to form a soild fused welded joint conforming the requirements of the CPWD Specifications 2019, Volume I & II. (with uptodate correction slips). The process of welding shall be flash butt welding.

11.5 Actual size of shutter frame shall not vary by more than $\pm$ 2mm than those shown in drawings.

11.6 Necessary holes and slots for hinges & fittings shall be made.

11.7 Priming coat of red oxide zinc chrome primer conforming to I.S. 2074-1979 shall be given. Before priming coat the steel surface shall be thoroughly cleaned of rust, scale & dust.

11.8 The door shutter frame shall be measured in running metre, along the centre line of the frame correct to a 1 mm & weight calculated according to standard tables. No deduction or extra payment shall be made for making holes/slots and making arrangements for fixing fittings.

11.9 The rate includes cost of material and labour involved in all the operations described above.

12.0 M.S. Sheet Door

12.1 M.S. Sheet and the welding shall be as per CPWD Specifications 2019, Volume I & II. (with uptodate correction slips). The M.S. Sheet on each face shall be in each piece. No joints in M.S. Sheets shall be permitted. The doors shall be factory manufactured as per drawings & specifications.

12.2 The M.S. Sheet shall be cut to size and welded to the M.S. Tube door shutter frames at the junctions. Tack welds 1 cm long @ 30 cm c/c shall be provided to each junction of M.S. Sheet & M.S. Tube vertical styles & horizontal rails. Tack welds between lock rail of M.S. tube shutter frame & the outer M.S. Sheet shall be provided before welding the inner sheet to the door shutter frame.

Necessary slots for providing 1 cm long tack welds between lock rail of M.S. tube door shutter & inner M.S. Sheet shall be made in the M.S. Sheet and tack welds provided.

12.3 2 cm tack welds shall be provided at each corner in addition to the 1 cm tack welds .

12.4 Painting shall be as per CPWD Specifications 2019, Volume I & II. (with uptodate correction slips)

12.5 Necessary holes/slots/arrangements for fittings shall be made.

12.6 Measurements shall be as per CPWD Specifications 2019, Volume I & II. (with uptodate correction slips)

12.7 The rate shall include the cost of materials and labour involved in all the operations described above.

13.0 Powder coating on aluminum sections & fittings/fixtures

13.1 Wherever specified the aluminum sections and fittings/fixture shall be coated in approved colour and shade with pure polyester powder of Berger/Interpon/Hardcastle/Nerocoat or equivalent to a minimum thickness of 50 microns.

13.2. The pure polyester powder coating shall be got executed from specialised agency. The contractor shall submit names of at least three specialised agencies with details of their experience, capability etc. to the Engineer-in-Charge who after satisfying himself shall give the approval in writing. The work shall start only after approval of specialised agency.

13.2.1 The pure polyester powder shall have following properties:-

13.2.1.1 Free Flow-ability - Satisfactory

13.2.2 Particle size :< 100 microns suitable for electrostatic spray.

13.2.3 Specific gravity : 1.1 to 1.5 depending on the colour.

13.2.4 Shelf life : 6 months.

13.2.5 Stoving Schedule :200^0 C for 10 mins. (metal temp.)

13.2.6 Test Certificates from approved laboratory for the representative samples shall be submitted by the Contractor.

13.3 The curing schedule shall be as specified by the manufacturer of pure polyester powder.

13.4 The properties of cured powder films shall be:-

13.4.1 Scratch hardness : Equal to or more than 4 Kg.

13.4.2 Impact resistance : Min 150 Kg cm

13.4.3 Pencil hardness : 3H to 4H

13.4.4 Salt spray resistance : 500 Hrs.

13.4.5 Water soak at room temperature : No change after 500 Hrs.

13.4.6 Detergent resistance : No attack after 500 Hrs.

13.4.7 Cross Hatch adhesion : GT= O (ASTM D-3359)

13.4.8 Cured Film thickness : Min 75 microns.

13.5 Tests for properties of cured film as given in 4 above shall be carried out at frequency specified in relevant BIS/BS/ASTM codes.

13.6 The surface of aluminum shall be prepared and pretreated as follows before powder coating:-

13.6.1 Removal of all foreign matter.

13.6.2 Chromatisation of aluminum surface as specified by the manufacturer of pure polyester powder by at least a five stage process consisting of alkali degrease, rinse and chromate conversion followed by two rinses. The chromate coating and alkali degrease shall be as per requirement of the pure polyester powder manufacturer

13.6.3 Proper curing at required temperature shall be done for specified time period so as to achieve the desired properties.

13.7 The pure polyester coated surface shall be of uniform texture, colour and gloss and shall be free from cracks, warps and other imperfections.

14.0 INTEGRAL WATER PROOFING TREATMENT

14.1 Treatment for roof surface with integral cement based compound

14.1.1 The execution of work shall have to under taken strictly as per relevant item of work.

14.1.2 **MEASUREMENTS:** The measurements shall be taken along the finished surface of treatment including the rounded and tapered portion at junction of parapet wall. Length and breadth shall be measured correct to one centimeter and area shall be worked out to nearest 0.01 sqm. No deduction in measurements shall be made for either opening or recesses for chimneys, stacks, roof lights and the like of areas upto 0.10 sqm. Nor anything extra shall be paid for forming such openings. For similar areas exceeding 0.10 sqm. Deductions will be made in measurements for full openings and nothing extra shall be paid for making such opening.

14.1.3 **Rates:** The rate shall include the cost of all labour and materials involved in all the operation described above.

15.0 ACRYLIC BASED TEXTURE PAINT

15.1 The acrylic based texture paint shall be of make, composition, texture and shade as per item of work and as approved by the Engineer-in-charge.

15.2 The surface on which the paint is to be applied shall be smooth, regular and free from dust etc. Undulations, broken edges, minor imperfections and irregularities shall be rectified as specified by manufacturer and approved by Engineer-in-charge so as to make the surface smooth and regular.

15.3 The texture paint shall be applied in a single coat on the surface as per specifications of the manufacturer.

During application, the surface should be well protected from strong winds, hot sun and cold weather. Adequate arrangement in this regard shall be made by the contractor.

15.4 The film thickness shall be 1.5 to 2 mm. The consumption rate of the texture paint for film thickness of 1.5 to 2 mm shall be average 2.5 kg / sqm.

15.5 Specifications in respect of scaffolding, protective measures, measurement and rate shall be as CPWD Specifications 2019 (with upto date correction slips).

16.0 TECHNICAL SPECIFICATIONS FOR PRE-CAST CONCRETE PAVING BLOCKS

16.1 **BASE**

16.1.1 The finished surface of the concrete base shall match the design the profile of the concrete blocks with + or – 20 mm.

16.1.2 Compaction shall be done with vibrating roller.

16.2 **BEDDING LAYER**

16.2.1 The bedding shall be from either a single source or blended to achieve the following grading.

Sieve Size	% Passing
9.52 mm	100
4.75 mm	95-100
2.36 mm	80-100
1.18 mm	50-100
600 microns	25-60
300 microns	10-30
150 microns	5-15
75 microns	0-10

Single sized, gap-graded sands or those containing an excessive amount of fines will not be used. The sand particles should preferably be sharp not rounded.

The joint-filling sand should pass a 2.35 mm sieve and be well graded. The following grading has been shown to give good results.

Sieve Size	% Passing
2.36 mm	100
1.18 mm	90-100
600 microns	60-90
300 microns	30-60
150 microns	15-30
75 microns	0-10

The use of cement in the joint-filling sand is not recommended as a general practice as the cemented sand is likely to crack into segments which are easily dislodged.

16.2.2 Average thickness of this laying course shall be 50mm with minimum of 40mm and a maximum of 80mm.

16.2.3 Humidity contents shall be at least 4% by weight.

16.2.4 It should contain not more than 3% by weight of clay and silt and the materials shall be free from deleterious or contaminates.

16.2.5 The finished surface of the bedding layer shall match exactly the design profile as indicated on the drawings.

16.2.6 Before placing the bedding layers, clean the surface of concrete by sweeping.

16.2.7 During construction the draining of the bedding and / or concrete use assured by perforations in the gully chambers at a matching level.

16.2.8 Do not allow any walking or driving on the finished surface of the bedding layers.

16.3 CONCRETE PAVING BLOCKS.

16.3.1 Laying of the blocks shall be done, precisely at the indicated level and profile and in a way that good surface draining to the gully chambers is assured.

16.3.2 Around gully chambers inspection pits etc. the pavement shall have a level of 5mm higher than the above mentioned elements.

16.3.3 The blocks shall be laid in an elbow pattern. The blocks shall be laid as tight as possible to each other and also along connections. The maximum joint width is limited to 4mm.

16.3.4 Laying of broken blocks is not allowed except along connections. The maximum length of a purpose broken block is 100mm. Breaking of the blocks shall be done with a block "block splitter".

16.3.5 Fine angular sand as per specification shall be brushed into the joints, thereafter compaction shall be done with a vibrating plate compactor on clean surface. After compaction again fine angular sand shall be brushed into the joints.

16.3.6 A well as before as after the compacting the maximum tolerance in profile under a lineal with a length of 3m shall be within + or – 5mm.

17. **VITRIFIED PORCELAIN TILES (ANTI SKID)**

The tiles shall be Anti-skid unpolished / matt finished and shall be of approved make and pattern / design / colour.

17.1.1 Dimensional and surface quality requirements and physical and chemical properties shall be as follows:-

17.1.1	Deviation in length & width of each tile from the prescribed length		± 0.5%
17.1.2	Deviation in length & width of each tile from the average size of 10 test specimens		± 0.75%
17.1.3	Deviation in thickness of each tile from the prescribed thickness		± 5%
17.1.4	Straightness of sides (Facial sides) related to prescribed sizes		± 0.5%
17.1.5	Rectangularity related to prescribed size		± 0.6%
17.1.6	Surface Flatness		
17.1.6.1	Centre curvature related to diagonal calculated from prescribed size		± 0.5%
17.1.6.2	Edge curvature related to prescribed size		± 0.5%
17.1.6.3	Warpage related to diagonal calculated from prescribed size		± 0.5%
17.1.7	Surface Quality	-	Minimum 95% of tiles shall be free from visible defects that would impair the appearance of a major area of tiles.
17.1.8	Water absorption by weight	-	Less than or equal to 3% average & max. 3.3% for individual tile.
17.1.9	Modulus of rupture	-	Min. 300 Kg/cm^2
17.1.10	Scratch hardness (Moh's scale)	-	Equal to or more than 6
17.1.11	Abrasion resistance	-	Less than or equal to $205mm^3$
17.1.12	Thermal shock resistance	-	Resistance to 10 cycles
17.1.13	Co-eff of thermal expansion from ambient temp. to 100^o C(K^{-1})	-	Max 9×10^{-6}
17.1.14	Resistance to staining of glazed size	-	Min. Class 2

17.2 The sampling of tiles for various test shall be as per IS – 13711.

17.2.1 The tests shall be carried out as per provisions of IS 13630 (Pt 1 13).

17.3 **Preparation of surface & laying**

Base concrete or the RCC slab on which the tiles are to be laid shall be cleaned wetted & mopped. The bedding mortar shall be as specified in the item of the work. Mortar and tiles shall be laid as per CPWD Specifications 2019, Volume I & II. (with uptodate correction slips).

17.4 The pointing & finishing of tiles shall be as per CPWD Specifications 2019, Volume I & II. (with uptodate correction slips).

17.5 The measurements shall be as per CPWD Specifications 2019, Volume I & II. (with uptodate correction slips).except that the glazed tiles mentioned therein shall mean ceramic glazed tiles.

17.6 The rate shall include the cost of all materials and labour involved in all the operations. Nothing extra shall be paid for use of cut (sawn) tiles in the work.

18. **Anti Termite Treatment**

Five years Guarantee bond in prescribed Performa attached as Annexure – II herewith shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability/liabilities under the guarantee bond. However, the sole responsibilityabove efficiency of Anti Termite treatment shall rest with the main contractor. Separate guarantee bonds shall be submitted by the contractor for different type of Anti Termite work.

Ten per cent of the cost of Anti Termite treatment work shall be retained as security deposit and the amount so withheld would be released after five years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within seven days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same will be got done from another agency at the risk and cost of contractor.

The security deposit against this item of work shall be in addition to the security deposit mentioned elsewhere in contract form.

a. All the materials, fixtures, fittings etc. shall be of the best quality and shall be of approved make and manufacture (wherever specified) as defined in the item of work or defined any where in this document otherwise shall be as mentioned in the CPWD specifications failing which the same shall be of ISI mark duly approved by the Engineer-in-Charge.

ADDITIONAL CONDITIONS FOR UPGRADATION WORKS

1. Before start of repairs/upgradation work in a flat, the Engineer-in-charge shall visit the flat and decided the scope/ major items of the works to be carried out particularly regarding modular kitchen, Sanitary installations, C.P. fittings, Wall tiles, flooring and finhishing work etc.
2. The Corrected form CPWD 7 is available with the cashier for inspection. The contractor is requested to go through the same. They will be bound the terms and conditions stated therein.
3. The contractor is advised to get acquainted with the proposed works & its site and also study the specifications and special conditions carefully before bidding. No claim of any sort shall be entertained on account of any site conditions & ignorance of specifications and special conditions.
4. The works shall be carried out as per CPWD specifications 2019 Vol. I & II with up to date corrections slips unless otherwise specified in the nomenclature of the individual items or in the specifications attached. At the points where specifications are silent, the instructions of the Engineer-in-charge shall be final.
5. In the event of any discrepancy between the nomenclature of the item of work as per schedule of quantities and the attached specification 2019 Vol. I & II, the nomenclature will prevail.
6. In the event of any discrepancy between the CPWD specifications 2019 Vol. I & II and special conditions attached, the special conditions shall prevail.
7. Unless otherwise provided in the schedule of quantities the rates bidded by the contractor shall be inclusive of all leads and lifts and shall apply to the heights and depths of the building and nothing extra shall be payable on him on this account.
8. The rates for all items of work, shall unless clearly specified otherwise, include the cost of all labour, materials and other inputs involved in the execution of the items of work.
9. The rates quoted by the contractor shall be taken as net and nothing extra shall be paid on any account i.e. royalty, carriage, sales tax and stacking at required place etc.
10. 1% water charges if water not arranged by contractor, Income tax plus surcharge and labourcessand GST as applicable shall be recovered from the gross amount of each bill.
11. 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.
12. The contractor has to make his own arrangement for all T & P like ladders, ghoree, sutli, empty containers, brushes and paper, kuchies etc. required for work and nothing extra shall be paid for the same.
13. The contractor shall 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.
14. Materials shall be brought to the site of work in original containers with the manufactures seal intact.
15. The materials required for day's work shall be issued to the contractor or his authorized 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 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 authorized 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.
16. Before the commencement of work, the contractor shall prepare one sample as instructed by the Engineer-in-charge for approval of the Engineer-in-charge. After the sample is approved by the Engineer-in-charge, the contractor shall be allowed to commence of the work and quality of work shall confirm to the approved sample.

