INDIAN INSTITUTE OF MANAGEMENT (IIM) UDAIPUR

NIT

E- Tender

Name of work: Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).

NIT No.: IIMU/Project/Faculty/06 dated 14.11.2024)

(Last date of submission of online bids upto 05:00 PM on 12.12.2024)

CAMPUS DEVELOPMENT AND MAINTENANCE OFFICE
IIM, Udaipur-313001 (Raj.)

INDEX

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The bidder shall upload the following documents **as ticked** of the same mentioning the page no. against each document as required in the NIT.

Sl. No.	Particular	Document required as per NIT	Attached as page No.
1.	Copy of proof for deposition of EMD in the form of Demand Draft/ Banker's Cheque/ Pay Order of any nationalized/Scheduled bank in favor of "Director, Indian Institute of Management, Udaipur, Rajasthan"payable at Udaipur, Rajasthan valid for 6 months	√	
2.	Copy of valid CPWD registration certificate of appropriate class, if, CPWD enlisted contractor.	√	
3.	Integrity agreement	√	
4.	Letter of Transmittal	√	
5.	Certificate of financial turnover from CA (**Form A**) along with audited balance sheets.	√	
6.	Certificate of Net Worth from CA (**Form B**)	√	
7.	Details of all works of similar nature of work, completed during the last seven years (ending upto previous day of last date of submission of online tender) – **Form C**	√	
8	Certificate of completed works duly certified by officer not below the rank of Executive Engineer-Performance report of works referred in Form C-(**Form-D**)	√	
9	Structure & Organization (**Form E**)	√	
10	Site Visit: The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment. Note: **Undertaking regarding visit of site of work** to be scanned and uploaded at the time of submission of bid (**Form-G)**.		
11	Self-certified copy of **declaration regarding local contents for preference make in India** on the letter head of the company. (Refer notification ref. no. P-45021/2/2017-PP (BE-II), dated 4th June 2020 for "Provision of Public Procurement (Preference to Make in India), Order 2017-Revision regarding" notification issued from the Ministry of Commerce and Industry, Department for promotion of industry and internal Trade (Public Procurement Section), Govt. of India. – (**Form H**)	√	
12.	Undertaking for GST registration Certificate of the State i.e. **other than (Rajasthan)** (**Form I)**.	√	
13.	The agency should not have been blacklisted or banned by any Govt. Department, Government Organization, PSU, University, Autonomous Institute etc. A notarized certificate duly notarized worth **Rs.500/- on Non-Judicial Stamp Paper** to this fact should be executed. **(Form J)**	√	
14.	Authority for signing the tender document duly notarized to this fact should be executed. **(Form K)**	√	
15.	Undertaking on structural stability & soundness as per	√	

	prescribed format duly notarized to this fact should be executed. **(Form L)**		
16.	**To become eligible to bid, the bidders shall have to furnish an affidavit on non-judicial stamp paper worth Rs.500/- as under:** I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back-to-back basis. Further that, if such a violation comes to the notice of Institute, then I/we shall be debarred for bidding in IIM Udaipur in future forever. Also, if such a violation comes to the notice of the Institute before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit / Performance Guarantee. (Scanned copy to be uploaded at the time of submission of bid). **(Form M)**	√	
17.	Certificate of registration of **GST**.	√	
18	Certificate of registration of **EPF**.	√	
19	Certificate of registration of **ESIC**.	√	
20	Copy of **PAN**.	√	
21	Electrical license issued from Electrical Inspectorate in the name of agency or in the name of associating agency. **(Note: Associating agency should meet the eligibility criteria**).	√	
22	Any other document	√	

INFORMATION AND INSTRUCTIONS TO CONTRACTORS FOR e- TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE

The Director, IIM Udaipur invites **online** percentage rate composite bids (Refer Sl. No. 2 of below table) from enlisted agencies having valid registration with CPWD/Indian Railways/MES/State PWDs/Private Corporate Bodies/PSUs in appropriate class of repute in **two** bid system for the following work:

Sl. No.	Description	Details		
1.	NIT No.	**IIMU/Project/Faculty/06 dated 07.10.2024**		
2.	Name of work & Location	Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).		
3.	Estimated cost put to tender	Civil & Development & Other Work	:	Rs.9,60,42,228.00
		Electrical	:	Rs.88,98,917.00
		Total	:	**Rs.10,49,41,145.00**
4.	Earnest Money	**Rs. 20,98,800/-** should be in the form of Demand Draft/ Banker's Cheque/ Pay Order of any nationalized/Scheduled bank in favor of "Director, Indian Institute of Management, Udaipur, Rajasthan"payable at Udaipur, Rajasthan valid for 6 months. **(Being a work contract, no exemption is allowed to any MSME / NSIC registered bidders)**		
5.	Tender fee	**Rs.5,000/-** (Non-Refundable) should be in the form of Demand Draft/ Banker's Cheque/ Pay Order of any nationalized/Scheduled bank in favor of "Director, Indian Institute of Management, Udaipur, Rajasthan"payable at Udaipur, Rajasthan valid for 3 months.		
6.	Period of Completion	15 months		
7.	Date of Pre bid meeting. (Will be held in the Office of Engineer-in-charge, IIM Udaipur).	26.11.2024		
8.	Last date & time of online submission of bid.	12.12.2024 upto 05:00 PM		
9.	Date & time of online opening of documents (Technical bid)	The eligibility cum technical bid shall be opened first at **3:30** PM 06.12.2024 The Financial bid shall be opened of those Tenderers who qualify in the eligibility of technical bid. The time and date of opening of financial bid of the eligible Tenderer shall be communicated later date through a notice uploaded on CPP portal in advance of opening of price bid (s).**The Institute shall not accept any loss or delay in transit as an excuse for late tendering**		
10.	Help Desk	**Phone – 02942477100** **Email - procurement@iimu.ac.in**		

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE
(APPLICABLE FOR INVITING BIDS ON TWO BID SYSTEM)

The Director, IIM Udaipur invites **online** percentage rate composite bids (Refer Cl. No. 3 of below table) from enlisted agencies having valid registration with CPWD/Indian Railways/MES/State PWDs/Private Corporate Bodies/PSUs in appropriate class repute in **two** bid system for the following work:

S. No	NIT No	Name of work & Location	Estimated cost put to bid (Rs.)			Earnest Money (Rs.)	Stipulated Period of Completion of work (In months)	Last date of online submission of bid, **copy of receipt of deposition of original EMD** and other documents as specified in the bid document.	Time & Date of opening of Technical Bid
1	2	3	4			5	6	7	8
1	**IIMU/Project/Faculty/06 dated 07.10.2024**	Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).	Civil	:	Rs.9,60,42,228.00	Rs.20,98,800/-	15 Months	Up to 1700 hrs on **12 Dec 2024**	At 1800 hrs **12 Dec 2024**
			Electrical	:	Rs.88,98,917.00				
			Total	**:**	**Rs.10,49,41,145.00**				

Eligibility criteria

1. Contractors who fulfill the following requirements shall be eligible to apply. **Joint ventures are not accepted.**

(A) Experienced contractors who have satisfactorily completed the works as mentioned below during the last Seven years ending previous day of last date ofsubmission of bids. Enlisted contractor of appropriate class in the appropriate category.

i. Valid registration certificate of the appropriate class.
ii. ii. EMD of Rs.20,98,800.00 only.
iii. iii. Form:- A to M, Copy of PAN CARD / EPF / ESIC, etc

(i) Completed three similar works each costing not less than Rs. 4.28 crores or completed two similar works each costing not less than **6.42 crores or** Completed one similar work costingnot less than **8.56 crores.**

Similar work shall mean **"Civil work (s)**"

"The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previous day of last date of submission of bids.

Note: While considering any similar work executed by applicant Firm under joint venture,

the experience of the applicant Firm in that work shall be restricted to its share/ responsibilities as reflected in the Memorandum of Understanding (MoU), signed between the parties, while forming joint venture for that work, attested copy of which shall be submitted along with the technical bid.

(ii) The bidder should have had an average annual financial turnover (gross) of at least 50% of the estimated cost, during the immediate last three consecutive years ending **31.03.2023**. Balance sheet duly audited by Chartered Accountant (Scanned copy of certificate from CA/Audited Balance Sheet to be uploaded). The year in which no turnover is shown would also beconsidered for working out the average. The multiplication factor of 7% per annum simple interest is not applicable on the Annual Turnover figures.

(iii) Should not have **incurred any loss (Profit after tax should be positive)** in more than two years during the last five consecutive years ending **31st March 2023, duly audited andCertified by Chartered Accountant.**

(iv) Should have **Net worth Certificate** (Form-B) from **Chartered Accountant with UDIN**
(Scanned copy of original be uploaded).
(v) Form c to m.
(vi) Latest Solvency certificate for not less than Rs. 4.20 crores issued by Nationalised / Scheduled Bank, which should not be older than 6 months from the last date of bid submission. The Solvency Certificate should have full address of banker for confirmation.

EMD

A part of earnest money is acceptable in the form of Bank Guarantee also. In such case 50% of earnest money or Rs.20.00 Lakh whichever is less, will have to be deposited in shapeprescribed above and balance can be accepted in form Bank Guarantee issued by a Commercial 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.

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

Copy of 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.

Online bid documents submitted by intending bidders shall be opened only of those bidders, whose proof of EMD deposited and other documents scanned and uploaded are received by the prescribed time and date and found in order.

2. 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.

3. Information and Instructions for bidders posted on the website shall form part of bid document.

4. Every page of the documents submitted by the applicant / firm shall be numbered & bear the stamped and full signature of the legally authorized person of the firm. Authority letters duly notarized are to be submitted along with tender documents.

5. Labour Cess, GST-TDS etc. or any other taxes as may be applicable shall be borne by the contractor. The tenderer shall quote the percentage rate considering all such taxes and nothing extra shall be paid.

6. The contractor has to submit the GST compliant R.A. & Final Bills showing the work done and

GST component separately. All the invoices must have the same GSTIN as submitted alongwith the bid or updated GSTIN as submitted alongwith 1st R.A. bill.

7. All the statutory recoveries shall be made from the running bills of the contractor like Security deposit, TDS on Income tax, TDS on GST, and Labour welfare cess etc. or any other statutory recovery as per Government of India norms at the prevailing rates and in the manner prescribed by Government of India.

8. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.iimu.ac.in/tender and https://eprocure.gov.in/ epublish/app free of cost.

9. But the bid can only be submitted after submission of proof of deposition of EMD within the period of bid submission and uploading the mandatory scan documents such as Fixed Deposit Receipt and Bank Guarantee or / and Bank Guarantee including e-Bank Guarantee (For Balance amount as prescribed) from any of the Commercial Bank towards EMD in favor of Director, IIM Udaipur as mentioned in NIT, If the scanned copies of all the documents stipulated in the bid document are not uploaded, then bid will become invalid and shall summarily be rejected.

10. The intending bidder must have a valid class digital signature certificate with encryption key (combo type) to perform any operations / transactions on the e-tendering portal / website.

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

12. Contractors can upload documents in the form of **JPG** format and **PDF** format.

13. The contractor must ensure to quote %age above / below / at par of each column.

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" (ZERO)**. Therefore, if any cell is left blank and no rate is quoted by the bidder, the 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 / subhead in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

14. The technical bid will be opened first on the due date and time as mentioned above. **The time & date of opening of financial bid of contractors qualifying the technical bid will be communicated to them at a later date**.

15. The contractor whose bid is accepted will be required to furnish a performance guarantee at specified percentage of the tendered amount as mentioned in schedule E and within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds,Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F',including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. 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, ESIC and BOCW Welfare Board including Provident Fund Code No. If applicable and

also ensure the compliance of aforesaid provisions by the subcontractors, if any engaged by the contractor for the said work within the period specified in Schedule F.

16. The department reserves the right to reject any prospective application without assigning any

reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.

Applicants are advised to keep visiting the mentioned websites from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.

17. Information and instruction for bidders posted on the website shall form part of bid document. List of documents to be filled by the contractor in various forms as mentioned below, to be scanned and uploaded within the period of bid submission.

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

i. Copy of proof for deposition of EMD in the form of bank transfer .

ii. Integrity agreement.

iii. Letter of Transmittal

iv. Certificate of Financial Turnover and Profit / loss statements from Chartered Accountant - **Form 'A'**

v. Net worth Certificate as per **Form 'B'**

vi. List of eligible similar nature of work completed during the last seven years ending previous day of last date of submission of bid -**Form 'C'**

a. If private works are shown in support of eligibility, certified copy of the tax deducted at source certificate (TDS), G.S.T. deposited in the State where the work is executed, shall be submitted along with the experience certificate and the T.D.S. amount shall tally with the actual amount of work done).

b. Works executed outside India shall not be considered as eligible works

vii. Certificate of completed works duly certified by officer not below the rank of Executive Engineer-Performance report of works referred in Form C- **(Form-D)**

viii. Structure & Organization - **Form 'E'**

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

Note: Undertaking regarding visit of site of work to be scanned and uploaded at the time of submission of bid (**Form-G)**

x. Self-certified copy of **declaration regarding local contents for preference make in India** on the letter head of the company. (Refer notification (**Form H**).

xi. Undertaking for GST Registration if not already obtained of Rajasthan State by the bidder (Form-I)

xii. The agency should not have been blacklisted or banned by any Govt. Department, Government Organization, PSU, University, Autonomous Institute etc. A notarized certificate duly notarized worth **Rs.500/- on Non-Judicial Stamp Paper** to this fact should be executed. **(Form J)**.
In case at any stage of work if this certificate is found to be false, action will be taken against the bidder by the IIMU and the same shall be acceptable

xiii. Authority for signing the tender document duly notarized to this fact should be executed. **(Form K)**
Individual signing the bid or other documents connected with the contract shall indicate

the full name with full signature and must specify whether he is signing as:

1. A sole proprietor of the firm or constituted attorney of sole proprietor.
2. A partner of the firm, in which case he must have authority to represent for arbitration of disputes concerning the business of the partnership firm either by virtue of the partnership agreement or power of attorney.
3. Constituted attorney of the firm.

Provided that,

i. In case of (ii), a copy of the partnership agreement or general power of attorney, in either case, attested by a Notary Public, or affidavit on stamp paper of all the partners admitting execution of the partnership agreement or the General Power of attorney should be furnished.

ii. In case of partnership firms, where no authority to refer dispute concerning the business of the partnership has been conferred on any partner, the tender offer and all other related documents must be signed by every partner of the firm.

iii. A person signing the tender form or any other documents forming the part of the contract on behalf of another shall be deemed to be warranty that he has authority to sign, such documents and if, on enquiry it appears that the person has noauthority to do so, the Institute may, without prejudice to other civil and criminal remedies, cancel the contract and make or authorize execution of contract / intended contract at the risk and cost of such person and hold the signatory liable to the Institute for all cost and damages arising from the-cancellation of the contract including any loss which the Institute may have on account of execution of contract / intended contract.

iv. Individual signing the tender or other documents connected with the contract shall indicate the full name with full signature and must specify the capacity and authority under which he signs such document marked as Annexure K and shall also submit documentary evidence of his authority duly notarized.

xiv. Undertaking structural stability & soundness as per prescribed format duly notarized to this fact should be Executed. (Form L).

xv. To become eligible to bid, the bidders shall have to furnish an affidavit on non-judicial stamp paper worth Rs.500/- as under:-

I/we Undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on Back-to-back basis, further that , if such a violation comes to the notice of Institute , then i/we shall be debarred for bidding in IIM Udaipur in future forever. Also, suppose such a violation comes to the notice of the Institute Before date of start of work. In that case, the Engineer-in-charge shall be free to forfeit the entire amount of earnest Money deposit / Performance Guarantee. (Scanned copy to be uploaded at the time of Submission of Bid) (Form M).

xvi. Certificate of registration of **GST**.

xvii. Latest GST Return

xviii. Certificate of Registration for **EPF** (irrespective of employee strength)

xix. Certificate of Registration for **ESIC** (irrespective of employee strength)

xx. Copy of **PAN** Card issued by Income Tax Department.

xxi. Latest Solvency certificate for not less than Rs. 4.20 crores issued by Nationalised / Scheduled Bank, which should not be older than 6 months from the last date of bid submission. The Solvency Certificate should have full address of banker for confirmation.

xxii. Electrical license issued from Electrical Inspectorate in the name of agency or in the name of associating agency. **(Note: Associating agency should meet the eligibility criteria**).

xxiii. Any other document as specified in the NIT/bid document.

xxiv. If any information furnished by the bidder is found incorrect at a later stage, he/they shall be liable to be debarred from bidding/taking up works in IIM Udaipur. The department reserves the right to verify the particulars furnished by the bidder independently. This tender notice can also be seen on Institute website www.iimu.ac.in & www.eprocure.gov.in.

SECTION-I

BRIEF PARTICULARS OF THE WORK (Scope of work)

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

S.No.	Name of Work	Estimate Cost	Period of Completion
1.	**Development of Infrastructure for New Campus of IIM Udaipur. (SH: - C/o Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).**	**Rs.10,49,41,145/-** (Composite) Rs. 9,60,42,228/- (Civil) (+) Rs. 88,98,917/- (Electrical).	15 (Fifteen) Months

2. Work shall be executed according to General Conditions of Contract 2023 for Construction works available separately at printer's outlets and online including amendments issued there in upto last date of bid. The General Conditions of Contract for Central Public Works Department is also available on website www.cpwd.gov.in.

3. The scope of work includes construction of Development of Infrastructure for New Campus of IIM Udaipur**. (SH: - C/o Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work) at Balicha, Udaipur (Rajasthan)).**

4. The scope of work in this contract shall include all Civil and Electrical works including services. The scope of work shall also involve internal and external developments works related to these building.

5. General features & major components of the scope of this work to be executed by the contractor are as under:

   i) Civil Works :

      a. Scope of work also includes earth work, masonry work, plaster work, all external and internal finishing works, flooring, door/ windows/ ventilators/ cupboards, wood work, internal and external water supply, sanitary, sewer, drainage, steel/aluminum/upvc work, waterproofing works, insulation etc.

      b. External development works like internal road, water supply and sewerage work, drainage and related services, open areas, parking, pathways, etc.

      c. Any other work as detailed in BOQ, specified elsewhere in tender documents and even incidental works not defined in this document but essential for completion of work.

   ii) Electrical Works :

      a. Complete Internal and External Electrical and Mechanical works in the buildings including ELV Works.

      b. All E&M works of water supplies, external electric supplies, etc.

   iii) The work shall be executed according to BOQ items, specifications and conditions specified in tender document, approved architectural, structural and service drawings and directions of Engineer-in-charge or his authorized representative.

   iv) The above-mentioned scope of work of the contractor which is **only indicative and not exhaustive**. The contractor shall be responsible for executing all items required for completing the buildings and allied works in all respect**s** to make it habitable and ready for occupation, as per direction of Engineer-in-charge.

   v) The scope of work includes cost of all materials, manpower, equipment's, T&P, fixtures,

accessories, royalties, taxes, watch & ward and all other essential elements for completion and maintenance of works whatsoever, under the scope of this contract. Any changes, modifications, revisions etc. required to be done by IIMU, client, local bodies, design consultants etc. in accordance with applicable standards will have to be executed by the contractor as per provisions of the contract specified elsewhere in this bid document.

6. **Drawings:** The drawings related to this work have been uploaded on website & can also be seen in Project office, IIMU Project Office, Udaipur. These drawings are indicative and may change as per actual requirement of work.