17. Before the commencement of work, the contractor shall draw up programme in consultation with the Engineer-in-charge for the execution of work so as to inform the occupants of the office flat/quarter at least one week in advance regarding the execution of the work.

18. In case the office, rooms/quarters/flats are not made available to the contractor according to the programme, the contractor shall not be entitled for any claim for idle labour or any other claim on any account what-so-ever.

19. Defective work/substandard 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 the contractor in accordance with the terms & conditions of contract.

    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 Engineer-in-charge.

20. The entire work shall be carried out in close co-operation with all other agencies working in the building. The contractor(s) shall not be entitled to any compensation on account of temporary stoppage of work due to other constructions.

21. No payment will be made to the contractor for damage caused by rains during the execution of the work and no claim on his account will be entertained.

22. It will be responsibility of the contractor for damage caused by rains during the execution of the work and no claim on his account will be entertained.

23. Scrapping shall be shown to the Assistant Engineer and got approved and test checked by him prior to distempering.

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

25. Any damage to the building, furniture, fittings of any other articles etc. done by the contractor or his workmen during the execution of work, shall be made good by the contractor, failing which the same shall be made good by the Engineer-in-charge or his authorized representative at the risk and cost of the contractor.

26. All doors, windows, floors, furniture, electrical fittings and other articles shall be protected from dust, splashes & damaged sufficient covering for the day's work shall be shown to the representative of the Engineer-in-charge before the contractor is allowed to proceed with the work, splashes & droppings from white washing, colour washing, distempering painting etc. on walls, floors, doors and window, down take pipes, furniture shall be removed by the contractor at his own cost and surface cleaned simultaneously after the completion of the day's work is done, without waiting for the actual completion of the other items of work of the contract. In case the contractor fails to comply with this requirement the Engineer-in-charge or his authorized representative shall be the right to get this work done at the risk and cost of the contractor either departmentally or through another agency without issue of any notice to the contractor, departmentally or through another agency without issue of any notice to the contractor, on his account. The representative of the Engineer-in-charge will however, mention about it in the site order Book employing the labour on the job at the contractor's cost.

27. The contractor should write their correct postal address on the application for bid papers. In case it is found that the address given in their application is not correct and as a consequence of the same if any registered letter sent through postal authorities is received back by the department undelivered to the contractor, the contractor shall be fully responsible for all the consequences and by such letter through registered post shall be deemed to have been delivered to him.

28. Shifting of furniture such as so far table, chairs, glass etc. and make necessary arrangements to protect the furniture, carpets, floors from any spidge during the execution of work. Any damage if done, shall be made good by the contractor at his own cost nothing shall be paid extra in this regard.

29. The work of addition and alterations covered under the contract shall be carried the individual quarters. The bungalows may be made available to the contractor execution work in piece meal/, in

parts, and the contractor shall execute the work in these quarters made available to him and the contractor shall not claim anything extra over agreement rates, due to execution of works in piece meal manner.

30. Residential quarters under upgradation shall be handed over to contractor in phased manner as required. However contractor shall make arrangement for upgradation work for atleast 10(Ten) bungalows/quarters at-a-time depending upon the urgency of the work.

31. Whether occupied or vacant upgradation work will be carried out in serial order in each colony with the consent of the concerned allottees.

ANNEXURE-I

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

This Agreement is made on the _____day of _____month of Two thousand Twenty four year between_____son of_____ of_____ (hereinafter called the Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government of the other part).

WHEREAS THIS agreement is supplementary to a contract (hereinafter called the Contract), dated _____and made between the GUARANTOR OF THE ONE part and the Government of the other part, whereby the Contractor, *inter alia*, undertook to render the 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 five 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 five years to be reckoned from the date after the maintenance period prescribed in the contract.

Provided 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._____

ANNEXURE-II

GUARANTEE TO BE EXECUTED BY CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF ANTI TERMITE TREATMENT.

The Agreement made this _____day of _____Two thousand Twenty Six and_____between_____son of_____ of_____ (hereinafter called the Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called the Government of the other part).

WHEREAS THIS agreement is supplementary to a contract (hereinafter called the Contract), dated _____and made between the GUARANTOR OF THE ONE part and the Government of the other part, whereby the Contractor, *inter alia*, undertook to render the buildings and structures in the said contract recited completely anti termite treatment.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said structures will remain anti termite treatment for five years from the date of giving of anti termite treatment.

NOW THE GUARANTOR hereby guarantees that anti termite treatment given by him will render the structures completely anti termite treatment and the minimum life of such anti termite treatment shall be five years to be reckoned from the date after the maintenance period prescribed in the contract.

a) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing building whereby anti termite treatment is removed in parts.
c) The decision of the Engineer-in-charge with regard to cause of anti termite treatment 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 anti termite treatment 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 anti termite treatment 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._____

ANNEUXRE-III

GUARANTEE TO BE EXECUTED BY THE CONTRACTORS FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF ALUMINIUM DOORS, WINDOWS, AND VENTILATORS WORK.

The agreement made this……day of …… Two Thousand Twenty Six and …… between ……..Son of …… …….. (Hereinafter called the GUARANTOR of the one part) and the President of India (hereinafter called the Government of the other part).

WHEREAS THIS agreement is supplementary to a contract (hereinafter called the Contract) dated…….. and made between the GUARANTOR OF THE ONE PART AND the Government of the other part, whereby the contractor inter alia, undertook to render work in the said contract recited structurally stable, leak proof and sound material, workmanship, anodizing, colouring, sealing.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, defective anodizing, colouring and finishing for two years from the date after the maintenance period prescribed in the contract.

NOW THE GUARANTOR hereby guarantees that the work executed by him will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, defective anodizing and colouring for the minimum life of two years to be reckoned from the date after the maintenance period prescribed in the contract.

The decision of the Engineer in Charge with regard to 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 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 make good all the defects and commits breach there under 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 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 the parties.

IN WITNESS WHERE OF 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 presence of

1……. 2…….

SPECIAL CONDITION FOR PROCUREMENT OF STEEL

CENTRAL PUBLIC WORKS DEPARTMENT

OFFICE MEMORANDUM

DG/MAN /366

ISSUED BY AUTHORTY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI **DATED : 14.03.2018**

Sub: Modification of Para 27.2 special condition of steel of works manual -2014.

In continuation of earlier OM issued vide No. DG/CPWD Works Manual/356 dated.11.09.2017, the fallowing modifications has been made in CPWD Works Manual 2014 with immediate effect.

Sl. No	Existing Provision	Modified Provision
1.	***27.2 Special conditions for steel reinforcement bars*** (1) (a) The CPWD/Contractor shall procure IS marked TMT bars of various grades from the steel manufacturers or their authorized dealers (as per following selection criteria) having valid BIS license for IS:1786-2008 (Amendment-1 November 2012). The procured steel should have following qualities:- i. Excellent ductility, bend ability and elongation of finished product due to possible refining technology. ii. Consumption of steel should be accurate as per design. iii. Steel should have no brittleness problem in finished product. iv. Steel should carry the quality of corrosion and earthquake resistance. v. Quality steel with achievement of proper level of sulphur and phosphorus as per IS:1786-2008. **(b) Selection Criteria of steel manufacturers** The supply of reinforcement steel for all CPWD works should have following selection criteria of steel manufacturers:- Steel producers of any capacity using iron ore/ processed iron ore as the basic raw material adopting advanced refining technologies as given under, (i) DRI-EAF = Direct Reduced iron – Electric arc furnace.	***27.2 Special condition for steel reinforcement bars*** The CPWD/Contractor shall/procure IS marked TMT bars of various grades from **(1) The Steel Manufacturers such as SAIL, TATA steel Ltd, RINL, Jindal Steel & Power Ltd, and JSW steel Ltd. or their authorized dealers having valid BIS license for IS: 1786-2008 (Amendment-1 November 2012)** **(2) (a)** The steel manufacturers or their authorized dealers (as per following selection criteria) having valid BIS license for IS:1786-2008 (Amendment-1 November 2012). The procured steel should have following qualities:- i. Excellent ductility, bend ability and elongation of finished product due to possible refining technology. ii. Consumption of steel should be accurate as per design. iii. Steel should have no brittleness problem in finished product. iv. Steel should carry the quality of corrosion and earthquake resistance. v. Quality steel with achievement of proper level of sulphur and phosphorus as per IS:1786-2008. **b) Selection Criteria of steel manufacturers** **(i)** The supply of reinforcement steel for all CPWD works should have following selection criteria of steel manufacturers:- Steel producers of any capacity using iron ore/ processed iron ore as the basic raw material adopting advanced refining technologies as given under, (i) DRI-EAF = Direct Reduced iron – Electric arc furnace.

or (ii) BF-BOF = Blast furnace – Basic oxygen furnace or (iii) COREX-BOF = COREX - Basic oxygen furnace For production of liquid steel to finish product at single/multiple locations with NABL or any other similarly placed accrediting Government body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 conforming to IS:1786-2008 (Amendment-1 November 2012). The check list for incorporation of any quality steel producer is enclosed for technical assessment is given in Annexure-1. Chief Engineer CSQ (Civil) unit, Directorate of CPWD shall approve the steel manufacturers. (2) The contractor shall have to obtain and furnish test certificates to the Engineer-in-charge in respect of all supplies of steel brought by him to the site of work. (3) Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in 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. (4) The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more, or as decided by the Engineer-in-charge. (5) The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent 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. (6) For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:	or (ii) BF-BOF = Blast furnace – Basic oxygen furnace or (iii) COREX-BOF = COREX - Basic oxygen furnace For production of liquid steel to finish product at single/multiple locations with NABL or any other similarly placed accrediting Government body which operates in accordance with ISO/IEC 17011 and accredits labs as per ISO/IEC 17025 conforming to IS:1786-2008 (Amendment-1 November 2012). The check list for incorporation of any quality steel producer is enclosed for technical assessment is given in Annexure-1. Chief Engineer CSQ (Civil) unit, Directorate of CPWD shall approve the steel manufacturers. **(II)** The contractor shall have to obtain and furnish test certificates to the Engineer-in-charge in respect of all supplies of steel brought by him to the site of work. **(III)** 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. **(IV)** The steel reinforcement bars shall be brought to the site in bulk supply of 10 tonnes or more, or as decided by the Engineer-in-charge. **(V)** 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. **(VI)** For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:

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

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

(8) The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.

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

Copy to:

1. All Spl. DGs. ADGs. CPWD, E-in-C, PWD, Govt. of Delhi. They are requested to endorse a copy of these OM to all CEs, SEs & EEs.
2. SE (TAS), CPWD w.r.t. approval received vide his file no. SE (TAS)/EE (TAD)/Steel/2017-18 (Part 3)
3. EE (M), CPWD copy may be placed in file no. CSQ/CM/16 (1)/2018

Executive Engineer (TAD)

SE (TAS), CSQ

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

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

(VIII) 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 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.