INDIAN INSTITUTE OF MANAGEMENT (IIM) UDAIPUR
Project department
Notice Inviting Tender

1. **The Director, IIM Udaipur** invites **online** percentage rate composite bids from CPWD enlisted contractors of appropriate class and other eligible firms / contractors of repute in **two** envelop system for the work of **"**Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).".

Every care has been taken while preparing this document to cover all necessary information, matters, Specification, general condition, special condition & provisions for smooth and complete execution of works. However, in case of any omission crops up inadvertently / unintentionally or discrepancy in the tender / conditions of contract for CPWD works, 2023 shall be the reference manual.

Summary of scope of work

1.1 The work is estimated to **composite cost** of **Rs. 10,49,41,145/- Civil + Electrical (including ELV)**. This estimate, however, is given merely as a rough guide.

1.1.1 For composite bid, besides indicating the combined estimated cost put to bid, should clearly indicate the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.

1.2 Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below: -

Criteria of eligibility for submission of bid documents, Joint venture are not accepted.

1.2.1 Criteria of eligibility for contractors:

Completed three similar works each costing not less than **Rs. 4.28 crores** or completed two similar works each costing not less than **Rs.6.42 crores Lakh or** Completed one similar work costingnot less than **Rs. 8.56 crores.**

Similar work shall mean **"Civil work (s)**"

Documentary evidence to be submitted from the competent authority. Supply order without installations shall not be considered for the purpose of experience in similar works."

"The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previous day of last date of submission of bids.

Note: While considering any similar work executed by applicant Firm under joint venture, the experience of the applicant Firm in that work shall be restricted to its share/ responsibilities as reflected in the Memorandum of Understanding (MoU), signed between the parties, while forming joint venture for that work, attested copy of which shall be submitted along with the technical bid.

(a) The bidder should have had an average financial turnover (gross) of at least 50% of the estimated cost, during the immediate last three consecutive years ending **31.03.2023**. Balance sheet duly audited by Chartered Accountant (Scanned copy of certificate from CA/Audited Balance Sheet to be uploaded). The year in which no turnover is shown would also be considered for working out the average. The multiplication factor of 7% per annum simple interest is not applicable on the Annual Turnover figures.

(b) Should not have **incurred any loss (Profit after tax should be positive)** in more than two years during the last five consecutive years ending **31st March 2023, duly audited and Certified by Chartered Accountant.**

(c) Should have **Net worth Certificate** (Form-B) from **Chartered Accountant with UDIN** (Scanned copy of original be uploaded).

i. Copy of proof for deposition of EMD in the form of bank transfer.

ii. Integrity agreement

iii. Letter of Transmittal

iv. Certificate of Financial Turnover and Profit / loss statements from Chartered Accountant - **Form 'A'**

v. Net worth Certificate as per **Form 'B'**

vi. List of eligible similar nature of work completed during the last seven years ending previous day of last date of submission of bid -**Form 'C'**

a. If private works are shown in support of eligibility, certified copy of the tax deducted at source certificate (TDS), G.S.T. deposited in the State where the workis executed, shall be submitted along with the experience certificate and the T.D.S. amount shall tally with the actual amount of work done).

b. Works executed outside India shall not be considered as eligible works.

v. Certificate of completed works duly certified by officer not below the rank of Executive Engineer-Performance report of works referred in Form C- **(Form-D)**

vi. Structure & Organization - **Form 'E'**

vii. **Site Visit**: The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment
Note: Undertaking regarding visit of site of work to be scanned and uploaded at the time of submission of bid (**Form-G)**

viii. Self-certified copy of **declaration regarding local contents for preference make in India** on the letter head of the company. (Refer notification (**Form H**)

ix. Undertaking for GST Registration if not already obtained of Rajasthan State by the bidder (Form-I)

x. The agency should not have been blacklisted or banned by any Govt. Department, Government Organization, PSU, University, Autonomous Institute etc. A notarized certificate duly notarized worth **Rs.500/- on Non-Judicial Stamp Paper** to this fact should be executed. **(Form J)**

xi. Authority for signing the tender document duly notarized to this fact should be executed. **(Form K)**

xii. Undertaking structural stability & soundness as per prescribed format duly notarized to this fact should be executed. **(Form L)**

xiii. To become eligible to bid, the bidders shall have to furnish an affidavit on non- judicial stamp paper worth Rs.500/- as under:

I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back-to-back basis. Further that, if such a violation comes to the notice of Institute, then I/we shall be debarred for bidding in IIM Udaipur in future forever. Also, if such a violation comes to the notice of the Institute before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit / Performance Guarantee. (Scanned copy to be uploaded at the time of submission of bid). (**Form M**)

xiv. Certificate of registration of **GST**.

xv. Latest GST Return

xvi. Certificate of Registration for **EPF**

xvii. Certificate of Registration for **ESIC**

xviii. Copy of **PAN** Card issued by Income Tax Department.

xix. Latest Solvency certificate for not less than Rs. 4.20 crores issued by Nationalised / Scheduled Bank, which should not be older than 6 months from the last date of bid submission. The Solvency Certificate should have full address of banker for confirmation.

xx. Electrical license issued from Electrical Inspectorate in the name of agency or in the name of associating agency. **(Note: Associating agency should meet the eligibility criteria**).

xxi. Any other document as specified in the NIT/bid document.

xxii. If any information furnished by the bidder is found incorrect at a later stage, he/they shall be liable to be debarred from bidding/taking up works in IWD. The department reserves the right to verify the particulars furnished by the bidder independently. This tender notice can also be seen on Institute website www.iimu.ac.in & www.eprocure.gov.in.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7 amended up to a day previous to the last date of submission of bid which is available as a Govt. of India Publication and also available on website **www.cpwd.gov.in** Bidder 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 **15 (Fifteen)** Months from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.

4. The site for the work is available. The architectural and structural drawings shall be made available as per approved program of completion submitted by the contractor after award of the work.

5 The bid document consisting of plans, Architectural and Structural drawings, specifications, the schedule of quantities of varioustypes of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Construction 2023 Form can be seen from websites.

6. After submission of the bid the contractor can re-submit a revised bid any number of times but before last date and time of submission of bid as notified.

7. While submitting the revised bid, the contractor can revise the quoted rates but before last date and time of submission of bid as notified.

8. When bids are invited in three stage system and if it is desired to submit a revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted, then the bid submitted earlier shall become invalid.

9. Earnest money of **Rs. 20,98,800/-** by shall be deposited through Demand Draft/ Banker's Cheque/ Pay Order of any nationalized/Scheduled bank in favor of "Director, Indian Institute of Management, Udaipur, Rajasthan"payable at Udaipur, Rajasthan valid for 6 months by all the intending bidders within the time and date of submission as mentioned in 'Information and Instructions for Bidders for e-tendering' of NIT, failing which the bids shall be rejected and uploaded documents shall not be verified. **(Being a work contract, no exemption is allowed to any MSME / NSIC registered bidders)**

A part of earnest money is acceptable in the form of Bank Guarantee also. In such case 50% of earnest money or Rs. 20 Lakh whichever is less, will have to be deposited in shape prescribed above and balance can be accepted in form Bank Guarantee issued by a Commercial 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.

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

Copy of 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.

Online bid documents submitted by intending bidders shall be opened only of those bidders, whose proof of EMD deposited and other documents scanned and uploaded are received by the prescribed time and date and found in order.

The technical bid submitted shall be opened at 06.11.2024

10. Bids are invited in two bid stage system. The Technical bid shall be opened first on the due date and time as notified hereinafter. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.

11. 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. Online bid documents submitted by intending bidders shall be opened only of those bidders and other documents scanned and uploaded are found in order.

12. Individual signing the bid or other documents connected with the contract shall indicate the full name with full signature and must specify whether he is signing as:

- A sole proprietor of the firm or constituted attorney of sole proprietor.
- A partner of the firm, in which case he must have authority to represent for arbitration of disputes concerning the business of the partnership firm either by virtue of the partnership agreement or power of attorney.
- Constituted attorney of the firm.

Provided that,

(A) In case of (ii), a copy of the partnership agreement or general power of attorney, in either case, attested by a Notary Public, or affidavit on stamp paper of all the partners admitting execution of the partnership agreement or the General Power of attorney should be furnished.

(B) In the case of partnership firms, where no authority to refer dispute concerning the business of the partnership has been conferred on any partner, the tender offer and all other related documents must be signed by every partner of the firm.

(C) A person signing the tender form or any other documents forming the part of the contract on behalf of another shall be deemed to be warranty that he has authority to sign, such documents and if, on enquiry it appears that the person has no authority to do so, the Institute may, without prejudice to other civil and criminal remedies, cancel the contract and make or authorize execution of contract / intended contract at the risk and cost of such person and hold the signatory liable to the Institute for all cost and damages arising from the-cancellation of the contract including any loss which the Institute may have on account of execution of contract / intended contract.

(D) Individual signing the tender or other documents connected with the contract shall indicate the full name with full signature and must specify the capacity and authority under which he signs such document marked as **Form K** and shall also submit documentary evidence of his authority duly attested by a Notary Public on Rs. 500/- non-judicial stamp paper.

13. The bid submitted shall become invalid and 50% of EMD shall be forfeited, if:

(i) The bidder does not deposit EMD in prescribed manner.

(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.

14. The contractor whose bid is accepted will be required to furnish a performance guarantee **as specified percentage of the tendered amount** as mentioned in schedule E and within the period specified in Schedule F. This guarantee shall be in the form of Insurance Security Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically the action as per EMD declaration Proforma will be taken by the E-in-C without any notice to the contractor. The Earnest Money deposited along with bid shall be returned after receiving the aforesaid performance guarantee**. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses / registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any, engaged by the contractor for the said work and Programme Chart (Time and Progress) within the period specified in Schedule F.**

15. The description of the work is as follows: - <u>Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work)</u>

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 bidder shall be responsible for arranging and maintaining at his own cost all materials, tools& plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents.Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be doneand of conditions and rates at which stores, tools and plant, etc. if any will be issued to him by the Institute and local conditions and other factors having a bearing on the execution of the work.

16. The integrity pact of the bid document shall be signed between Engineer-in-charge and the successful bidder after acceptance of the bid.

17. The competent authority on behalf of the Director, IIM Udaipur 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 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.

18. Canvassing, whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.

19. The competent authority on behalf of the Director, IIM Udaipur reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.

20. The contractor shall not be permitted to bid for works in IIM Udaipur, if his near relative is working in IIM Udaipur in any capacity. 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 Officer in the IIM Udaipur. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

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

22. The bid for the works shall remain open for acceptance for a period of **90** days from the date of opening of technical bid in case bids are invited on two bids envelop system (strike out as the case may be).

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

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

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

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

    a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence & negotiation leading thereto.

    b) Standard C.P.W.D. Form 7 amended up to a date previous to last date of submission of bid.

24. For Composite Bids

24.1 The Institute will call bids for the composite work. The Earnest Money will be fixed with respect to the combined estimated cost put to tender for the composite bid.

24.2 The bid document will include following three components:

Part A: CPWD-6, CPWD-7 including Schedule A to F for the Civil & Electrical component of the work, Standard General Conditions of Contract for CPWD, 2023 (Construction Work) as amended / modified up to a date previous to last date of submission of bid.

Part B: Particular Specifications and Special conditions, specifications and schedule of quantities as applicable to major/civil component of the work.

Part C: Special Conditions, additional terms & conditions, specifications and schedule of quantities are applicable to Electrical component(s) of the work.

24.3 For electrical works, the bidder should have **valid electrical license from competent authority in the name of the contractor. However, the contractors are allowed to participate in tender with an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate with the contractors having valid electrical license.**

24.4 The eligible bidders shall quote percentage rate overall for the entire work i.e. including both Civil & Electrical.

24.5 After acceptance of the bid by competent authority, the Engineer-in-charge of the work shall issue letter of award on behalf, IIM Udaipur. After the work is awarded, the main contractor will have to enter into an agreement with Engineer- in- charge.

24.6 Entire work under the scope of composite bid shall be executed under one agreement.

24.7 If required, the main contractor has to associate agency(s) for Electrical component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to Engineer-in-Charge within one month from stipulated date of start. Name of the agency(s) to be associated shall be approved by Engineer-in-Charge.

24.8 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. 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.

24.9 The main contractor has to enter into agreement with contractor(s) associated by him for execution of electric component(s). In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.

24.10 Running payment for the civil & electrical component shall be made by Engineer-in-charge to the main contractor.

24.11 The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite works shall be recorded by Engineer-in-charge of major component after record of completion certificate of all other components. Final bill of whole work including electrical shall be finalized and paid by the Engineer-in-charge.

25. In case of any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Engineer-in-charge, the bid submitted shall become invalid and the Institute shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tender shall not be allowed to participate in the retendering process of the works.

26. Jurisdiction of courts

The court of the place from where the letter of award of work has been issued shall have the jurisdiction to decide any dispute arising out of or in respect of the contract.

27. In case of delay in release of payment of R.A. Bills by the department due to non-availability of funds or other reasons, contractor has to pay all labour/ workers engaged on the work shall be paid on time without any delay, delay in payment to the contractor shall be governed by Clause 7 of GCC, CPWD, 2023.
28. The bidder must note that there is a limited plot area available and so limited space for installation of T&P and storing other construction material. The bidder has to plan work methodology as per the available site and no extension of time or additional payment shall be payable on this account.
29. The successful bidder should ensure proper coordination with other agencies executing internal & external finishing and services works in the same building. The contractor should ensure to provide the working site to other agencies as per the agreed completion programme in such a way that the pace of other agencies is not affected. No extension of time or additional payment shall be payable on this account.

INDIAN INSTITUTE OF MANAGEMENT UDAIPUR

PROJECT DEPARTMENT

Percentage Rate Tender & Contract for works

(A) Tender for the work: Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).

(B) To be submitted online by 5.00 P.M. on 05.12.2024 through websitewww.eprocure.gov.in.

(i) Technical bid To be opened in the presence of tenderers who may be present at the office of Engineer-in-charge, IIM Udaipur on 06.12.2024.

T E N D E R

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & 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 Director, IIM Udaipur 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.

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

A sum of **Rs. 20,98,800/-** as EMD has been deposited in the prescribed form.

If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said Director, IIM Udaipur 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 Director, IIM Udaipur or the successors inoffice 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 Institute, then I/We shall be debarred for tendering in IIM Udaipur in future forever. Also, if such a

violation comes to the notice of Institute before date of start of work, The Engineer – in – Charge shall be free to forfeit the entire amount of Earnest Money Deposited / Performance Guarantee.

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

Dated :.....

Signature of Contractor:
Postal Address:

Witness :
Address:
Occupation :

ACCEPTANCE

The above tender (as modified you vide letters mentioned hereunder) is accepted by me for and on behalf of the IIM Udaipur for a sum of ₹. _____ (Rupees_

_____)

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

a)
b)
c)

Engineer-in-charge, IIMU.

Signature .....

Dated .....

SCHEDULES
[FOR COMPOSITE WORK]

SCHEDULE 'A'

Schedule of quantities (As per PWD-3) (Enclosed)	:	Civil: Page No. 149 to 174. Electrical : Page no. 175 to 183

SCHEDULE 'D' Extra schedule for specific requirements/documents for the work, if any.	:	-----Nil-----		
SCHEDULE 'E' Reference to General Conditions of contract	:	General Conditions of Contract 2023 (Construction Work. **Correction slips issued up to Circular No. DG/CON/Construction 2023/04 dated 08.12.2023 (To the extent applicable for construction work.**		
Name of work **:**	:	Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).		
Estimated cost of work	:	Civil	:	Rs.9,60,42,228/-
		Electrical	:	Rs.88,98,917/-
		Total	**:**	**Rs. 10,49,41,145/-**
(i) Earnest money:	:	**Rs. 20,98,800/-**		
(ii) Performance guarantee:	:	5% of tendered value.		
(iii) Security Deposit	:	2.5% of tendered Value		
SCHEDULE 'F'				
General Rules & Directions: Officer inviting tender.	:	**Director, IIM Udaipur**		
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.	:	see below		
Definitions: 2(v) Engineer-in-Charge	:	**Engineer-in-charge, IIM Udaipur**		
2(viii) Accepting Authority	:	Director, IIM Udaipur		
2(x) Percentage on cost of materials and labour to cover all overheads and profits.	:	**15% (Fifteen per cent)**		

2(xi) Standard schedule of Rates	:	**For Civil**: Delhi Schedule of Rate 2023 & DAR (Civil) 2023 & Market rate with correction slips issued up to last date of submission of tender. **For Electrical**: Delhi Schedule of Rate 2022 & market rate with correction slips issued up to last date of submission of tender.
2(xii) Department	:	Campus Development & Maintenance Office, IIMUdaipur.
9(ii) Standard CPWD contract Form GCC 2023 CPWD Form 7/8 as modified & corrected upto.	:	Standard CPWD contract form GCC 2023 & CPWD Form-7 modified & corrected upto last date of submission of bid.
Clause 1 (i) Time allowed for submission of performance guarantee, programme chart (Time & Progress) and applicable labour licenses,registration with EPFO, ESIC and BOCW welfare board or proof of applying thereof: from the date of issue of letter of acceptance	:	10 days
(i) Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount beyond the period as provided in (i) above.	:	05 days
Clause 2 (ii) Authority for fixing compensation under clause 2	:	**Director, IIM Udaipur**
Clause 2A (i) Whether clause 2A shall be applicable	:	**No**
Clause 5 Number of days from the date of issue of letter of acceptance Date of Start for reckoning date of start Milestone(s) asper table given below:-	:	10 days.

Table of milestone(s)

Sl. No.	Description of Milestone	Time allowed in Months. (From date of start) for achieving milestone	Amount to be withheld in case of non-achievement of each milestone.
1.	Total composite work done of costing 20% of tendered amount.	4 months	1.0% of composite tendered amount.
2.	Total composite work done of costing 45% of tendered amount.	8 months	1.0% of composite tendered amount.
3.	Total composite work done of costing 60% of tendered amount.	10 months	1.0% of composite tendered amount.
4.	Total composite work done of costing 80% of tendered amount.	12 months	1.0% of composite tendered amount.
5.	Total composite work done of costing 100% of tendered amount.	15 months	1.0% of composite tendered amount.

Note:
1. Request for rescheduling of milestones shall be made by the contractor, as per Appendix XVI.
2. In case of milestones are not achieved by the contractor, action under clause-5 of the contract will be taken.