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

SE (C&M), CSQ

LIST OF APPROVED MAKE OF MATERIALS
(FOR CIVIL WORKS)

Make/Brands of Materials and finishes approved are listed below. However, equivalent materials and finishes of any other Specialized firms may be used, in case it is established that the Makes/brands specified below are not available in the market or for any other reasons, subject to approval of the alternate Make/brand by the Engineer-in-Charge,

Sl. No.	MATERIALS	APPROVED MAKE
1	Structural Steel, Sections	Tata, Jindal, Prakash, Rana Capital, Apollo, Bhushan
2	Admixture	Fosroc, MC BAUCHEMIE, CICO/ CHOCKSEY/ BASF
3	Bitumen	Indian Oil, Hindustan Petroleum, Bharat Petroleum
4	Injection Grouting	Pidilite (Dr. Fixit), SIKA, FOSROC CHOCKSEY/ DURA BUILD
5	Locks/Latch	Godrej, Harrison, Plaza, Dorma, Yale, Dorset
6	Laminates	Formica, Decolam, Merino, Greenlam
7	Stainless steel wire mesh	Sterling enterprises, Trimurty Welded Mesh
8	Prelaminated MDF Board	Green Penelmax, Marino, Veer, Century
9	Adhesive	Pidilite, Dunlop, Vamorganic CHOCKSEY/ DURA BUILD
10	Flush Door Shutters (Decorative/Non Decorative)	Duro, Merino, Century ply, Greenlam and Jayna Doors of Jain wood Industries, Jain Doors Pvt. Ltd. /Orion Doors, Greenpanel
11	Block Boards, Plyboards	DURO, CENTURY, Greenlam
12	Hydraulic Door Closure/Floor spring	Hardwyn, Godrej, Dorma, Hafele, Dorset
13	Panic Exit Device	Ingerrsoll, Hardwyn, Everest
14	Aluminium Extruded Profile	Hindalco,Jindal, Indalco
15	Anodised Aluminium Hardwares (Heavy Type)	Hardima, Everite, Sigma (ISI marked), Earl Bihari. Dorma
16	Tempered Glass	Modi Float, Saint Gobain, ASAHI, Glaverbel
17	Polyster Powder Coating Shades	Nerolac, Berger, J&N
18	Dash/anchoring Fasteners	Hilti/Fischer/Canon/Bosch/Wurth
19	Friction Stay Hinges	Earl- Bihari, Hettich
20	Steel Nuts, Bolts and Screws	Kundan, Puja, Atul, Wurth
21	EDPM Gasket	Hanu/Anand
22	Ceramic Tiles	Kajaria, Nitco, Somany, RAK,
23	Vitrified Tiles (Double Charged/ Nano Tech) (GVT/Anti Skid/ Glossy/Matt finish 1st Quality).	Kajaria, Nitco, Somany, RAK,
24	Terrazzo Tiles	Nitco, Unistone, K.K Manhole
25	Chequered Tiles	Nitco, Unistone, K.K Manhole
26	Cement Concrete Tiles	NITCO, Unistone, Dalal, Surendera
27	Tile Adhesive	CICO, PIDILITE FERROUS, Fosroc/ CHOKSEY, MYK Laticrete
28	White Cement	Birla White, JK White
29	Clay Tile on Roof	KENZAI, JOHNSON
30	CC Pavers	NITCO, TUFTEK/K.K Pvt. Ltd./, Hindustan Tile, Dalal, Surendera
31	Water Proofing Cement Paint	Snowcem, Berger, ICI India Ltd. , Asian Paints
32	Synthetic Enamel Paint (Premium Quality)	Berger, Nerolac, ICI, Asian Paints

33	Acrylic/Plastic Emulsion Paint (Premium Quality)	Berger, Nerolac ICI, Asian Paints
34	Fire Clay Sink & Drain Board	Parryware, Hindware, Cera.
35	Soil waste & Vent Pipes & fittings (a) Centrifugal Cast iron pipes	NECO, RIF, SKF, HIF, Kapilansh, RPMF
36	LA (CI) Pipes	Electro Steel, Kesoram
37	G.I. Pipes & M.S. Pipe	TATA,JINDAL(Hissar), Prakash Surya
38	G.I. Fittings (Malleable Cast Iron)	Unik, ICS
39	Gunmetal Valves (Full way chech Valves.)	Leader, Zoloto, Prima, SANT
40	Stone ware Pipes & Gully Traps	Perfect / Parry/Anand
41	PVC Doors/Windows	Syntex, Rajshri, Jain Doors, Jayna
42	MS pipes	Kirloskar, Electro Steel.
43	C.I. Double Flanged Sluice Valves	Kirloskar, IVS, Burn
44	C.I. Double Flanged Non Return Sluice Valves	Kirloskar, Zoloto
45	C.I. Manhole Covers	RIF, NECO, SKF, RPMF
46	UPVC pipes	Supreme, Prince, Finolex, Astral
47	SS Autoclose Hinges	Hettich, Earl-Bihari
48	Ball Valves	Zoloto, IBP, Prima, Arco
49	Butterfly Valves	Audco, Zoloto
50	Unglazed Vitrified Heavy Duty Tiles	Johnson-(Endura), Somany-(Dura Stone), Kajaria, Oasis, Varmora
51	Spider Fittings	Dorma, Sevax, Hettich
52	Mineral Fiber False ceiling	ARMSTRONG, GYPROC, AEROLITE, USG BORAL, DIAMOND
53	APP	Bitumat co. Ltd., STP, Dermabit Technow NICOL/Torchtar
54	FRP Doors & Frames	Ashoo Model Arts, Selected Product Co., Fiberways, Jayna Doors of Jain wood Industries, Jain Doors Pvt. Ltd. , FRP Bhatt
55	PVC /Synthetic Water Storage Tank	Sintex/Uniplast, Polycon
56	RMC	ACC, Ultra Tech (Birla), RMC India, Lafarge, M/S NDCON Construction, V.K.Ready Mix Concrete Pvt. Ltd., Shri Ram Ready Mix Concrete Pvt. Ltd
57	Indian/European WC, Wash Basin and other Sanitary Installation.	Parryware, Hindware, Cera, Jaquar
58	C.P. Brass Fittings	Jaquar (Continental series), Kohler, Grohe,
59	Water Proofing compound	CICO, IMPERMO (By Snowcem India Ltd.) PIDILITE/ CHOKSEY / DURA BUILD/Fosroc.
60	Stainless Steel Sink	Jayna/ Neelkantha/ Nirali
61	Bevelled Edge Mirror	ATUL/JOLLY/MODIGAURD
62	Glass Panes	Modi Guard/Saint Gobin/ASAHI
63	Plaster of Paris	Shree Ram/Adhar Shree/Sakarni/Decotouch
64	Wall Putty	Birla White/JK White/Home Pride
65	Cement	ACC/ Birla/ Ultratech/ J.P. Rewa & Cement Corporation of India. J.K, Gujrat Ambuja, M/S Binani Cement.
66	Aluminium hinges	Classic /Argent/Crown
67	Steel Reinforcement (TMT Bars)	Tata, SAIL, RINL, JSPL, JSW
68	Galvanised/Galvalume Profile Sheets	Tata, Jindal, Kamdhenu
69	Metal False ceiling	Durlum, Armstrong , Dexune, Credence, RITE, Hi-Steel

70	Acrylic Distemper	Berger, Nerolac, ICI India Ltd. Asian Paints.
71	Smooth Exterior Paint.	Asian (Apex), Berger (Wheather Coat), Nerolac, ICI India Ltd.
72	Premium Exterior Paint with Silicon Additives	Asian (Apex-Ultima), Berger (All Guard), Nerolac, ICI India Ltd.
73	Acoustic Foldable movable partitions	Hafele, Dorma, Azazo
74	Door Fittings	Hafele, Dorma, Hardwyn, Godrej, Dorset
75	PVC pipes & Fittings	Supreme, Finolex, AKG, SFMC
76	Steel Primer	Berger, Nerolac, ICI India Ltd. Asian Paints.
77	Wood Primer	Berger, Nerolac, ICI India Ltd. Asian Paints.
78	Plastic Seat covers of W.C.	Commander, Diplomant, Hindware, Somany
79	PVC flushing Cistern	Commander, Hindware (Slimline), Hindustan, Somany.
80	Stainless Steel Railing	Connect Arch. Pvt. Ltd., Jindal S.S. Ltd., Geze, ICICH Inds., ESSAL, Dorma, D Line, Kitch
81	C-PVC pipes	Astral, Ashirvad, Prince
82	Stainless Steel hard ware fittings	Dorma, Hafele, Godrej, Geze.,Dorset
83	Hermitically Sealed Performance glass & Toughened glass.	Saint Gobin, Asahi, Pilington, Viracon (Processed by theme or their approved Processors).
84	Epoxy Paint	Asian, ICI, Kansai, Nerolac.
85	Sanitary Fittings	Hindware, Parryware, Prima, Cera, Hindustan, Jaquar
86	Textured Exterior Paint	Ultra tech texture paint, Spectrum, Heritage, Asian, Dulux (AkzoNobel)
87	Gypsum Board	Saint Gobain, USG.
88	Calcium Sillicate false ceiling i/c frame work	Aerolite, Hilux, Armstrong, RITE
89	Glass Reinforced Jali	Uni Stone, Dalal, Ultra Tech
90	AAC Blocks	Finecrete, Ultra Tech, RS Green
91	Wooden Door Frames and Shutters	Goyla, Jayna, Kutty
92	DI Pipes	Electro steel, Jindal Saw, Tata Metalls
93	Aeoustical – False Ceiling	RITE, USE KNAFF, Armstrong
94	Aeoustical – Wall Paneling	RITE, Armstrong, Anutone

For Items/Materials not covered in the list above, the 1st quality material is to be used as per the Nomenclature of items or 1st quality material of the reputed Make/Brand required to be used for execution of either agreement item or any Extra item as per approval and direction of Engineer-in-Charge after approval of NIT approving authourity.

SCHEDULE OF QUANTITY

Name of Work: Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).

S. No.	Description	Qty	Unit	Rate	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 natiral soruces : 4 graded stone aggregate 20 mm nominal size derived from natural soruces)	48.00	cum	7878.50	378168.00
1.2	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natiral soruces : 10 graded stone aggregate 40 mm nominal size derived from natural soruces)	43.00	cum	6518.60	280300.00
2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement :				
	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)	4.00	cum	10852.95	43412.00
3	Centering and shuttering including strutting, propping etc. and removal of form for				
	Shelves (Cast in situ)	49.00	sqm	927.25	45435.00
4	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
	Thermo-Mechanically Treated bars of grade Fe-500D or more.	470.00	Kg	107.85	50690.00
5	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
	Cement mortar 1:6 (1 cement : 6 coarse sand)	6.00	cum	9105.95	54636.00
6	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
	Cement mortar 1:4 (1 cement :4 coarse sand)	24.00	sqm	1123.80	26971.00

7	Providing and fixing 18mm 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 20mm 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 stone slab of colour black, Cherry / Ruby red				
7.1	Area of slab upto 0.50 sqm	160.00	sqm	5413.50	866160.00
7.2	Area of slab over 0.50 sqm.	150.00	sqm	5136.30	770445.00
8	Providing edge moulding to 18 mm thick marble stone counters, Vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.				
	Granite work	372.00	mtr	510.95	190073.00
9	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.	23.00	mtr	568.55	13077.00
10	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	93.00	each	978.70	91019.00
11	Providing and fixing expansion hold fasteners on C.C. /R.C.C./Brick masonry surface backing including drilling necessary holes and the cost of bolt etc complete.				
	Wedge expansion type				
	Fastener with threaded dia 6 mm	186.00	each	36.75	6836.00
12	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	3027.00	sqm	1267.95	3838085.00

	mixed with pigment of matching shade complete.				
13	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia. & length (hold fast lugs or dash fastener shall be paid for separately).				
	Second class teak wood	15.00	cum	142949.70	2144246.00
14	Providing and fixing glazed shutters for doors, windows and clerestory windows using 4 mm thick float glass panes, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws.				
	Second class teak wood				
	30 mm thick	272.00	sqm	4523.40	1230365.00
15	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters :				
	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	542.00	sqm	3473.85	1882827.00
16	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured).	542.00	sqm	462.35	250594.00
17	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :				
	2nd class teak wood				
	50x12 mm	3044.00	mtr	221.10	673028.00
18	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :				
	20 mm dia (heavy type)	157.00	mtr	175.00	27475.00
19	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
	Fixed to openings /wooden frames with rawl plugs screws etc.	1950.00	Kg	238.35	464783.00
20	Providing 40x5 mm flat iron hold fast 400 mm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block	2450.00	each	228.85	560683.00

	300x100x150 mm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)				
21	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	93.00	each	854.65	79482.00
22	Providing and fixing special quality bright finished brass cupboard or ward robe locks with four levers of approved quality with necessary screws etc. complete.				
	65 mm	190.00	each	362.40	68856.00
23	Providing and fixing aluminium casement stays, 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.	410.00	each	71.50	29315.00
24	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete.				
	Double strip (horizontal type)	810.00	each	39.70	32157.00
25	Providing and fixing wire gauge shutters using stainless steel grade 304 wire gauge with wire of dia 0.5 mm and average width of aperture 1.4 mm in both directions for doors, windows and clerestory windows with necessary screws :				
	35 mm thick shutters				
	With ISI marked stainless steel butt hinges of required size				
	Second class teak wood	190.00	sqm	5217.65	991354.00
26	Providing and fixing 6mm thick both sides Pre-laminated cement bonded wood particle board as per IS : 15786:2008 of approved brand and shade with suitable full threaded steel screws etc. on the backing of racks, drawer, cupboard, kitchen cabinet under kitchen counter etc. all complete as per direction of Engineer-in-charge.	890.00	sqm	1010.60	899434.00
27	Providing and fixing cupboard shutter with 19mm thick one side decorative and other side balancing lamination factory pressed BWP grade marine ply as per IS 710 of approved brand including 2mm thick PVC edge banding tape with hot glue by edge bending machine etc. with auto closing spring loaded hinges (hydraulic type) etc. complete as per direction of Engineer-in-charge.(Payment of providing and fixing auto closing hinges shall be paid separately)	890.00	sqm	2829.25	2518033.00

28	Providing and fixing 19mm thick both side balancing lamination factory pressed BWP grade marine ply as per IS 710 of approved brand boxes, shelves, racks, almirah, cupboard and drawer etc. including necessary nails,screws etc. complete as per direction of Engineer-incharge.	2200.00	sqm	2593.15	5704930.00
29	Providing and fixing stainless steel fancy handle of approved make fixed with SS screws etc. complete as per direction of Engineer-in-charge.				
	200 mm	1860.00	each	186.65	347169.00
30	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.	2790.00	each	272.00	758880.00
31	Providing and fixing stainless steel soft closing heavy type telescopic drawer channels of approved make 500 mm long with screws etc. complete as per directions of Engineer- in-charge.	372.00	One Set	885.10	329257.00
32	Providing and fixing ready made 304 grade stainless steel Modular kitchen basket and accessories such as right angle basket (Plain Cup & Saucer, plant, Partition, Bottle rack, Thali, Cutlery) kitchen utensil basket, Dinner set basket, kitchen grain basket, Multipurpose basket as per site requirement including finishing (wherever required) and fittings. The same shall be fixed with necessary stainless steel nuts & bolts, Stainless Steel screws & telescopic channel etc. as per direction of Engineer-in charge. (For payment purpose only weight of Stainless steel basket shall be considered excluding weight of all fixing accessories such as nuts, bolts, fasteners telescopic basket channels etc. Payment of providing and fixing telescopic channel shall be paid separately)	578.00	kg	533.25	308219.00
33	Providing and fixing 2mm thick 16 to 19mm wide PVC edge binding tape of approved quality for cupboard/wardrobe shutters including necessary synthetic resin hot pressed to edges on binding machine etc. complete as per directions of Engineer-in-charge.	5600.00	mte	43.80	245280.00