Time allowed for execution of work**:**	**15 months**
Authority to decide:	
Extension of time	**Engineer-in-charge**
Rescheduling of milestone**:**	**Director, IIM Udaipur**
Shifting of date of start in case of delay in handing over of site.	**Director, IIM Udaipur**

Scheduling of handling over of site

Part	Portion of site	Description	Time period handing over reckoned from date of issue of letter of intent.
Part A	Portion of Work without any hindrance	Complete site	10
Part B	Portion of Work with encumbrance	N.A	-
Part C	Portions dependent on work of other agencies	N.A.	-

Clause 6 Computerized Measurement Book / **Electronic Measurement Book**	:	**Computerized Measurement Book**

Clause 7 Gross work to be done together with net payment / adjustment of advances for material collected, if any since the last such payment for being eligible to interim payment.	:	**Rs.60.00 Lakhs (Per Civil Work)** **For** **Rs. 5 Lakhs (Electrical Work)**

Clause 7A Weather clause 7 A shall be applicable			: **Yes** (No running Account Bill shall be paid for the work till the applicable GST registration of the same State in which work is to be taken up, labour licenses, registration with EPFO, ESIC, whatever applicable are submitted by the contractor to the Engineer-in-charge). No interest shall be payable in case of delay in processing bill.	
Clause 7B Payment to Third Party			:	**Applicable**
Clause 8A Authority to decide compensation on account if contractor fails to submit completion plans.			:	**Engineer-in-charge**
Clause10A List of testing equipment to be provided by the contractor at site lab.			: **Civil:** **Refer Page No. 51-52 of this NIT.**	
Clause10B (ii) & Clause 10 B (iii) Whether clause 10B (ii) shall be applicable			:	**Yes**
Clause10C Component of labour expressed as component Percent of value of work executed			: **25%** (Qualifying amount for Work done will be 85% of the value of the work during period under consideration.)	
Clause10CA			:	**Applicable**
S.NO.	**Materials covered under this clause:**		**Nearest material(other than cement, reinforcement bars, the structural steel and POL) for which all India wholesale price index to be followed:**	**Base price and its corresponding period of all the Materials covered under clause 10 CA Base price for the Month of June 2024. (As per DG/10CA/54 dated 11.11.20)**
1	**Cement (OPC)** **Cement (PPC)**			**Rs .4843.75 per tonne** **Rs. 4140.63 per tonne**
2	**Reinforcement bars TMT Fe500D, Primary Manufacturer**			**Rs. 56,600 per tonne**
3	**Structural steel**			**Rs. 54,745 per tonne**
Clause10CC			:	**Not Applicable**

Clause 11 Specifications to be followed for execution of work	:	CPWD Specification 2019 Vol.-I & II for Civil works and CPWD General Specification 2023- Part-I (Internal) & Part-II (External), with correction slips upto the submission of bid.
Clause 12 Type of Work	:	-**balance work**
12.2 & 12.3 Deviation limit beyond which clauses 12.2 & 12.3 shall apply for all building work Including Electrical, sanitary & development work.	:	**100%**
12.5 (i) Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except items mentioned in earth work subhead of DSR and related items)	:	**100%**
(ii) Deviation limit for items mentioned in earth work subhead of DSR and related items.	:	**100%**

Clause 16 Competent Authority for deciding reduced rates	:	Director, IIM Udaipur
Clause 18 List of mandatory machines, tools and plants to be deployed by the contractor at site.	:	**Civil:** **Refer Page No. 53-54 of this NIT.**

Note: The list of machinery, tools & plants to be deployed by the contractor at site are minimum. The contractor shall deploy additional machinery, tool & plants in order to maintain the progress of the work without any extra cost to the department.

Clause 19 Authority to decide penalty for each default.	:	**Engineer-in-charge**
Clause 19 C Authority to decide penalty for each default.	:	**Engineer-in-charge** **Rs. 500/- Per day.**
Clause 19 D Authority to decide penalty for each default.	:	**Engineer-in-charge** **Rs. 1,00/- Per day.**
Clause 19 G Authority to decide penalty for each default	:	**Engineer-in-charge** **Rs. 200/- Per day.**
Clause 25	:	**Applicable.** **The Dispute Redressal Committee (DRC) shall be appointed by Director, IIMU.**
Clause 31 Whether clause 31 shall be applicable	:	**Applicable**

Clause 32

"Requirement of Technical Representative(s) and Recovery Rate, for the period on the number of days basis as per absence record at site & verified by Engineer-in-charge.

S No	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical / Technical representative)	Minimum experience	No.	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32.	
						Figures	Words
1.	Degree / Diploma	Civil	Principal technical representative	5 years for degree holders & 8 years for diploma holder.	1	Rs.50,000/- per month	Rs. Fifty Thousand per month
2	Degree / Diploma	Civil	Technical representative	5 years for degree holders & 5 years for diploma holder.	1	Rs.40,000/- per month	Rs. Forty Thousand per month
2.	Degree / Diploma	Electrical / Mechanical	Technical representative	5 years for degree holders & 8 years for diploma holder.	1	Rs.40,000/- per month	Rs. Forty Thousand per month

"Assistant Engineers retired from Government services that are holding Diploma will be treated at par

with Graduate Engineers."

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

Clause 38 I	:	
I) (a) Schedule/statement for determining theoretical quantity of cement & bitumen	:	On the basis of Delhi Schedule of Rates2023 printed by C.P.W.D. with correction slips issued up to date of receipt of tender.
II) Variations permissible on theoretical quantities.		
Cement for works with estimated cost put to tender not more than Rs. 5 lakhs	:	2 % plus/minus.
for works with estimated cost put to tender more than Rs. 5 lakhs	:	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.

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	N.A.	Not Permitted
2.	Steel Reinforcement	N.A.	Not Permitted
3.	Reinforcement Bars TMT (Primary Manufacturer)	N.A.	Not Permitted
4.	Structural Steel (Primary Manufacturer)	N.A.	Not Permitted

Clause 39 Provision of Independent External Monitors Threshold value (estimated cost put to tender) at and above which Integrity Pact would be applicable.	:	**Rs.10.00 Crore**
(i) Particulars of IEMs appointed by CVC:	:	As approved by the Institute.

A Special Conditions

1) DEFNITION:

In the Contract (as hereinafter defined) the following definitions words and expressions shall have the In the Contract (as hereinafter defined) the following definitions words and expressions shall have the meaning hereby assigned to them except where the context otherwise required.

i) *Institute* shall mean the IIM, Udaipur.

ii) *The President* shall mean the Director, IIM Udaipur.

iii) *The Engineer-in-charge*, who shall administer the work,

iv) *Government or Govt. of India* shall mean the Indian Institute of Management, Udaipur represented by its Director.

v) The term *Director General of Works* shall mean the Director of the Institute.

vi) *Accepting authority* shall mean the Director, IIM Udaipur or his authorized representative.

vii) The term SDG/ADG/Chief Engineer shall mean the Director, IIM Udaipur.

viii) Engineer-in-charge shall mean the Project Institute Engineer who is the overall in charge and head of the Campus Development & Maintenance Office, IIMUdaipur..

ix) *Superintending Engineer* shall mean the Chief of Administration of the Institute, who shall perform the duties & responsibilities as mentioned in GCC applicable to this contract and shall direct the contract.

x) *Architect* shall mean any Architects, firms or persons as may be appointed by the Institute.

xi) *Site Engineers* shall mean the Jr. Engineer (Civil / Electrical) appointed by Project department

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2. **DUTIES & POWERS**:

2.1 Site Engineers:

The duties of the Site Engineer(s) are to watch and supervise the works and the workmanship in connection with the works, and to test and examine any materials to be used. He shall have no authority to relieve the contractor of any of his duties or obligations under the contract, except as expressly provided here under, nor to order any work involving delay or any extra payment by the Institute and to make any variation in the works.

The Engineer-in-charge, from time to time in writing, delegates to the Site Engineer(s) any of the powers and authorities vested in them. Any written instruction or written approval given by the Site Engineer (s) to the contractor within the terms of such delegation (but not otherwise)

shall bind the contractor and the Institute as though it had been given by the Engineer-in- charge provided always as follows:

a) Failure of the Site Engineer (s) to disapprove any work or materials shall not prejudice the power of the Engineer in-charge to subsequently disapprove such work or materials and to order the pulling down, removal or breaking up thereof.
b) If the contractor is dissatisfied by reason of any decision of the Site Engineer (s), he shall be entitled to refer the matter to the Engineer-in-charge, who shall thereupon confirm reverse or vary such decision.

3. **ASSIGNMENT & SUBLETTING**:

3.1 The contractor shall not assign the contract or any part thereof or any benefit or interest therein or there under without the written consent of the Engineer in-charge. The whole of the works included in the contract shall be executed by the contractor except where otherwise provided in the contract. The contractor shall not sublet any part of the works without the written consent of the Engineer in-charge and such consent, if given, shall not relieve the contractor from any liability or obligation under the contract, and he shall be responsible for the acts, defaults and neglects of sub-contractor, his agents, servants or workmen, as if they were the acts, defaults or neglects of the contractor provided always that the provision of labour contracts on a piece work basis shall not be deemed to be a subletting under this clause.

4. **SCOPE OF CONTRACT**:

The contract comprises Construction of 8 nos. Faculty Housing at IIM Udaipur and rectification of defects for fifteen (15) months after the completion, and the provision of all labour, materials, constructional plant, equipment and transportation, temporary works and everything, whether of a temporary or permanent nature required in and for such construction, completion and maintenance so far as the necessity for providing the same is specified in or reasonably to be inferred from the contract. The contractor shall make his own arrangements for the safe storage of materials, accommodation for his staff etc. and no claim for temporary accommodation from the contractor shall be entertained.

The contractor shall carry out and complete the said work in every respect in accordance with this contract and as per the directions and to the satisfaction of the Engineer in-charge. Issue of further drawings and / or written instructions, detailed directions and explanations which are hereinafter collectively referred to as instructions of the Engineer in-charge in regard to:

a) The variation or modification of the design, quality or quantity of works or the addition or omission or substitution of any work.
b) Any discrepancy in the Drawings or between the Schedule of Quantities and / or Drawings and / or specifications.

c) The removal from the site of any materials brought thereon by the contractor and the substitution of any other material thereof.

d) The dismissal from the work of any person employed thereupon.

e) The opening up for inspection of any work covered up.

f) Amending / making good of any defects.

The contractor shall forthwith comply with and duly execute any instructions of work comprised in such Engineer in-charge's instructions, provided always that the verbal instructions and explanations given to the contractor or his representative upon the works shall, if involving a variation, be confirmed in writing by the contractor within seven days and if not dissented in

writing within a further seven days by the Engineer in-charge, such shall be deemed to be instructions of the Engineer in-charge within the scope of the contract.

5. **CONTRACT DOCUMENT***:*

5.1 The several documents, forming the contract, are to be taken as mutually explanatory of one another and in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer-in-charge who shall thereupon issue to the contractor its interpretation directing in what manner the work is to be carried out. In case the contractor feels aggrieved by the interpretation of the Engineer-in-charge then the matter shall be referred to the Director and his decision shall be final, conclusive and binding on both parties to the contract.

5.2 The drawing etc. shall remain in the custody of the Institute. Two complete sets of drawings, specification and Schedule of Quantities shall be furnished by the Engineer-in-charge to the contractor in such time, which must not delay the progress of the construction, and the Institute shall furnish copies of any additional drawings, which in their opinion may be necessary for the execution of any part of the work. One complete set shall be kept on the work site and the Engineer-in-charge, and his representatives shall be, at all reasonable times, have access to the same. The contractor shall study the drawings thoroughly before the commencement of work. In case of any discrepancy, the contractor shall seek clarification before proceeding with the works. Figured dimensions are in all cases to be accepted in preference to the scaled sizes. Large-scale details should take preference over small scale ones.

The contractor shall give adequate notice in writing to the Engineer-in-charge of any further drawings or specification that may be required for the execution of the works or otherwise under the contract. Any delay claimed by the contractor for EOT will not be valid against any drawings or details unless the same was specifically asked in writing by the contractor & Engineer-In-Charge has failed to provide it with in 15 days from the date of request.

The Engineer-in-charge shall have full powers and authority to supply to the contractor from time to time during the progress of the work such drawings and instructions as shall be necessary for proper execution and the contractor shall carry out and be bound by the same.

5.3 The successful tenderer shall be required to enter into an agreement with the Institute. The Schedule of Quantities & rates filled by the successful tenderer there in, the General Conditions of Contract 2023 for Construction Works incorporating corrections upto last date of submission of bids, CPWD specifications for Civil & Electrical Works, the Special conditions, additional specifications, minutes of the pre bid conference, negotiation letter and the award letter etc. shall form part of the agreement to be signed by the successful tenderer. The cost of stamp paper and stamp duty required for the agreement shall be borne by the contractor.

5.4 The contractor(s) shall give to the Municipality, police, and other authorities all necessary notices etc. that may be required by law and obtain all requisite licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be levied on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain lights either for illumination or for cautioning the public at night.

5.5 The Contractor(s) shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, services and compound walls are to be constructed. However, if any change is required, the same shall be done with the approval of Engineer-in-Charge & no extra payment shall be made on this account. The contractor shall collect & stack the hard rock this will be measured as per the direction of Engineer-in-charge and it may be used in RR masonry and sub base of road, etc as per the direction of Engineer-in-charge.

5.6 Other agencies will also simultaneously execute and install the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings etc. as may be required for the electric and other related works and nothing extra shall be payable on this account.

5.7 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of

the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed, so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.

5.8 The contractor shall be fully responsible for the safe custody of materials brought by him at site / issued to him even though the materials may be under double lock and key system. The contractor has to make his own arrangement like shed enclosure etc. for keeping the material, providing security etc. The contractor shall be allowed to make temporary structures for cement godown, installation of batch mixing plant, stores, labs, offices, sheds etc. The contractor shall remove all the structures erected by him necessary for the execution of the work, after completion of the work and clean the site removing all structures and temporary hutments in all respect as per the direction of Engineer-in-charge.

5.9 Contractor(s) shall provide permanent benchmarks, flag tops and other reference points for the proper execution of work and these shall be preserved till the end of the work. All such reference points shall be in relation to the levels and locations, given in the Architectural and other related services drawings.

5.10 On completion of work, the Contractor(s) shall submit at his own cost four set of “as built’ drawings printed in A2 size page & soft copy of the drawings shall be shared in AutoCad to the Engineer-in-Charge within 6 weeks of completion of the work failing which a recovery of Rs.50,000/- for each item as listed below, to be made as reasonable compensation. These drawings shall have the following information.

1. Lay out of piping and their diameters including soil waste pipes and vertical stacks.

2. Ground and invert levels of all sanitary & drainage pipes together with locations of all manholes and connections, upto outfall.

3. Layout of water supply line with diameters, locations of control valves, access panels etc.

4. All drawings related to fire & electrical installations and services.

5. All floor plans including sections & elevations.

5.11 Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to byelaws of municipal body/corporation, where CPWD specifications are not available. The Contractor (s) should engage approved, licensed plumbers for the work and get the materials (fixtures/fittings) tested by the municipal Body/Corporation authorities wherever required at his own cost.

5.12 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, nomenclature of items and specifications etc. issued for the work and satisfy himself that the information available there from is complete and unambiguous. The figure and written dimension of the drawings shall supersede the measurement by scale. 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 occurring by the commencement of work on the basis of any erroneous and/ or incomplete information and no claim whatsoever shall be entertained on this account.

5.13 The Architectural drawings given in the tender other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fixing involved unless and otherwise specifically mentioned. However, the work shall be executed in accordance with the drawings duly approved by the Engineer-in-Charge.

5.14 The contractor shall render all help and assistance in documenting the total sequenceof this project by way of photography, slides, audio-video recording including photographs, slides, audio-videography etc. and nothing extra shall be payable to the contractor on this account.

5.15 The contractor shall be fully responsible for the safe custody of materials brought by him at site / issued to him even though the materials may be under double lock and key system. The contractor has to make his own arrangement like shed enclosure etc. for keeping the material, providing security etc. The contractor shall be allowed to make temporary structures for cement godown, installation of batch mixing plant, stores, labs, offices, sheds & labour huts etc. The contractor shall remove all the structures erected by him necessary for the execution of the work, after completion of the work, and clean the site removing all structures and temporary hutments in all respect as per the direction of Engineer-in-charge.

6 **SITE INSPECTION**:

Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders 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 offer. The bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all materials, tools & Plants, water, access facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of bid by a bidder implies that he has read the Bid 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. (if any) will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

The contractor carrying out this work shall strictly abide by the Municipal/State regulations as well as any security regulations imposed by the Department/Police Authorities/ Local Authorities, from time to time, regarding trans-shipment of equipments, operations, drainage, security etc. wherever applicable.

7 CLEANLINESS OF SITE

The Contractor shall not stack building material / malba / muck/ rubbish on the land or road of the local development authority or on the land owned by the others, as the case may be. So the muck, rubbish etc. shall be removed periodically as directed by the Engineer-in-Charge, from the site of work to the approved dumping grounds as per the local byelaws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the Contractor. Nothing extra shall be payable on this account. In case, the Contractor is found stacking the building material / malba as stated above, the Contractor shall be liable to pay the stacking charges / penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and byelaws of such body or authority. The Engineer –in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above counts, from any sums due to the Contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.

8 INSPECTION OF WORK

In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by the senior officers of the Institute in addition of the Engineer-in-Charge and his authorized representative. The contractor shall at times during the usual working hours and at all times at which reasonable notices of the intention of the Engineer-in-Charge or other officers as stated above to visit the works shall have been given to the Contractor, either himself be present to receive the orders and instructions or have a responsible Site Engineer duly accredited in writing, to be present for that purpose Senior Officers of Institute Authorities shall be inspecting the on-going work at site at any time with or without prior intimation.

8. MATERIALS AND WORKMANSHIP:

All materials used shall conform to the requirements of materials specified in this specification. Where material requirements are not specified, they shall conform to the applicable standards and codes approved by the Department. All materials shall be new, free from defects and of good quality in all respects as per the prescribed specifications. Parts shall be free from flaws and objectionable imperfections and shall be machined true in a workman like manner. No deviations from the specified materials are permissible. Wherever materials are not specifically called out, they shall be properly selected by the contractor to the best standards for the application and with the prior approval of the Engineer-in-charge.

9. STANDARDS & CODES:

The design, manufacture and performance of tendered material/equipment shall comply with all currently applicable statutory regulations and safety codes in the locality where the material/equipment will be installed. The material shall also conform to the requirement of the latest editions of applicable IS/B.S Standards. The contractor shall refer to the relevant sections of this specification for material/equipment standards and codes. Nothing in this specification shall be construed to relieve the contractor of his responsibility.

10. RATES:

The rates quoted by the bidder, shall be firm and inclusive of all taxes, including GST and all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at site i/c temporary constructional storage, risks, overhead charges general liabilities/ obligationsand clearance from local authorities including comprehensive maintenance for a period of one year from the actual date of completion of work. However, the fee to be paid to local bodies/statutory bodies in context with the inspections shall be borne by the Institute.

11. FREE GUARANTEE PERIODS (Defect Liability Period):

Guarantee: All materials/installations shall be guaranteed by the contractor for a period of **12 months** from the date of completion of work/ date of commissioning of system / date of taking over of the installation by the department, whichever is later, against unsatisfactory performance of the installations and/or any break down/ failure due to defective design, poor quality of material and/or bad workmanship. The material or equipment or any other part thereof found defective during guarantee period shall forthwith be repaired or replaced free of cost, to the satisfaction of the Engineer-in-charge. In case it is felt by the department that undue delay is being caused by the contractor in doing so, the same will be got done by the Institute at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding.

12 VALIDITY:

Bids should be kept open for acceptance for at least **90 days** from the date of opening of technical bids. Those who do not agree for a validity of **90 days** will do so at their own risk and no request for extending the validity is likely to be made from this office. However, if due to any circumstances beyond control, if the bidders are advised to extend the validity, they shall not be

permitted to revise their rates, offer any rebate or concession while extending the validity which may materially result in any reduction or increase in the computed prices of their original offer.

13 TERMS OF PAYMENT:

Payments shall be released as per **General condition of contract for CPWD works 2023 for Construction works with correction slips upto last date of submission of bid,** all interim payments shall have deductions towards advances and other contract conditions. Payment shall be made after supply, installation, testing and commissioning of items as per actual progress of work.