34	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
	Hot finished welded type tubes.	8870.00	kg	194.40	1724328.00
35	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.				
	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	6351.00	kg	172.60	1096183.00
36	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-incharge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	1300.00	kg	772.40	1004120.00
37	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1:4 (1 cement : 4 coarse sand):				
	25 mm thick.	361.00	sqm	1948.25	703318.00
38	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	74.00	sqm	2354.70	174248.00
39	40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) with joints 3 mm thick, side buttered with cement mortar 1:2 (1 cement : 2 stone dust) admixed with pigment to match the shade of stone and pointing with same mortar.				
	Red sand stone	320.00	sqm	1647.00	527040.00

40	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.				
	Glazed vitrified floor tiles polished finish of size				
41.1	Size of Tile 600 x 600 mm	3116.00	sqm	1502.75	4682569.00
	Glazed Vitrified tiles Matt/Antiskid finish of size				
41.2	Size of Tile 600 x 600 mm	1620.00	sqm	1464.85	2373057.00
42	Deduct for not using 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) bedding in laying of floor tiles and jointing with grey cement slurry @ 3.3 kg/ sqm.	4736.00	sqm	-850.11	-4026121.00
43	Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in average 3mm thickness.	4736.00	sqm	753.25	3567392.00
44	Crazy ceramic tile flooring, with under layer 12 mm thick cement mortar 1:4 (1 cement: 4 coarse sand), with joints not exceeding 5 mm, including filling the gaps with ordinary cement mixture & mixing with synthetic polyester fibre, triangular in shape having specific gravity of 1.34 to 1.40, cross section size ranging from 10 to 40 micron & length upto 6 mm , mixing fibre @ 125 grams per 50 kg of cement in cement mortar, including providing and mixing water proofing material in mortar @ 1 kg per 50 kg of cement, all complete as per direction of Engineer-in-charge.	1511.00	sqm	954.15	1441721.00
45	Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete as per direction of Engineer-in-charge.				

	Size of Tile 600x600 mm or more	4736.00	sqm	309.05	1463661.00
46	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles.	4736.00	sqm	-13.30	-62989.00
47	Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing , curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.				
	Polished Granite stone slab colour of Black, Cherry/Ruby Red or equivalent	547.00	sqm	4481.30	2451271.00
48	Providing gola 75x75mm in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 stone aggregate 10 mm and down gauge) including finishing with cement mortar 1:3(1 cement : 3 fine sand) as per standard design				
	In 75x75mm deep chase	409.00	mtr	305.15	124806.00
49	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	100.00	each	298.25	29825.00
50	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i)Single socketed pipes.				
	75 mm diameter	250.00	mtr	248.80	62200.00
	110 mm diameter	250.00	Mtr	377.40	94350.00
51	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS :5382 leaving 10 mm gap for thermal expansion.				
51.1	Coupler				
51.1.1	75mm	40.00	each	91.70	3668.00

51.1.2	110mm	80.00	each	136.15	10892.00
51.2	Single tee with door				
51.2.1	110x110x110 mm	50.00	each	234.15	11708.00
51.3	Bend 87.5°				
51.3.1	75 mm bend	50.00	each	105.90	5295.00
51.3.2	110 mm bend	20.00	each	150.35	3007.00
51.4	Shoe (Plain)				
51.4.1	75 mm Shoe	20.00	each	93.10	1862.00
51.4.2	110 mm Shoe	20.00	each	131.85	2637.00
52	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised -PVC rain water pipes by means of 50x50x50mm hardwood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.				
52.1	75 mm	20.00	each	369.85	7397.00
52.2	110 mm	20.00	each	371.30	7426.00
53	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.				
	2 mm thick corrugated (2.5" or 4.2" or 6") or step-down (2" or 3" or 6") as specified	190.00	sqm	1401.35	266257.00
54	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineerin- charge. The sheet shall be fixed using self drilling /self tapping screws of size	961.00	sqm	738.65	709843.00

	(5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.				
55	12 mm cement plaster of mix :				
	1:6 (1 cement: 6 coarse sand)	7090.00	sqm	343.65	2436479.00
56	15 mm cement plaster on rough side of single or half brick wall of mix:				
	1:6 (1 cement: 6 coarse sand)	4730.00	sqm	395.35	1870006.00
57	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6 mm thick cement plaster 1:6 (1 cement : 6 fine sand).	1580.00	sqm	518.55	819309.00
58	Neat cement punning	80.00	sqm	79.95	6396.00
59	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	2325.00	sqm	262.70	610778.00
60	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 :				
	New work (two or more coats) over and including water thinable priming coat with cement primer having VOC content less than 50 gram/litre.	1660.00	sqm	185.65	308179.00
61	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :				
	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	93.00	sqm	226.25	21041.00
62	French spirit polishing :				
	Two or more coats on new works including a coat of wood filler	1910.00	sqm	446.25	852338.00
63	Washed stone grit plaster on exterior walls height upto 10 metre above ground level, in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand), furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15 mm cement plaster 1:1/ 2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size), in panels with groove all around as per approved pattern, including scrubbing and washing the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in-charge	200.00	sqm	1162.25	232450.00

	(payment for providing grooves shall be made separately).				
64	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer, including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :				
	15 mm wide and 15 mm deep groove	350.00	mtr	75.15	26303.00
65	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.	15300.00	sqm	156.05	2387565.00
66	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	Two coats	13640.00	sqm	137.45	1874818.00
67	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.	15740.00	sqm	25.15	395861.00
68	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :				
	One or more coats on old work.	1860.00	sqm	102.80	191208.00
69	French spirit polishing :				
	One or more coats on old work.	280.00	sqm	224.80	62944.00
70	Finishing walls with Acrylic Smooth exterior paint of required shade :				
	Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface	436.00	sqm	120.75	52647.00
71	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.				
	With cement mortar 1:4 (1cement: 4 coarse sand)	1090.00	sqm	560.50	610945.00
72	Renewing glass panes and refixing existing wooden fillets:				

	Float glass panes of nominal thickness 5 mm (weight not less than 12.5kg/sqm)	155.00	sqm	1552.75	240676.00
73	Dismantling W.C. Pan of all sizes including disposal of dismantled materials including malba all complete as per directions of Engineer-in-Charge.	93.00	each	134.10	12471.00
74	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. (a) Internal Work-Exposed on wall	775.00	mtr	3.25	2519.00
75	Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineer- in-charge.	104.00	cum	851.50	88556.00
76	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	191.00	cum	2434.25	464942.00
77	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.	14.00	cum	3551.25	49718.00
78	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.				
	In cement mortar	3.00	cum	2060.20	6181.00
79	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :				
	Of area 3 sq. metres and below	620.00	each	367.20	227664.00
80	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.				
	For thickness of tiles 10 mm to 25 mm	7763.00	sqm	73.40	569804.00
81	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	310.00	Sqm	266.45	82600.00
82	Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead :				
	Thickness above 10 mm up to 25 mm	3100.00	Sqm	77.75	241025.00

83	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :				
	75 to 80 mm dia pipe.	264.00	mtr	75.70	19985.00
	100 mm dia pipe	273.00	mtr	78.00	21294.00
84	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.	98.00	each	112.05	10981.00
85	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.	5900.00	sqm	54.65	322435.00
86	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.	600.00	cum	263.95	158370.00
87	Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required:-				
	White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer	31.00	each	3960.55	122777.00
88	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	31.00	each	1683.35	52184.00
89	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 :				
	Kitchen sink with drain board				
	510x1040 mm bowl depth 200 mm.	31.00	each	7159.00	221929.00
90	Providing and fixing white vitreous china water closet squatting pan (Indian type) :				
	Orissa pattern W.C. pan of size 580x440 mm	5.00	each	3169.05	15845.00
91	Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.				
	10 litre capacity - White	5.00	each	1190.65	5953.00

92	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
	Flexible pipe				
92.1	32 mm dia	124.00	each	119.55	14824.00
92.2	40 mm dia	31.00	each	119.55	3706.00
93	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.	113.00	each	1607.95	181698.00
94	Providing and fixing 600x120x5 mm glass shelf with edges round off, supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	113.00	each	1083.50	122436.00
95	Providing and fixing soil, waste and vent pipes:				
95.1	100 mm dia.				
	Sand cast iron S&S pipe as per IS: 1729.	310.00	mtr	1151.90	357089.00
95.2	75 mm diameter :				
	Sand cast iron S&S pipe as per IS: 1729.	248.00	mtr	1044.75	259098.00
96	Providing and filling the joints with spun yarn, cement slurry and cement mortar 1:2 (1 cement : 2 fine sand) in S.C.I./ C.I. Pipes :				
96.1	75 mm dia pipe	248.00	each	168.20	41714.00
96.2	100 mm dia pipe	248.00	each	198.15	49141.00
97	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :				
97.1	For 100 mm dia pipe	62.00	each	362.85	22497.00
97.2	For 75 mm dia pipe	93.00	each	360.00	33480.00
98	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
98.1	100 mm dia				
	Sand cast iron S&S as per IS - 3989	62.00	each	705.20	43722.00
98.2	75 mm dia				
	Sand cast iron S&S as per IS- 3989	62.00	each	522.80	32414.00
99	Providing and fixing plain bend of required degree.				
99.1	100 mm dia				
	Sand cast iron S&S as per IS : 3989	93.00	each	570.05	53015.00

99.2	75 mm dia				
	Sand cast iron S&S as per IS - 3989	62.00	each	390.50	24211.00
100	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
	75x75x75 mm				
	Sand cast iron S&S as per IS - 3989	31.00	each	665.05	20617.00
101	Providing and fixing collar :				
101.1	100 mm				
	Sand cast iron S&S as per IS - 3989	31.00	each	513.15	15908.00
101.2	75 mm				
	Sand cast iron S&S as per IS - 3989	31.00	each	362.05	11224.00
102	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 :				
102.1	100 mm inlet and 100 mm outlet				
	Sand cast iron S&S as per IS: 3989	93.00	each	1996.50	185675.00
102.2	100 mm inlet and 75 mm outlet				
	Sand cast iron S&S as per IS - 3989	62.00	each	1975.15	122459.00
103	Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litre with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.	93.00	each	18212.90	1693800.00
104	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. : Internal work - Exposed on wall				
	20 mm nominal dia Pipes	5101.00	mtr	335.00	1708835.00

105	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.				
	20 mm nominal outer dia .Pipes.	1008.00	mtr	537.60	541901.00
106	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe including painting with anticorrosive bitumastic paint, cutting chases and making good the wall:				
	15 mm dia. nominal bore	775.00	mtr	580.45	449849.00
107	Providing and fixing brass bib cock of approved quality :				
	15 mm nominal bore	40.00	each	353.25	14130.00
108	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
	20mm nominal bore	70.00	each	462.50	32375.00
109	Providing and fixing uplasticised PVC connection pipe with brass unions :				
	45 cm length				
	15 mm nominal bore	560.00	each	97.75	54740.00
110	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)				
	20 mm nominal bore	190.00	each	346.80	65892.00
111	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :				
	20 mm nominal bore	70.00	each	857.85	60050.00
112	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	93000.00	per litre	11.00	1023000.00
113	Providing and fixing C.P. brass stop cock (concealed) of standard design and of				

	approved make conforming to IS:8931.				
	15 mm nominal bore	31.00	each	670.45	20784.00
114	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 :				
	15mm nominal bore	434.00	each	574.30	249246.00
115	Providing and fixing C.P. Brass extension nipple (size 15mm x 50mm) of approved make and quality as per direction of Engineer-in-charge.	248.00	each	74.80	18550.00
116	Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.				
	15 mm nominal bore, 105 mm long, weighing not less than 138 gms	93.00	each	182.10	16935.00
117	Cutting holes up to 30x30 cm in walls including making good the same:				
	With common burnt clay F.P.S. (non modular) bricks	217.00	each	416.80	90446.00
118	Making chases up to 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.	47.00	mtr	202.90	9536.00
119	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
	For fixed portion				
	Powder coated aluminium (minimum thickness of powder coating 50 micron)	388.00	kg	530.90	205989.00
120	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				

	Powder coated aluminium (minimum thickness of powder coating 50 micron)	171.00	kg	634.45	108491.00
121	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):				
	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/sqm)	78.00	sqm	1505.25	117410.00
122	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.	620.00	sqm	617.05	382571.00
123	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: (a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. (b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. (c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around. (d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately. For the purpose of measurement the entire treated surface will be measured.	2390.00	sqm	688.90	1646471.00
124	Grading roof for water proofing treatment with				

	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	191.00	cum	8042.30	1536079.00
	Cement mortar 1:4 (1cement : 4 coarse sand)	8.00	cum	15155.60	121245.00
125	Chipping of unsound/weak concrete material from slabs, beams, columns etc. with manual Chisel and/ or by standard power driven percussion type or of approved make including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts all complete as per direction of Engineer-In-Charge				
	25mm average thickness	1160.00	Sqm	126.75	147030.00
126	Cleaning of reinforcement from rust from the reinforcing bars to give it a total rust free steel surface by using alkaline chemical rust remover of approved make with paint brush and removing loose particles after 24 hours of its application with wire brush and thoroughly washing with water and allowing it to dry, all complete as per direction of Engineer-In-Charge.				
	Bars up to 12 mm diameter	17400.00	mtr	8.25	143550.00
127	Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect.				
	SBR Polymer (@10% of cement weight) modified cementitious bond coat @ 2.2 kg cement per sqm of surface area mixed with specified proportion of approved polymer	1010.00	Sqm	141.20	142612.00
128	Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt. of cement used) as per specifications and directions of Engineer-in-charge. Note: Measurement and payment: The pre-measurement of thickness shall be done just after the surface preparation is completed and Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding / tapping with a blunt metal instrument and/or the 75 mm size cube crushing strength at the end of 28 days to be not less than 30 N/Sqmm2).				
127.1	12 mm average thickness.	570.00	Sqm	388.65	221531.00