14 Recovery of Security Deposit:

The person/persons whose tender(s) may be accepted (herein after called the contractor) shall permit the Institute at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 2.5% of the gross amount of each running bill till the sum will amount to security deposit of 2.5% of the tendered value of the work. Such deductions will be made and held by the Institute by way of security deposit unless he/they has / have deposited the amount of security at the rate mentioned above in cash or in the form of Government securities or fixed deposit receipt. In case a fixed deposit receipt of any Bank is furnished by the contractor to the institute as part of the security deposit and the bank is unable to make payment against the said fixed deposits receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the institute to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from or paid by the sale of a sufficient part of his security depositor from the interest arising therefrom or from any sums which may be due to or may become due to the contractor by Government on any account whatsoever and in the event of his security deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the StateBank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favour of the Engineer-in-charge, any sum or sums which may have been deducted from or raised by sale of his security deposit or any part thereof. The security depositshall be collected from the running bills of the contractor at the rates mentioned above.

The security deposit as deducted above can be released against bank guarantee issued by a scheduled bank which shall be **released on expiry of defect liability period / guarantee period of 12 months.**

15 Taxes:

All taxes as per prevailing notification of Central / State Government shall be recovered from the contractor's bill.

16 GENERAL REQUIREMENTS:

16.1 **Coordination with other agencies**:

The Contractor shall be responsible to co-ordinate with other agencies working at site. The Contractor will have to carry out changes / modifications, if any, required due to lack of coordination with other agencies at his cost.

16.2 **Site Supervision**:

The Contractor shall engage sufficient qualified and experienced site staff to execute the works. Registered and licensed trade persons shall be employed under the direct employment of the contractor and shall be full time on site to supervise the works. The decision of the Engineer-In-Charge as to what constitutes this necessity shall be final and binding.

16.3 Inspection at Manufacturer's Works

Owners reserve the right to depute their representative for inspection of the tendered material for witnessing tests as per relevant standards at manufacturer's works prior to dispatch of the material to site at IIM Udaipur. The contractor is required to offer the material for inspection at the manufacturer's works before dispatch as per the relevant national/international standards along with pre-dispatch routine test results/report. The contractor shall give sufficient advance notice of minimum **10 days** regarding readiness of material and the dates proposed for witnessing required tests and inspections to the engineer-in-charge or his authorized representative and to facilitate his presence during inspection and testing. The institute at his discretion may depute their representatives to witness such testing and/or inspection. The materials duly inspected by the engineer-in-charge, or his authorized representative shall be dispatched to site by the contractor after issue of dispatch clearance by the engineer-in-charge.

Inspections and tests at the works of the manufacturer do not relieve the Contractor of his responsibility for the defects or other failures discovered /noticed in the material during the execution of the contract .and to meet the contract requirements. The contractor must ensure the supply of material strictly as per the prescribed specifications.

17. Period of Completion: 15 (Fifteen) months

18.1"As New" Conditions:

At the time of handing over of the contract works after the maintenance period, the whole installation shall be in 'as-new' condition. The Contractor shall, during the course of the contract, protect all plants and equipments and shall restore/repaint as necessary before completion of the contract.

18.2 Godown / Worker Accommodation:

The accommodation for workers shall be arranged by the Contractor outside the campus of IIM Udaipur. Storage space shall be arranged by the Institute. The contractor shall construct the stores at his cost, and he shall be responsible for watch and ward of his materials/installations.

18. **Supply of Material**:

Merely a provision in the Schedule of Quantities does not require the contractor to supply the item. The contractor has to supply the quantity of material actually required for use on work as per the approved drawings. If at any point of time it comes to the notice that any of the items supplied by the contractor & paid by the Institute is not required for use on work, the amount shall be recovered suo-moto, and no claim shall be entertained on this account.

Make in India: Self-certified copy of declaration regarding local contents for preference make in India on the letter head of the company. (Refer notification ref. no. P-45021/2/2017-PP (BE-II), dated 4th June 2020 for "Provision of Public Procurement (Preference to Make in India), Order 2017-Revision regarding" notification issued from the Ministry of Commerce and Industry, Department for promotion of industry and internal Trade (Public Procurement Section), Govt. of India.

19 SAFETY, HEALTH AND ENVIRONMENT

a) The Contractor(s) shall take all precautions to avoid accidents by exhibiting necessary caution boards during day and night, speed limit boards, red flags, red lights and providing barriers hoarding written in English and Hindi. He shall be responsible for all damages and accidents caused to existing/new work due to negligence on his part. No hindrances shall be caused to traffic during the execution of the work. In case of any accident of labour / contractual staff the entire responsibility will rest on the part of the contractor and any compensation under such circumstances if becomes payable the same shall be entirely born by the contractor and department shall have no role on this account.

b) The contractor is required to follow the CPWD Safety code as prescribed in the General condition of the contract 2023.

c) The contractor shall assign to his workmen, tasks commensurate with their qualification, experience and state of health for driving of vehicles, handling and erection of materials and equipments. All lifting equipments shall be tested certified for its capacity before use. Adequate and suitable lighting at every work place and approach there to, shall be provided by the contractor before starting the actual operations at night.

d) Hazardous and / or toxic materials such as solvent coating or thinners shall be stored in appropriate containers.

e) All hazardous materials shall be labeled with the name of the materials, the hazards associated with its use and necessary precaution to be taken.

f) Contractor shall ensure that during the performance of the work, all hazard to the health of personnel, have been identified, assessed and eliminated.

g) Appropriate personal protective equipment such as helmets, gloves, goggles, aprons,safety belts etc. shall be provided to the workers employed at the work site as per the requirement and exposure to the hazardous materials or locations.

h) The contractor has to follow the model rules for the protections of the Health and sanitary arrangement for the workers as provided in the **General condition of contract for CPWD works 2023 for Construction works with correction slips issued by DG/CON upto the last extended date of opening of the tender (To the extent appliable for contract)**

i) The contractor shall provide first aid facilities, drinking water facilities, washing facility, Latrines and urinals, shelter during rest, crèches, canteens, anti-malarial precautions, preventive action for communicable diseases, proper drainage, sewerage, etc. in compliance of model rules for the protection of Health and Sanitary arrangement for the workers.

j) The wages of the labour shall be paid as per the guidelines provided in the CPWD contractor labour regulations.

k) The contractor has to keep a record of all the workers employed at site, make daily attendance along with the location of the work and follow the CPWD contractor's labour regulation. All the labour record shall be made available for inspection and verification to the Engineer-in-charge or his authorized representative as and when required.

l) Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. In case the same are to be removed and diverted, the same shall be payable to the contractor. The contractor shall work out the cost and the same shall be approved by Engineer-in-Charge. 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.

m) The Contractor shall be responsible for the watch and ward / guard of the buildings safety,fittings and fixtures & protection of flooring doors & windows etc. provided by him/ supplied to

him against pilferage and breakage during the period of installations and thereafter till the entire work as per agreement is physically handed over to the department. No extra payment shall be made on this account.

18 **ENVIRONMENTAL MANAGEMENT PLAN**

The contractor shall strictly adhere to the following conditions as part of his contractual obligations:

19 **SITE:**

The contractor shall ensure that all the topsoil excavated during construction works is neatly stacked and is not mixed with other excavated earth. The -contractor shall take the clearance of the Engineer in Charge before any excavation. Top soil should be stripped to a depth of 20 cm (centimeters)from areas to be disturbed, for example proposed area for building, roads, paved areas, external services and area required for construction activities etc. it shall be stockpiled to a maximum height of 40 cm in designed areas, covered or stabilized with temporary seeding for erosion prevention and shall be re applied to the site during plantation of the proposed vegetation or as directed by the engineer in charge. Top soil shall be separated from subsoil, debris and stones larger than 50 mm (millimeter) diameter. The stored top soil may be used as finished grade for planting areas.

The contractor should follow the construction plan as proposed by the Engineer in Charge to minimize the site disturbance such soil pollution due to spilling. If required use of staging and spill prevention and control plan to restrict the spilling of the contaminating material on site needs to be restored. Protection of top soil from erosion by collection storage and reapplication of top soil, constructing sediment basin, contour trenching, mulching etc., may also be directed by the engineer in charge.

No excavated earth shall be removed from the campus unless suggested otherwise by Engineer in Charge. All subsoil shall be reused in back filling/landscape, etc. as per the instruction of Engineer in charge. The surplus excavated earth shall be disposed of by the contractor as per the direction of engineer in charge at his own cost for reuse.

The contractor shall not change the natural gradient of the ground unless specifically instructed by the Engineer in Charge. This shall cover all natural features like water bodies, drainage gullies, slopes, mounds, depressions, etc. Existing drainage patterns through or into preservation area shall not be modified unless specifically directed by the Engineer-in Charge.

The contractor shall not carry out any work which results in the blockage of natural drainage.

The contractor shall ensure that existing grades of soil shall be maintained around existing vegetation and lowering or raising the levels around the vegetation is not allowed unless specifically directed by the Engineer-in-charge.

Contractors shall reduce pollution and land development impacts from automobiles use during construction.

Overloading of trucks is unlawful and creates the erosion and sedimentation problems, especially when loose materials like stone dust, excavated earth, sand etc. are moved. Proper covering shall be used by the contractor. Also, no overloading shall be permitted.

20 CONSTRUCTION PHASE AND WORKER FACILITIES:

20.1 The contractor shall specify and limit construction activity in pre-planned /designated areas and shall start construction work after securing the approval for the same from the Engineer in Charge. This shall include areas of construction, storage of materials, and material and personnel movement.