127.2	25 mm average thickness in 2 layers.	380.00	Sqm	587.35	223193.00
129	Providing and fixing hard drawn steel wire fabric of size 75 x25 mm mesh or other suitable size wire mesh to be fixed & firmly anchored to the concrete surface by means of "L" shaped mild steel shear key welded with existing reinforcement including the cost of materials, labour, tool & plants as approved by Engineer-in-charge.	78.00	sqm	902.55	70399.00
				Total	**73071389.00**
	Modified Estimated Cost after using correction factor on DSR 2023 on account of GST @ 0.973				71098461.00
	Add Cost Index @ 4.03%				2865268.00
				Total	**73963729.00**
130	Providing and fixing stainless Steel tower bolts of approved quality & make complete set with complete accessories & screws as per direction of Engineer-in-charge.				
130.1	250x10 mm	620.00	each	285.65	177103.00
130.2	150x10 mm	1736.00	each	188.90	327930.00
131	Providing and fixing stainless Steel Door Stopper of approved quality & make complete set with complete accessories & screws as per direction of Engineer-in-charge.	279.00	each	322.25	89908.00
132	Providing and fixing stainless Steel sliding door bolts of approved quality & make complete set with nutbolt as per direction of Engineer-in-charge.				
	250x10 mm	279.00	each	402.60	112325.00
133	Providing and fixing stainless steel 304 grade handle of approved make as per sample approved with screws etc complete as per direction of Engineer-in-charge.				
133.1	125 mm	992.00	each	43.10	42755.00
133.2	150 mm	620.00	each	59.70	37014.00
134	Providing and fixing bright/Matt finished Stainless Steel 304 grade pull bolt lock, ISI marked with necessary screws bolts, nut and washers etc. complete.	78.00	each	269.60	21029.00
135	Providing and fixing Stainless steel SS grade 304 , curtain rod 25 mm dia 1.20mm thick to required colour and shade i/c wooden knobs and brackets all as per approved samples available in sub-division office but excluding the cost of wooden rings which shall be paid extra as per direction of Engineer-in-charge (Payment shall be made between ends of rod including insertions in the knobs)	620.00	mtr	533.60	330832.00

136	Dismantling wash basin/sink of size including disconnection water supply etc & stacking the materials as per the direction of Engineer-in-charge.	134.00	each	148.50	19899.00
137	Providing and fixing C.P. brass Towel Ring of Jaquar make code no.(CAN-1121N) / Kohler (Code No. K-5631IN-CP) /Parryware (Code No. T-5902A1) make complete as per direction of Engineer-in-charge.	133.00	each	894.10	118915.00
138	Providing and fixing Square flat cut floor drain jali of stainless steel grade 304 with hole of approved quality as per direction of Engineer-in-charge.	93.00	each	311.20	28942.00
139	Providing and fixing Classic Square Flat Cut 304-Grade Floor Drain with Hole & Cockroach Trap (5 x 5 Inches) of approved quality as per direction of Engineer-in-charge.	558.00	each	415.45	231821.00
140	Providing and fixing S.S. towel rack of 600 mm long without hangers of Jaquar (Code No. ACN1181FS) / Kohler (Code No. K-25065IN-CP) / Hindware (Code No.F-880008) make with brackets fixed to cleats with C.P. brass screws etc. complete as per direction of Engineer-in-charge.	93.00	each	2680.10	249249.00
141	Providing and fixing CP brass single lever quarter turn sink mixer with swiveling spout (wall mounted model) with connecting legs and wall flanges of Jaquar (Code No. COP-309PM) / Parryware (Code No.G-T4635A1) /Hindware (Code No.F-320027CP) make as per direction of Engineer-in- charge. (a) 15 mm nominal bore	41.00	each	3051.80	125124.00
142	Providing and fixing CP brass health faucet with 1.2 meter long flexible tube and wall hook of Jaquar (Code No. ALD- 573) / Parryware (Code No. T9941A1) / Kohler (Code No. K-97258IN-CP) make as per direction of Engineer-in-charge.	98.00	each	1352.00	132496.00
143	Providing and fixing CP brass overhead shower 100mm round shape Single Flow with rubit cleaning system of Jaquar (Code No. OHS-1989)/Hindware (Code No. F-160215CP)/ Kohler (Code No. K-27724IN-CP) or equivalent alongwith Shower arm straight 20mm and 450mm long round shape without bend for wall mounted showers with flange of Jaquar (Code No. SHA-CHR-49483)/ Hindware (Code No. F-160024)/ Parryware (Code No. T9949A1) or equivalent as per direction of Engineer-in-charge.	93.00	each	2494.75	232012.00

144	Providing and fixing S.S. Soap Dish holder of Jaquar (Code No. ACN-1131N) / Hindware (Code No. F-450022CP)/ Kohler (Code No.K-25068IN-CP) make as per direction of Engineer-in-charge.	103.00	each	667.55	68758.00
145	Providing and fixing C.P. brass long body bib cock quarter turn with flange ceramic cartirdges of approved quality conforming to IS standards and weighing not less than 690 gms. (Brand:-Jaquar (VGP-81037) / Kohler (K-16093IN-4-CP)/ Hindware (F520005) make as approved by Engineer-in-charge.				
	15 mm nominal bore	67.00	each	1705.30	114255.00
146	Providing and fixing 3 inlet diverter exposed part kit consisting of pertaining lever wall flangle& button of Jaquar (Code No. VGP-81193NK)/Kohler (Code No. K-P16316IN-4FP-CP)/Hindware (Code No. F850035) including concealed body for 3 inlet single lever diverter with button cat no. of Jaquar (Code No. ALD-CHR-193N) /Hindware (Code No. F-520068PGD)/Parryware (Code No. G9969A5 make as approved by Engineer-in-charge.	103.00	each	6012.75	619313.00
147	Providing and fixing single lever quarter turn CP brass two way bib cock with wall flange of Jaquar (Code No. VGP-81041) / Kohler (Code No. K-16094IN-4-CP) / Hindware (Code No. F-360005CP) make as approved by Engineer-in-charge.				
	15 mm nominal bore	62.00	each	2009.55	124592.00
148	Providing and fixing quarter turn C.P. angle cock with wall flange of Jaquar (Code No. VGP-81053) / Kohler (K-23515IN-4-CP) / Hindware(Code No. F-740039-CP) make as per direction of Engineer-in-charge.				
	15mm nominal bore	558.00	each	998.05	556912.00
149	Providing and placing white / semi transparent polyethylene loft water storage tank of approved brand & manufacture with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank [sintex, Electroplast, Star, Lotus].	5890.00	litre	13.35	78632.00
150	Providing and fixing thin rim table top basin of Jaquar [Make:- JDS-WHT-25939] with fixing accesories set along with Basin Mixer [Make:- VGP-81011B], 32 mm C.P. brass waste of standard pattern or equivalent make including painting of fittings and brackets, cutting and	62.00	each	10295.50	638321.00

	making good the walls wherever required as per direction of Engineer-in-Charge.				
151	Providing and fixing G.I. tank nipple to the existing PVC water storage tank at terrace including making necessary hole complete as per direction of Engineer-in-charge.				
	25 mm	31.00	each	99.65	3089.00
152	Providing and fixing CP brass waste for Sink / wash basin etc. complete (a) 40 mm dia	31.00	each	157.15	4872.00
153	Providing and fixing stainless steel wire guage shutter consisting of 1 mm thick M.S. sheet and 10 mm TMT bars @ 75mm c/c diagonally including around frame of M.S. tube of size 32 x 32 mm and 1.5 mm thick with M.S. sliding door bolt of size 250x16 mm on both sides,handle of M.S. flat 20x5 mm on both sides, M.S. tower bolt 250x 10 mm and godown / floor lock including poviding and fixing stainless steel wire gauge with average width of aperture 1.40 mm in both direction with wire of dia 0.63 mm fixed to the frame with 12 mm M.S. U-board i/c applying a priming coat of approved steel primer, complete in all respect as per direction of Engineer - in - Charge.	233.00	Sqm	7144.40	1664645.00
154	Providing and fixing stainless steel adjustable legs for modular kitchen cabinet etc. load bearing capacity 450- 470kg/each wide foot in a black plastic finish etc. complete as per direction of Engineer-In-Charge.	248.00	each	246.75	61194.00
155	Providing and fixing C.P. brass Spout 235mm long with wall flange of jaquar (Code No. SPJ-81429) / Kohler (Code No. K-27490IN-CP) / Parryware (Code No. 1327187) make for divertor as per direction of Engineer-in-charge.	93.00	each	1637.90	152325.00
156	Providing and fixing S.S. Toilet Paper Roll Holder with Flap of Jaquar Make (Model no. ACN-1153S) / Kohler (Code No. K-5633IN-CP) / Hindware (Code No. F-880003GRT) as per direction of Engineer-in-charge.	93.00	each	1459.50	135734.00
157	Providing and laying in required size dry areated light weight ACC Blocks/ Khanger for filling in shunken portion compacting to required slope complete as per direction of engineer in charge.	100.00	Cum	4454.60	445460.00
158	Providing and fixing stainless steel fancy handle of approved make fixed with SS screws etc. complete as per direction of Engineer-in-charge.				
	125 mm	775.00	each	120.90	93698.00

159	Providing and fixing factory made modular wardrobe with 8mm thick both sides BSB (Both Side Balancing) laminated factory pressed Densified Merino marine PB, Century SPB-HDMR or equivalent E1 Emission Grade with suitable full threaded steel screws etc. on the backing of racks, drawer, cupboard, kitchen cabinet under kitchen counter etc. The Densified Merino marine PB, Century SPB-HDMR board shall pass the BWP grade performance parameter of 72 hours boiling water resistance test as per IS 1734, tested in accordance with IS 1734 (Part 5), shall have Ultra High Moisture Resistance, min. 2.5 mm surface layer thickness on each side with surface roughness <8 Ra, shall be made with FSC certified wood to ensure no deforestation is involved in manufacturing with min. Density of 780 Kg/m3 all complete made by authorised OEM Neelkanth, Godrej, AIS, Siddhi Enterprises as per direction of Engineer-in-Charge.	890.00	sqm	1073.75	955638.00
160	Providing and fixing factory made modular wardrobe with 18mm thick One sides OSB (One Side Balancing) laminated factory pressed Densified Merino marine PB, Century SPB-HDMR or equivalent E1 Emission Grade with suitable full threaded steel screws etc. on the backing of racks, drawer, cupboard, kitchen cabinet under kitchen counter etc. The Densified Merino marine PB, Century SPB-HDMR board shall pass the BWP grade performance parameter of 72 hours boiling water resistance test as per IS 1734, tested in accordance with IS 1734 (Part 5), shall have Ultra High Moisture Resistance, min. 2.5 mm surface layer thickness on each side with surface roughness <8 Ra, shall be made with FSC certified wood to ensure no deforestation is involved in manufacturing with min. Density of 780 Kg/m3 all complete made by authorised OEM Neelkanth, Godrej, AIS, Siddhi Enterprises as per direction of Engineer-in-Charge.	808.00	sqm	2584.45	2088236.00

161	Providing and fixing factory made modular wardrobe with 18mm thick Both sides laminated factory pressed Densified Merino marine PB, Century SPB-HDMR or equivalent E1 Emission Grade with suitable full threaded steel screws etc. on the backing of racks, drawer, cupboard, kitchen cabinet under kitchen counter etc. The Densified Merino marine PB, Century SPB-HDMR board shall pass the BWP grade performance parameter of 72 hours boiling water resistance test as per IS 1734, tested in accordance with IS 1734 (Part 5), shall have Ultra High Moisture Resistance, min. 2.5 mm surface layer thickness on each side with surface roughness <8 Ra, shall be made with FSC certified wood to ensure no deforestation is involved in manufacturing with min. Density of 780 Kg/m3 all complete made by authorised OEM Neelkanth, Godrej, AIS, Siddhi Enterprises as per direction of Engineer-in-Charge.'	1720.00	sqm	1790.00	3078800.00
162	Cutting edges or grove of stone to make rough etc. complete as per direction of engineer in charge	1163.00	Mtr	54.75	63674.00
163	Credit for dismantled G.I. pipe (a) 15 mm to 40mm and as per direction of Engineer-in-charge.	750.00	Kg	-25.00	-18750.00
164	Credit for brass /CP brass fittings like bib cocks, pillar cock, stop cock etc and as per direction of Engineer-in-charge.	100.00	Kg	-500.00	-50000.00
165	Credit for dismantled S.C.I/C.I 75 mm to 100 mm and as per direction of Engineer-in-charge.	220.00	Kg	-31.00	-6820.00
166	Credit for dismantaling and taking away dismentaled Steel work and as per direction of Engineer-in-charge.	160.00	kg	-35.00	-5600.00
167	Credit for taking away PVC Cistern, loft tank, over head tank and PVC doors etc. and the like received from dismantling. The material so received shall be the property of contractor after dismantling duly weight/measured before removing from the site in the presence of Engineer-in-Charge or his authorised representative all complete.	1330.00	kg	-18.00	-23940.00
168	Credit for taking away old dismentalled damaged flush doors/ Cupboard shutters/ boxes etc. The material received from dismantling shall be the property of contractor, after dismantling material weight to be measured before removing from the site	5540.00	kg	-15.00	-83100.00

	in the presence of engineer in charge or his authorised representative shall be taken for credit all complete.				
169	Credit for aluminium fittings / grill/ aluminium sections such like tower bolt, sliding bolt, handle etc and as per direction of Engineer-in-charge.	120.00	kg	-170.00	-20400.00
				Total	**86980621.00**

Note:- In case of overall percentage rates quoted by Agency is below the schedule of rates, such below percentage shall not apply on the item at S.No. 163 to 169. However in case quoted overall percentage is above the Schedule of rates, such percentage shall also be applied on these items.

Executive Engineer
"V" Division, CPWD,
R.K. Puram, New Delhi

PART-C

Minor Component

(Electrical work)

कार्यो' की अनुसूचियां PERFORMA OF SCHEDULES **(A to F For Electrical work)**

अनुसूची 'क' SCHEDULE 'A'				
मात्राओं की अनुसूची (संलग्न) Schedule of quantities			Attached (Electrical Works) Page No. 127-133	
अनुसूची 'ख' SCHEDULE 'B'				
ठेकेदार की निर्गत की जाने वाली सामग्रियों की अनुसूची Schedule of materials to be issued to the contractor Schedule				
क्रम. सं. S.No.	मद विवरण Description of item	मात्रा Quantity	जिस दर पर सामग्रियां ठेकेदार को प्रभावित होगी वह दर अंकों एवं शब्दों में Rates in figures & words at which the material will be charged to the contractor	निर्गत स्थान Place of Issue
1	2	3	4	5
-----NIL-------- *(Material required for the work shall be arranged by the Contractor)*				
अनुसूची 'ग' SCHEDULE 'C'				
ठेकेदार को भाड़े पर दिए जाने वाले औजार एवं संयत्र Tools and plants to be hired to the contractor				
क्रम. सं. S.No.	विवरण Description		भाड़ा प्रभार प्रतिदिन Hire charges per day	निर्गत स्थान Place of Issue
1	2		3	4
-----NIL-------- *(shall be arranged by the Contractor)*				
अनुसूची 'घ' SCHEDULE 'D'				
कार्य के लिए विशेष अपेक्षाएं/दस्तावेज, यदि कोई हों, की अतिरिक्त अनुसूची Extra schedule for specific requirements/documents for the work, if any.			**NIL**	
अनुसूची 'ड' SCHEDULE 'E'				
ठेके की सामान्य शर्तो का संदर्भ Reference to General Conditions of contract			General Conditions of Contract Maintenance Works 2023 as modified & corrected upto previous day of the last date of submission of the tender.	
कार्य का नाम Name of Work : **Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).**				
कार्य की अनुमानित लागत Estimated cost of work :			Total : (Electrical : Rs. 1,19,64,287/-)	
(i)	धरोहर राशि Earnest money		As per major component of work	

(ii)	निष्पादन गारंटी Performance guarantee	(a) PG Shall be 5% of the **Estimated Cost put to tender (ECPT) or contract amount whichever is higher**, or as prescribed from time to time, to be submitted in the form as prescribed in GCC. Performance Guarantee shall remain valid for a minimum period of **six months** beyond the date of completion of all contractual obligations as per GCC. ln case of contracts where supplementary agreement is drawn, the fresh pG shall be obtained from the contractor @ 5% of the amount of the supplementary agreement or as prescribed from time to time. The PG received against the original work shall be released as per contract conditions. (b) A bid will be treated as abnormally low if the quoted bid amount is **lesser than 80%** ofthe estimated cost put to tender. (c) **Requirement of Additional Performance Guarantee (APG):** In case of abnormally low bids as defined the above, the bidder shall be required to submit Additional Performance Guarantee (APG) in addition to the Standard Performance Guafantee (PG). The amount of Additional Performance Guarantee (APG) shall be equivalent to the difference between the 80% amount of ECPT and quoted amount is 0.7A then the amount of APG shall be 0.8A - 0.7A). The Additional Performance Guarantee (APG) shall be in the prescribed format of Performance Guarantee and has to be submitted within the time frame prescribed for submission of Performance Guarantee. The other terms and conditions of release etc. of APG shall be same as that of PG. **(As per O.M. No. DG/Manual-2024/20 dated 27.02.2026)**
(iii)	प्रतिभूति निक्षेप Security Deposit	2.5% of Tendered Value
अनुसूची 'च' SCHEDULE 'F'		
सामान्य नियम एवं दिशानिर्देशः General Rules & Directions :		
निविदा आमंत्रण करने वाला प्राधिकारी Officer inviting tender -		Executive Engineer, V-Division, CPWD, New Delhi
कार्य की मदों की मात्रा के लिए अधिकतम प्रतिशत जिससे अधिक निष्पादित मदों के लिए दरों का निर्धारण खण्ड 12.2 और 12.3 के अनुसार होगा 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**

परिभाषायें:– Definitions:	
2 (i) भारसाधक इंजीनियर Engineer-in-Charge	Executive Engineer (E), DED-61, CPWD, New Delhi
2(ii) स्वीकार कर्ता प्राधिकारी Accepting Authority	Superintending Engineer, Delhi Circle-VI, CPWD, New Delhi or successor thereof.
2(x) अतिरिक्त और लाभों को पूरा करने के लिए सामग्रियों की लागत पर प्रतिशतता Percentage on cost of materials and labour to cover all overheads and profits	15%
दरों की मानक अनुसूची Standard schedule of Rates	Delhi Schedule of Rates 2025 (as modified & correction issued upto day previous to the last date of submission of online receipt of tender) and Market Rate
2(xi) विभाग Department	Central Public Works Department
9(ii) मानक के.लो.नि.वि. ठेका फार्म ..... तक संशोधित और शोधित के.लो.नि.वि. फार्म 7 Standard CPWD Contract Form :	Standard CPWD Contract Form General Conditions of Contract 2023 (Maintenance Works) for CPWD Form – 7/8 as modified & corrected upto previous day of the last date of submission of the tender.
खण्ड Clause 1	
(i) स्वीकृति पत्र जारी होने की तारीख से निष्पादन गारंटी के प्रस्तुतीकरण के लिए अनुमत समय, दिनों में (i) Time allowed for submission of **Performance Guarantee alongwith requisite documents mentioned elsewhere in the NIT, Programme Chart (Time and Progress) and applicable Labour Licences, Registration with EPFO and ESIC or proof of applying thereof from the date of issue of letter of acceptance, and also ensure the compliance of aforesaid provisions by the sub-agencies, if any, engaged.**	As per major component of work
(ii) समय वृद्धि, दिनों में (ii) **Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above**	As per major component of work
खण्ड Clause 2 खण्ड 2 के तहत प्रतिकर निश्चित करने वाला प्राधिकारी Authority for fixing compensation under clause 2	Superintending Engineer Delhi Circle - 6, CPWD New Delhi or successor thereof
Clause 2A Applicable clause/clause 2A लागू खण्ड 2/खण्ड 2क	No नही

<table>
<tr><td colspan="2">खण्ड Clause 5
कार्य आरम्भ करने की तारीख की गणना के लिए स्वीकृति पत्र जारी होने की तारीख से दिनों की संख्या
Number of days from the date of issue of letter of acceptance for reckoning date of start</td><td colspan="2">As per major component of work</td></tr>
<tr><td colspan="2">लक्ष्य मील–पत्थर सारणी
Table of Mile-stones</td><td colspan="2">लक्ष्य नीचे दी गई सारणी अनुसार
As per Table given below</td></tr>
<tr><td>S. No.</td><td>Description of Milestone (Financial)</td><td>Time Allowed in days (from date of start)</td><td>Amount to be withheld in case of non achievement of Milestone</td></tr>
<tr><td>1.</td><td>Gross work done 1/8th of Electrical work</td><td>¼ of the total period</td><td rowspan="4">In the event of not achieving the necessary progress as assessed from the running payment, 1.25% of the tendered value of work will be withheld for failure of each milestone.</td></tr>
<tr><td>2.</td><td>Gross work done 3/8th of Electrical work.</td><td>½ of the total period</td></tr>
<tr><td>3.</td><td>Gross work done 3/4th of Electrical work</td><td>¾ of the total period</td></tr>
<tr><td>4.</td><td>Completion of work done i/c testing etc. Complete.</td><td>Full period</td></tr>
<tr><td colspan="4">Milestones shall be applicable both for Major Component (Civil Work) as well as for Minor Component (Electrical Work) of the work as attached. The Contractor will ensure that Electrical Component of the work are executed in time without giving any chance for slippages of Milestones on account of delay in execution of associated electrical work by him. However, in case the Contractor for the work does not achieve milestones, the amount shown against Milestones shall be withheld by the Engineer-in-Charge of the respective component separately.</td></tr>
<tr><td colspan="3">कार्य निष्पादित करने के लिए अनुमत्य समय
Time allowed for execution of work</td><td>24 Months</td></tr>
<tr><td colspan="3">Authority to decide :-</td><td></td></tr>
<tr><td>(i)</td><td colspan="2">Authority to convey the decision of shifting of milestone and extension of time.</td><td>Executive Engineer (E)
DED-61, CPWD
New Delhi or successor thereof</td></tr>
<tr><td>(ii)</td><td colspan="2">Authority to decide rescheduling of mile stone and extension of time</td><td>Superintending Engineer
Delhi Circle-6, CPWD
New Delhi or successor thereof</td></tr>
<tr><td>(iii)</td><td colspan="2">Shifting of date of start in case of delay in handing over of site</td><td>Superintending Engineer
Delhi Circle-6, CPWD
New Delhi or successor thereof</td></tr>
<tr><td colspan="3">Clause 5
Applicable Clause5/Clasue5A</td><td>Clause 5</td></tr>
<tr><td colspan="3">Clause 6 Computerized Measurement Book (CMB)/ Electronic Measurement Book (EMB) through CPWD ERP portal</td><td>Applicable (EMB)</td></tr>
<tr><td colspan="3">खण्ड Clause 7
अंतरिम भुगतान के लिए पात्र होने के लिए अंतिम ऐसे भुगतान के बाद कुल भुगतान एकत्रित सामग्रियों के अग्रिमों के समायोजन सहित किया जाने वाला कुल कार्य</td><td>4.98 Lacs</td></tr>
</table>

<table>
<tr><td>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</td><td></td></tr>
<tr><td>खण्ड Clause 7A
Whether Clause 7A shall be applicable</td><td>Yes</td></tr>
<tr><td>Clause 7B</td><td>Applicable</td></tr>
<tr><td>खण्ड Clause 10 A
List of testing equipment to be provided by the contractor at site lab:</td><td>As per requirements of site.</td></tr>
<tr><td>खण्ड Clause 10 B
Whether Clause 10 B shall be applicable</td><td>Not Applicable</td></tr>
<tr><td>खण्ड Clause 10C
Component of Labour expressed as percent of total value of work</td><td>Not Applicable</td></tr>
<tr><td>खण्ड 10गग
खण्ड 10गग उन संविदाओं पर लागू होगा जिसमें कार्य समापन की अवधि, अगले कालम में दर्शायी गई अवधि से अधिक अनुबंधित है।
Clause 10CC Clause 10CC to be applicable in contracts with stipulated period of completion exceeding the period shown in the next column
Applicable/ Not Applicable
Schedule of Component of materials, Labour etc. For price escalation.</td><td>12 माह

12 Months

Applicable</td></tr>
<tr><td colspan="2"><table>
<tr><td>S.No.</td><td>Relevant component of Material/ Labour for Price escalation</td><td>Percentage of total value of work</td></tr>
<tr><td>1.</td><td>Component of material</td><td>75%</td></tr>
<tr><td>2.</td><td>Component of Labour</td><td>25%</td></tr>
</table></td></tr>
<tr><td>Clause 10D</td><td>Applicable</td></tr>
<tr><td>खण्ड Clause 11 कार्य निष्पादन के लिए अनुपालन किए जाने वाले विनिर्देश
Specifications to be followed for execution of work</td><td>C.P.W.D. General Specifications for Electrical works Part-1 Internal (2023) & Part-II External (2023) as modified & correction issued upto day previous to the last date of submission of online receipt of tender.</td></tr>
<tr><td>खण्ड Clause 12
Type of Work
The completion cost of agreement should not exceed 1.5 times of Tendered amount</td><td>Maintenance Work</td></tr>
<tr><td>Authority to decide Deviation:-</td><td></td></tr>
<tr><td>(i) Upto 1.25 times of Contract Amount (With recorded reasons)</td><td>Engineer-in-charge</td></tr>
<tr><td>(ii) Beyond 1.25 times upto 1.50 times of Contract Amount (With recorded reasons)</td><td>Superintending Engineer
Delhi Circle-6 or successor thereof</td></tr>
<tr><td colspan="2">(Modified as per SOP 2024)</td></tr>
<tr><td>12.2 विचलन सीमा, जिसके परे खण्ड 12.2 भवन निर्माण कार्य के लिए लागू होंगे
12.2 Deviation limit beyond which clause 12.2 shall apply for building work</td><td>As per major component of work</td></tr>
<tr><td>खण्ड Clause 16
घटी हुई दरे निर्धारित करने की लिए सक्षम प्राधिकारी
Competent Authority for deciding reduced</td><td>SE, Delhi Circle-6, CPWD New Delhi, upto 5% value of Agmt. Quantity beyond that with the approval of ADG (Delhi).</td></tr>
</table>

Rates	
खण्ड Clause 18 List of mandatory machinery, tools & plants to be deployed by the contractor at site:	As per actually required at site and shall be arranged by the contractor.

खण्ड Clause 19 :- The Contractor shall obtain a valid license under the Contract Labour (R&A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid license until the completion of the work.

The contractor shall also comply with provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.

Clause 19	**:- As per major component**
खण्ड Clause 25: **Settlement of Disputes by Conciliation and Arbitration :**	
For all claims in dispute	
1. Conciliator-	Additional Director General (Delhi)
2. Arbitrator Appointing Authority	Superintending Engineer, DC-6, CPWD
3. Place of Arbitration	New Delhi
खण्ड CLAUSE 31	In case, Electricity is supplied by the Department, 1% (One Percent) amount shall be recovered from the gross amount of the work done.

Sr. No.	**खण्ड– CLAUSE 32 : Requirement of Technical Representative(s) and Recovery Rate**						
	Minimum Qualification of Technical Representative	**Discipline**	**Designation (Principal Technical/ Technical representative)**	**Minimum Experience (years)**	**Number**	**Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 32(i)**	
						Figures	**Words.**
As mentioned in Schedule 'F' of the as per major Component of work.							

खण्ड Clause 38 (i) क) सीमेन्ट और बिटुमन की अनुमानमूल मात्रा निर्धारित करने के लिए अनुसूची / विवरण (i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of	NIL
(ii) अनुमानमूलक मात्राओं में अनुमत्य विचलन Variations Permissible On Theoretical Quantities क) सीमेन्ट **(b)** Cement	शून्य
ख।) बिटुमन सभी कार्यों के लिए (b) Bitumen for all works	2.5 प्रतिशत केवल जमा और घटा के पक्ष में शून्य 2.5% plus only & nil on minus side
ग) इस्पात प्रत्येक व्यास, कोट और श्रेणी के लिए पूनर्वलन और संरचनात्मक इस्पात काट c) Steel Reinforcement and structural steel (sections for each diameter, section and category)	शून्य Nil
घ) सभी अन्य सामग्रियां	शून्य

(d)	All other materials	Nil

ANNEXURE 'A'

SPECIAL CONDITIONS FOR ASSOCIATION OF AGENCY FOR MINOR COMPONENT (ELECTRICAL WORKS)

1. The main contractor shall have to associate agency for execution of minor component (Electrical works), who fulfils the eligibility criteria as mentioned below.

(a) Approved and eligible contractor of CPWD in appropriate class, considering tendered amount of minor component (Electrical works) and having valid electrical contractor license.

2. The intending bidder shall upload Valid Electrical Contractor License or undertaking that "I/We Shall either obtain valid electrical license at the time of execution of electrical work 44or associate an approved and eligible contractor of CPWD in appropriate class having valid electrical contractor license".

3. However the main contractor shall also be eligible to carry out himself for execution of minor component (Electrical work) without associating any other agency provided :-

(i) The main agency possesses valid electrical license or give an undertaking that he will submit it along with PG Money.

4. The main contractor shall have to submit following documents of proposed associated agencies as mentioned in above 1. a) along with the performance guarantee after the acceptance of tender.

(i). Self attested copy of valid Electrical contractor license,

(i) Self attested copy of GST registration.

(ii) Self attested copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO and ESIC, for approval of the department as per eligibility requirement mentioned in above along with the performance guarantee after the acceptance of tender.

5. Original Consent letter of such selected associated agency for association shall also be enclosed in the prescribed format as per FORM-X at Annexure "B" along with documents mentioned at above sl.no-4.

6. If the main contractor fails to submit all the documents of the proposed associated agency, along with the performance guarantee after the acceptance of tender before the due date indicated in Schedule-F, the bidder shall be suspended for one year and shall not be eligible to bid for CPWD tenders from the date of issue of suspension order.

7. After approval of associated agency by Engineer-in-charge, the main contractor will submit MOU signed with the associated agency as per FORM-Y at Annexure 'C' in shape of affidavit on stamp paper duly attested by notary in original within 7 (Seven) Days after issue of approval letter (for associate agency & lift manufacturing company). The MOU shall be signed by both the parties" i.e. main contractor as 1st party and associated Agency as 2nd party, independently for minor component i.e. electrical work(s).

8. All technical discussions during currency of the contract, shall be attended by electrical work(s) shall be signed and submitted by the associate agency along with the main contractor.
9. The associated agency and the main contractor shall attend the site during inspection of the work by the Engineer-in-Charge or higher authority.
10. The main contractor shall be entirely responsible and answerable for all the works done by his associated agency regarding their quality, adherence to the laid down specification, terms and conditions, warranty/guarantee etc as per the agreement and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.
11. In the event electrical works, the main contractor on written directions of the Engineer-in-charge, shall remove the Associated Agency deployed on the work and shall submit name of new associated Agency as per eligibility criteria mentioned in the NIT to execute the left over electrical work without any loss of time after completion of all formalities mentioned as above in Sl. No. 4,5&7.

    Also if main contractor wants to change the associated agency during the currency of the contract he shall submit name of new associated Agency as per eligibility criteria mentioned in the NIT to execute the left over electrical work after completion of all formalities mentioned as above in Sl. No. 4,5 &7.
12. The main contractor shall be responsible and liable for proper and complete execution of the all works including electrical work and ensure coordination and completion of all associated electrical works.
13. Running payment for the work shall be made to the main contractor. In case main contractor fails to make the payment to the associated agencyby him within 15 days of receipt of each running account payment then on the written complaint of any associated agency for such work, Engineer-in-Charge shall serve the show cause to main contractor and after considering the reply of the same he may make the payment directly to the concerned associated agency for the work as per the terms & conditions of the agreement/M.O.U. drawn between main contractor and associated agency fixed by him, if reply of main contractor either not received or found unsatisfactory. Such payment made to the associated agencyshall be recovered by Engineer-in-Charge from the next RA/final bill due to main contractor as the case may be.

ANNEXURE 'B'

Form -X

CONSENT LETTER FROM ELIGIBLE ASSOCIATE AGENCY OF ELECTRICAL WORK.

Name of work:- **Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).**

1. I / We hereby give my consent to associate with M/s ……, for executing the of work of ……..... (Mention Electrical work).
2. I / We will execute the work as per specifications and conditions of the agreement and as per directions of the Engineer–in-Charge for the electrical work till the completion of the work.
3. I / We will be responsible for necessary action to handover the installations and for rectification of defects and repair during the maintenance / warranty period.
4. Also I / We will employ full time technically qualified Engineer / supervisor for the electrical workcomponent of the work as required for the work. I / We will attend inspection of officers of the department as and when required.

Date:

Signature with date of Main Agency/Contractor

Address

Signature with date of Associate Agency

Address

1. Witness with address

(From main contractor side)

2. Witness with address

(From associated agency)

ANNEXURE 'C'

Form-Y

MEMORANDUM OF UNDERSTANDING [M.O.U] BETWEEN

1] M/S [Name of the firm/agency with full address]

Enlistment Status

Valid Upto:

[Henceforth called the main contractor]

And

2]M/S [Name of the firm/agency with full address]

Enlistment Status

Valid Upto:

[Hence forth, called Associated Agency]

1. For the execution of Electrical Work(s) **"Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works)".**

We state that M.O.U between us will be treated as an agreement and has legality as per Indian Contract Act [amended upto date] and the department [CPWD] can enforce all the terms and conditions of the agreement for execution of the above work. Both of us shall be responsible for the execution of work as per the agreement to the extent this MOU allows. Both the parties shall be paid consequent to the execution as per agreement to the extent this MOU permits. In case of any dispute, either of us will go for mediation by the EE (E), DED-61, CPWD, New Delhi. Any of us may appeal against the mediation to the ADG(Delhi),CPWD, Nirman Bhawan New Delhi. His decision shall be final and binding on both of us.

We have agreed as under:

1] The associated agency will execute all electrical work in the wholesome manner as per terms and conditions of the agreement and as per the direction of the Engineer-in-charge.
2] That the Associated agency has gone through the contract and has understood the scope of work required for the purpose of executing electrical work.

3] All the machinery and equipments, tools and plants, special T&P required for execution of the specialized work(s), as per agreement, shall be the responsibility of the associated ed agency.

4] The site staff required for the electrical work(s) shall be arranged by the associated agency as per terms and conditions of the agreement.

5] Site order book maintained for the said work shall be signed by the authorized representative of main contractor as well as Associated Agency.

6] All the correspondence regarding execution of the electrical work(s) shall be done by the Department with the Associated agency with a copy to the main contractor. In case of non-compliance of the provisions of agreement, the main contractor, as well as the associated agency shall be responsible. The action under clauses 2 and 3 shall be initiated and taken against the main contractor.

SIGNATURE OF MAIN CONTRACTOR
Date:
Place:

SIGNATURE OF ASSOCIATED AGENCY.
Date:
Place:

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 **Preferred Make** 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 (Three phase wiring)
Live : Red (Single 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. 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.
32. 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.
33 The work will also be carried out at different locations in piece meal manner, as and when required.

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.

33. Guarantee of fixtures for LED fittings :-

a) The contractor will be required to submit guarantee of LED fittings from the manufacturer to the department and the contractor will stand performance guarantee of LED fittings supplied and installed by them for a period of 60 months from the date of the handing over of the installation. An amount for this performance guarantee of LED fittings @ 5% of the actual work done amount of all LED fittings as additional security deposit has to be deposited with EE(E), ECD-V, CPWD, New Delhi in shape of DD/FDR/BG in favour of "Executive Engineer (E), ECD-V,CPWD, Pushpa Bhawan, New Delhi" after completion of the work but before release of performance guarantee deposited at the time of award of work. This performance guarantee against guarantee/ warranty of LED fittings will be released after successful performance guarantee period of 60 months. If the performance of LED fittings found unsatisfactory during the guarantee period or contractor fails to replace the defective LED fittings within seven days' time after written complaint in this regard, the amount of performance guarantee shall be forfeited absolutely. The Guarantee shall be counted from the day of handing over of the installation to the client.

b) Guarantee of other equipments except LED :

All equipments shall be guaranteed for period of 12 months from the date of taking over the installations by the department against unsatisfactory performance and/or break down due to defective design, workmanship of material. The equipments or components, or any parts thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost to the satisfaction of the Engineer-in-charge. In case it is felt by the department that undue delay is being caussed by the contractor in doing this the same will got be done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final.

TECHNICAL SPECIFICATIONS OF LED LIGHTS

S. No	Parameters	Technical specifications
1	LED chip make	Cree /Nichia/ Osram / Lumiled/ Philips
2	Ingress Protection	IP20 (For indoor appliances) IP66 (For outdoor appliances)
3	CRI (Typical)	>80 for indoor appliances & CRI >70 for outdoor appliances
4	Harmonicas/THD	<20% for LED tubes &<10% for all LED fittings
5	Power Factor	Minimum 0.90 at full load/230 Vac
6	Input Voltage	Operating Voltage – 140-270 VAC
7	Rated Voltage	220V-240V
8	Surge Voltage	Up-to 2 kV L, N for Indoor Lighting
9	Input Frequency	47 to 55 Hz
10	Working Temp	-15 to +50 deg C
11	Product Housing Op. Temperature	-5 to +50 deg C
12	Working Humidity	10% - 90% RH
13	Luminaire Efficacy	For 3000K >90 Lm/w For 4000 K> 95Lm/w For 5700/6500 > 100Lm/w
14	LED Lifespan & Luminaire Photometric data	IESLM79 and IESLM80
15	Standard Warranty	5 years for all fitting (Indoor & Out Door)
16	LED Life	50000 Buring Hours at L70B50 for LED tubes (18watt) 50000 Burning Hours at L-70 for all LED fittings (Indoor & Out Door)

Note :- The above technical specifications shall supersede the technical specification of the particular model of any make as mentioned in list of Preferred make.

List of Preferred Make for Electrical Works

S. No	Details of Materials / Equipments	Manufacturer's Name / Make
1	FRLS PVC insulated copper conductor single core cable for wiring. (ISI marked)	Finolex/ RR Kabel / KEI /Rallison/Havells / Polycab/Plaza
2	PVC sheathed / XLPE power armoured copper/ Aluminium conductor cable of 1.1 KV grade	Finolex/ RR Kabel / Rallison/Polycab/Havells / KEI/Plaza
3	MS Conduit (ISI Marked) with heavy duty MS conduit pipe accessories	BEC /NIC / AKG (ISI Marked)
4	PVC Conduit medium class	AKG/ BEC/ Polypack/ Precision/ Norpack
5	G.I. Box	Honeywell/ Schneider Electric/ Legrand / North West / Havells / ABB
6	G.I./M.S. Pipe	Tata/ Jindal / Prakash Surya / SAIL
7	Pianotypeswitches&accessories	Kinjal/Anchor/Antex
8	Modular Type switch, socket & accessories	Northwest (Artisa)/Legrand (Arteor)/Schnieder Electric (Unica Pure) / Honeywell (Orna)/ Panasonic (Vision)
9	Phenoliclaminatedsheet	Hylem/Formica(Whitecolour)ISIMarked
10	MCB, Isolator, Industrial Plug Socket, RCCB, RCBO's	Schneider Electric-ACT19 / Legrand DX3/ Hager-H3/ Siemens
11	MCBDB & Loose Wire Box	Schneider Electric / Legrand / Hager/ L&T / ABB (Note : MCBs Make shall be same as DBs Make)
12	Moulded Case Circuit Breaker (MCCB) Thermal Release / Microprocessor based (Ics=Icu=100%)	Schneider Electric-NSX / Legrand-DPX3 / Hager/ /Seimens
13	Panel/ Feeder Pillar	Tricolite/ Advance/ Adlec/ Neptune/ Milestone/ SPC electrotec /KEPL
14	Contactor/Timer	Schneider Electric / L&T / BCH / Siemens / Legrand / ABB / Hager
15	Voltmeter/Ammeter	Conzerv / Larsen & Toubro / Secure / AE /Socomac / Neptune /Hager/ABB
16	LED type indicating lamps / Push Button	Schneider Electric / L&T / Siemens / Vaishno/Legrand/Trilux
17	LED Fittings	Phillips/ Havells/ Wipro/LT/Regent/Trilux
18	Ceiling/ Wall/ Fresh Air Fan/ Exhaust Fan	Crompton/ Havells/ Usha/ Orient/Atomberg
19	Pole Box	Hensel / Spelsberg / Naptune-Bals / Syntex
20	Window/Split AC	Mitsubishi/ Toshiba/ O General/ Daikin/ Hitachi/ Panasonic
21	Paint/ Primer	Asian/ Berger/ Dulux/ Nerolac/ Shalimar
22	Cement	ACC/ Birla/ Ambuja/ Jaypee/ J.K.
23	D.W. Corrugated HDPE Pipe	REX / Dura plast / Zenduct / Triputi / Duraline/Astral

24	GSS Sheet	Jindal/Tata (Hissar)
25	Cable Tray	Pilco/ Slotco/ MEM/ MEC/ Steelways/ Legrand/ Ctm Engineering/ Kepl/RP Controls
26	Brass Compression Gland	Baliga lighting/ Comet/ Cosmos/ Dowells/ Lapp/ Gripwell
27	Voltage Stabilizer	V-Guard/ Bluebird/ Voltas/ Servokon
28	Copper pipe	Totaline/ Mandev/ Rajco/ Diamond/ Star/ MetTube/ Hindustan/ Jindal refrigeration
29	Nitrile rubber insulation	A-flex/K-flex/ Vidoflex/ Euro/ Batex/ Armacell/ Superlon
30	Fire Extinguisher	Minimax/ Safex/ Lifeguard/ Kanex/ Omex
31	Online UPS	Nuberic/ Eaton/ APC/ Vertiv/ABB
32	SMF Battery	Exide/ Amara raja/ Amaron/ Luminous/ Rocket/ HBL
33	Rack	MTS/ Surya/ APW/ Netrack/ Valrack
34	PVC Trunking	MK/ Legrand/ Schneider/ Hager
35	24 Port L2 Switch	Legrand/Systimax/Panduit
36.	Butterfly Valve/NRV/Ball Valve/ Y Strainer/ Sluice Valve	Sant/ Leader/ Kirloskar/ Audco/ Advance/ Indofos
37.	Cushy Foot Mountings	Dunlop/ Resistoflex/ Jyoti
38.	Batteries	Exide/ Panasonic/ Amarraja
39.	Pressure Switch/ Pressure Gauges/ Flow Switch	Indofoss/ Feibig/ H.Guru/ Marsh/ Japson/ Rapid Control/ System Sensor
40.	Internal/ External Hydrant/ RRL HOSE Pipe/ Branch Pipe/ First Aid Hose Reel Drum/ Air Vessel/ Hose Box	Lifeguard/ Neage/ Getech/ Minimax (ISI Marked)
41.	Hose Reel	Lifeguard/ Neage/ Getech/ Minimax (ISI Marked)
42.	Fire Brigade Inlet Connection	Lifeguard/ Neage/ Getech/ Minimax (ISI Marked)
43.	Sprinkler Head	Mather & Platt/ Tyco/ HD
44.	Monobloc Pump	Kirloskar/KSB/Crompton
45.	ACB	Legrand/ ABB/ Seimens/Schneider
46.	Measuring instruments	L&T/Siemens/C&S/AE/Schneider
47.	C.T.	L&T/Siemens/C&S/GE/ABB/Schneider
48.	Indicating lamps, control Switches & push buttons	L&T/Siemens/C&S/AE/ABB/Schneider
49.	Onload changeover	L&T/Siemens/C&S/ABB/ Legrand /Schneider
50.	Relays/ Contactors/Capacitior	L&T/Siemens/ABB/C&S/Schneider/Havells/Epcos
51.	Compressor	Tecumseh/ Hitachi /Carrier/Daikin/ Mitsubishi/ /LG/Emerson/ Lloyd/ Voltas/ O-General.
52.	Video door bell with camera	Panasonic/CP Plus/Legrand/Godrej

For Items/Materials not covered in the list above, the 1st quality material is to be used as per the Nomenclature of items or 1st quality material of the reputed Make/Brand required to be used for execution of either agreement item or any Extra item as per approval and direction of Engineer-in-Charge after approval of NIT approving authourity.

SCHEDULE OF QUANTITY (ELECTRICAL WORK)

Name of Work: Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).

S. No.	Description of item of work	Qty	Unit	Rate	Amount
1	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.				
1.1	Group A	31	Points	1440.00	44640.00
1.2	Group B	314	Points	1684.00	528776.00
2	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 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable as earth wire in existing surface/recessed steel/PVC conduit including dismantling as required.				
2.1	Group B	901	Points	752.00	677552.00
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.	562	Points	2242.00	1260004.00
4	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	527	Nos.	545.00	287215.00
5	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 A & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	527	Nos.	659.00	347293.00
6	Supplying & fixing suitable size GI box wih 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.	281	Nos.	807.00	226767.00
7	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.				

7.1	20 mm	3100	Mtrs.	254.00	787400.00
7.2	25 mm	3720	Mtrs.	289.00	1075080.00
7.3	32 mm	620	Mtrs.	360.00	223200.00
8	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.				
8.1	3 x 1.5 sq mm	2790	Mtrs.	104.00	290160.00
8.2	6 x 1.5 sq mm	620	Mtrs.	195.00	120900.00
8.3	3 x 4 sq mm	3410	Mtrs.	222.00	757020.00
8.4	6 x 4 sq mm	930	Mtrs.	424.00	394320.00
8.5	3 x 6 sq mm	2170	Mtrs.	326.00	707420.00
8.6	6 x 6 sq mm	620	Mtrs.	641.00	397420.00
8.7	2 x 10 sq. mm + 1 x 6 sq mm	310	Mtrs.	489.00	151590.00
8.8	2 x 16 sq. mm +1 x 6 sq mm	155	Mtrs.	660.00	102300.00
9	Supplying and drawing following pair 0.5 mm dia FRLS/HFFR PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.				
9.1	2 Pair	1550	Mtrs.	39.00	60450.00
10	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braided and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	1550	Mtrs.	54.00	83700.00
11	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required				
11.1	5/6 A switch	901	Nos.	121.00	109021.00
11.2	15/16 A switch	124	Nos.	176.00	21824.00
11.3	3 pin 5/6 A socket outlet	124	Nos.	136.00	16864.00
11.4	6 pin 15/16 A socket outlet	124	Nos.	219.00	27156.00
11.5	Telephone socket outlet	124	Nos.	168.00	20832.00
11.6	TV antenna socket outlet	124	Nos.	168.00	20832.00
11.7	Bell push	31	Nos.	159.00	4929.00
12	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc.as required.				
12.1	1 or 2 Module (75mmX75mm)	217	Nos.	354.00	76818.00
12.2	6 Module (200mmX75mm)	124	Nos.	462.00	57288.00
12.3	8 Module (125mmX125mm)	124	Nos.	517.00	64108.00
12.4	12 Module (200mmX150mm)	31	Nos.	614.00	19034.00
13	Supplying and fixing call bell/ buzzer suitable for single phase, 230 V, complete as required.	31	Nos.	112.00	3472.00

14	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/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required. (Brush Less Direct Current (BLDC) Fan without Remote)				
14.1	1200mm, service value ≥ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	186	Nos.	2695.00	501270.00
15	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.				
15.1	Single pole	1054	Nos.	285.00	300390.00
16	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
16.1	63 A	31	Nos.	2866.00	88846.00
17	Supplying and fixing following rating, double pole, 240 V, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
17.1	40 A	31	Nos.	472.00	14632.00
17.2	63 A	31	Nos.	569.00	17639.00
18	Supplying and fixing following rating, four pole, 415 V, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
18.1	63 A	31	Nos.	1115.00	34565.00
19	Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
19.1	63 A	31	Nos.	3597.00	111507.00

20	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, 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)				
20.1	8 way (4 + 24), Double door	31	Nos.	6337.00	196447.00
21	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)				
21.1	12 way Double door	31	Nos.	2871.00	89001.00
22	LED Batten light (System lumen efficacy ≥120 <135 lm/Watt) 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, freq 50/60 hz, Operating temp range - 15 deg to 40 deg centigrade, 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 /6000°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 and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. complete in all respect i/c 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 from NABL lab for 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)				
22.1	18- 22 watt	310	Nos.	734.00	227540.00

23	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/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.				
23.1	12-15 watt	281	Nos.	715.00	200915.00
24	Dismantling of existing damaged electrical light point /fan point/exhaust fan point including fitting/fixture & making good the same to original finish with cement, sand etc including removal of garbage/malba & dismantled material from site etc complete as reqd.	624	Points	32.00	19968.00
25	Supplying, installation, testing & Commissioning of surface mounted 2 feet long LED batten MIRROR LIGHT, IP20 fitting, having CCT range 700K 6500K with Extruded aluminium housing having system efficacy> 120 lm/W (not LED Chip efficacy), CRI≥80, Minimum System Output ≥1200 Lumens, useful life of 50,000 hrs at L70 (L70B50 not acceptable) & driver having PF ≥0.9 &THD<10% and Surge Protection of 2 KV including connections with 3X1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing on existing wall/ceiling etc complete as reqd. The LED fitting must have the	95	Nos.	452.00	42940.00

	embossed/engraved logo the approved make (fittings with stickers shall not be approved). BIS Certificate issued to the approved make along with LM79 report from NABL lab must be shared at the time of supply.				
26	Supplying and fixing of Fancy wall bracket in stainless steel base duly wired with LED bulb & lamp holder suitable for CFL lamp/LED Retrofit lamp complete with all accessories i/c connection etc as required.	403	Nos.	1175.00	473525.00
27	Supplying, installation, testing & Commissioning of Bulk Head fitting made of Aluminium die cast housing duly powder coated and polycarbonate opal diffuser, IP65, color temperature 5700K-6500K system efficacy ≥ 120lm/W (not LED Chip efficacy), CRI≥80, Minimum System Output ≥ 1200 Lumens, useful life of 50,000 hrs at L70 &driver having PF ≥ 0.9 & THD<10% and Surge Protection of 2.5 KV on the existing wall/ceiling surface including connection with 3X1.5 sq.mm FRLS PVC insulated copper conductor, earthing etc complete as required. The LED fitting must have the embossed/engraved logo the approved make (fittings with stickers shall not be approved)	31	Nos.	1365.00	42315.00
28	Supplying, installation, testing & Commissioning of fresh air fans of plastic body with 250mm sweep dia, 1280 RPM speed and air delivery between 700-788 m3/hr with all accessories in the existing opening including resizing the existing hole to suit the dia of the exhaust fan and making good the damage i/c providing connection with 1.5Sqmm FRLS/HFFR copper conductor cable etc complete as required.	95	Nos.	2184.00	207480.00
29	Supplying, installation, testing & Commissioning of heavy Duty motor, metal make exhaust fans 300 mm sweep dia, 1400 RPM speed and air delivery between 1150-1710 m3/hr with louvers/shutters & all accessories in the existing opening including resizing the existing hole to suit the dia of the exhaust fan and making good the damage i/c providing connection with 1.5Sqmm FRLS/HFFR copper conductor cable etc complete as required.	31	Nos.	4484.00	139004.00
30	Supplying and fixing of surface mounted image display call bell system having 7" colour TFT LCD display high resolution colour camera with facility of minimum 100 snap shots, electric door lock release system with working voltage of 12V - 13.5V DC making suitable connection etc. as required.	31	Nos.	8113.00	251503.00
31	Supplying, installation, testing & commissioning of self priming monoblock pump set on the foundation i/c providing and fixing suitable nipple, nut and bolts etc. and working on 220 V, 1HP single phase, with provision of thermal overlaod protection complete with testing etc., as reqd.	31	Nos.	8655.00	268305.00

32	Supplying and laying of one number 3 x 6 sqmm XLPE insulated and PVC sheathed Al conductor armoured power cable of 1.1 KV grade on surface as required.	465	Mtrs.	304.00	141360.00
33	Less credited to contactor on account of dismantled material during upgradation (quoted rate shall not be less than estimated rate)				
33.1	Steel conduit(20/25/32 mm size)	500	Kg.	-30.00	-15000.00
33.2	Copper/Aluminium wire miscellaneous 1.5/4/6 sq mm	240	Kg.	-350.00	-84000.00
33.3	GI boxes with switch/sockets	550	Nos.	-5.00	-2750.00
33.4	Fitting /fixture (tube light/mirror light/wall light/bulkhead)	750	Nos.	-25.00	-18750.00
33.5	SP/TP DB with DP/MCB	65	Nos.	-30.00	-1950.00
33.6	Exhaust Fan	100	Nos.	-350.00	-35000.00
33.7	Aluminium armoured cable	350	Mtrs.	-50.00	-17500.00
33.8	Monoblock pump	31	Nos.	-3000.00	-93000.00
33.9	Ceiling Fan	186	Nos.	-550.00	-102300.00
			Total		**11964287.00**

Note:- In case of overall percentage rates quoted by Agency is below the schedule of rates, such below percentage shall not apply on the item at S.No. 33. However in case quoted overall percentage is above the Schedule of rates, such percentage shall also be applied on these items.

Executive Engineer
DED-61, CPWD,
Pushpa Bhawan, New Delhi

FINANCIAL BID
(Performa for Quoting the Rates)

CENTRAL PUBLIC WORKS DEPARTMENT					
NIT No. 24/SE/DC-6/V-Divn/2026-27					
NAME OF WORK : Upgradation of Type-V(A) Flats at AGV Complex, New Delhi during 2026-28. (SH: Civil & Electrical Works).					
SCHEDULE OF QUANTITY					
S.No	**Name of Components**	**Estimated Cost**	**Percentage above or below the Estimated Cost**	**%age in Figures**	**Total Cost**
1.	**Civil Works**	**Rs. 8,69,80,621/-**			
2.	**Elect. Works**	**Rs. 1,19,64,287/-**			
	Total	**Rs. 9,89,44,908/-**			

Contractor