20.2 Preserve and protect Landscape during Construction

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

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

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

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

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

20.8 The contractor shall be required to develop and implement a waste management plan, quantifying material diversion goals. He shall establish goals for diversion from disposal in landfill and incinerators, if required, and adopt a construction waste management plan to achieve these goals. A project- wide policy of “Nothing leaves the site” shall be followed. The contractor’s ingenuity is especially called towards meeting this prerequisite/credit (as per IGBC LEED India, New Construction v1.0 & GRIHA, MNRE) and may consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation, designating a specific area(s) on the construction site for segregated or commingled collection of recyclable material, and track recycling efforts throughout the construction process, identifying construction haulers and recyclers to handle the designated materials at hiscost. The diversion may include donation of materials to charitable organization and salvage of materials on- site.

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

20.10 The contractor shall provide potable water and other amenities for all workers as per the contract.

20.11 The contractor shall provide the minimum level of sanitation and safety facilities for the workers at site as described in CPWD General Conditions of contract. The contractor shall ensure cleanliness of workplace with regard to the disposal of waste and effluent; provide clean drinking water and latrines and urinals as per applicable provisions. Adequate toilet facilities shall be provided for workmen within easy access of their place of work. The total no. to be provided shall not be less than 1 per 30 employees in any one shift. Toilet facilities shall be made as soon as practicable. Every toilet shall be so constructed that the occupant is sheltered from view and protected from the weather and falling object. Toilet facilities shall be maintained in a sanitary condition. A sufficient quantity of disinfectant shall be provided and natural or artificial illumination shall also be provided.

20.12 The contractor shall ensure that air pollution due to dust/generators is kept to a minimum, preventing any adverse effects on the workers and other people in and around the site. The contractor shall ensure proper screening, covering stockpiles, covering brick and leads of dusty materials, wheel –washing facility, gravel pit, and water spraying. Contractor shall also ensure the following activities to prevent air pollution during construction.

20.13 Clear vegetation only from areas where work will start right away.

20.14 Vegetate/mulch areas where vehicles do not ply.

20.15 Apply gravel/landscaping rock to the areas where mulching/paving is impractical.

20.16 Identity roads on-site if applicable that would be used for vehicular traffic. Upgrade vehicular roads (if these are unpaved) by increasing the surface strength by improving particle size, shape and mineral types that make up the surface & base and add surface gravel to reduce source of dust emission to limit amount of fine particles (smaller than 0.075 mm) to 10-20%.

20.17 Water spray, through a simple hose for small projects, to keep dust under control. Fine mist should be used to control fine participation. However, this should be done with care so as not to waste water. Heavy watering can also create mud, which when tracked onto paved public roadways, must be promptly removed. Also, there must be an adequate supply of clean water nearby to ensure that spray nozzles don't get plugged.

20.18 Water spraying shall be done on:

20.19 Any dusty materials before transferring, loading and unloading.

20.20 Area where demolition work is being carried out.

20.21 Any unpaved main haul carried out.

20.22 Areas where excavation or earth moving activities are to be carried out.

20.23 The contractor shall ensure that the speed of vehicles within the site is limited to 10 km/hr.

20.24 All material storage should be adequately covered and contained so that they are not exposed to situations where winds on site could lead to dust/participate emissions.

20.25 Spills of dirt or dusty materials will be cleaned up promptly, so the spilled material does not become a source of fugitive dust and also to percent of seepage of pollutant laden water into the ground aquifers. When cleaning up the spill, ensure that the clean-up process does not generate additional dust. Similarly, spilled concrete slurries or liquid wastes should be contained /cleaned up immediately before they can infiltrate into the soil/ground for runoff in nearby areas.

20.26 Provide dust screens, sheeting or netting to scaffold along the perimeter of the building at his cost.

20.27 Cover stock piles of dusty material with impervious sheeting before they leave the site at his cost.

20.28 Cover dusty load on vehicles by impervious sheeting before they leave the site at his cost.

20.29 Contractor shall be required to provide an easily accessible area that services the entire building and is dedicated to the separation, collation and storage of materials for recycling including (at a minimum) paper, corrugated cardboard, glass, plastics, and metals. He shall coordinate size and functionality of the recycling areas with the anticipated collections services

for glass, plastic, office paper, newspaper, cardboard, and organic wastes to maximize the effectiveness of the dedicated areas. Consider employing cardboard balers, aluminum can crushers, recycling chutes, and collection bins at individual workstations to further enhance the recycling program.

20.30 The contractor shall ensure that no construction leachate (e.g. cement slurry etc.), is allowed to percolate into the ground. Adequate precautions will be taken to safeguard against this including reduction of wasteful curing process, collection, basic filtering and reuse. The contractor shall follow requisite measures for collecting drainage water run-off from construction area sand material storage sites and diverting water flow away from such polluted areas. Temporary drainage channels, perimeter dike/swale, etc. shall be constructed to carry the pollutant-laden water directly to the treatment device or facility (municipal sewer line).

20.31 Staging (dividing a construction area into two or more areas to minimize the area of soil that will be exposed at any given time) should be done to separate undisturbed land from land disturbed by construction activity and material storage.

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

20.33 The contractor shall ensure the following activities for construction workers safety, among other measures at his cost.

20.33.1 Guarding all parts of dangerous machinery.
20.33.2 Precautionary sign for working on machinery.
20.33.3 Maintaining hoists and lifts, lifting machines, chains, ropes, and lifting tackles in good condition.
20.33.4 Durable and reusable formwork system to replace to timer framework and ensure that formwork where used is properly maintained.
20.33.5 Ensuring that walking surface or boards at height are of sound construction and are provided with safety rails or belts.
20.33.6 Ensuring that walking surfaces or boards at height are of sound construction and provided with safety rails or belts.
20.33.7 Provide protective equipment, helmets etc.
20.33.8 Provide measures to prevent fires. Fire extinguishers and buckets of sand to beprovided in the prone area and elsewhere.
20.33.9 Provide sufficient and suitable light for working during nighttime.

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

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

23 The contractor shall prepare and submit 'Spill prevention and control plans' before the start of construction, clearly stating measures to stop the source of the spill, to contain the spill, to dispose the contaminated material and hazardous wastes, and stating designation of personnel trained to prevent and control spills. Hazardous wastes include pesticides, paints, cleaners, and petroleum products.

24 Contractor shall collect & submit the relevant material certificates for materials if directed by the Engineer in Charge with high recycled (both post-industrial and post-consumer) content, including materials like RMC mix with fly-ash, glass with recycled content, calcium silicate boards etc.

25 The contractor shall collect the relevant material certificates for rapidly renewable materials such as bamboo, wool, cotton insulation, Agri fiber, linoleum, wheat board, strawboard and cork etc.

26 Where possible, the contractor shall select materials/vendors, harvested and manufacture regionally a 800-km radius of the project site.

27 Contractors shall adopt an IAQ (Indoor Air Quality) management plan to protect the HVAC system during construction, control pollutant sources, and interrupt pathways for contamination. He shall sequence installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wallboard. He shall also protect stored on-site or installed absorptive materials from moisture damage.

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

29 The contractor shall make efforts to reduce the quantity of indoor air contaminants that are odorous or potentially irritating and harmful to the comfort and well- being of installer and building occupants. The contractor shall ensure that the VOC (Volatile Organic Compounds) content of paints, coatings and primers used must not exceed the VOC content limits mentioned below in case items are/is available in schedule of quantities.

30 Paints

30.1 Non-flat-150 g/L, Flat (Mat)-50, g/L Anti corrosive/anti rust-250 g/L

30.2 Coatings/Clear wood finishers

30.3 Varnish-350 g/L, Lacquer-550 g/L, Floor coating -100 g/L, sealers stains-250 g/L.

31 Sealers

31.1 Waterproofing sealer-250 g/L, sanding sealer-275 g/L, other sealers -200 g/L.

32 The VOC (Volatile Organic Compounds) content of adhesives and sealants used if prescribed in the schedule of quantities must be less than VOC content limits mentioned: Architectural Application VOC Limit (g/l less water).

33 Indore Carpet adhesives -50 g/L, carpet Pad adhesive -50 g/L, wood Flooring Adhesive -100 g/L, Rubber Floor Adhesives -60 g/L, Sub Floor Adhesives -50 g/L, Ceramic tiles Adhesive -65 g/LVCT and Asphalt Tile adhesives – 50 g/L, Dry Wall and panel Adhesive-50 g/L, Structural Glazing Adhesives -100 g/L, Multipurpose Construction Adhesive -70 g/L Substrate Specific Application VOC Limit (g/l less water), Metal to Metal -30 g/L, Plastic foams – 50 g/L, Porous material (except wood)- 50 g/L, Wood-30 g/L, Fiber Glass-80g/L.

34 Wherever required, Contractor shall meet and carry out documentation of all activities on site, supplementation of information, and submittals in accordance with IGBC LEED India New Construction v1.0 or GRIHA program standards and guidelines, towards meeting the aforementioned building environmental rating standards(s) expert assistance shall be provided to him up on request.

35 Water use during construction: Contractor should spray curing water on concrete structure and shall not allow free flow of water. The concrete structure should be kept covered with thick cloth/gunny bags and water should be sprayed on them. The contractor shall do water ponding on all sunken slabs using cement and sand mortar.

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

37 The contractor shall provide O & M manuals wherever applicable.

38 The contractor shall make himself conversant with the site waste management programmanual and actively contribute to its compilation by estimating the nature and volume of waste generated by the process/installation in question.

39 MATERIALS & FIXTURES FOR THE PROJECT:

The contractor has to comply as per MoEF issued notification 8.0.763(E) dated 14th Sept. 1999 containing directive for greater flyash utilization. Every construction agency engaged in the construction of buildings within a radius of 50 km radius of a Thermal Power Plant, have to use of 100 %fly ash-based bricks/block in their construction.

The contractor shall ensure that all paints, polishes, adhesives, and sealants used both internally and externally, on any surface, shall be Low VOC products. The contractor shall get prior approval from the engineer in charge before the application of any such materials.
All plumbing and sanitary fixtures installed shall be as per the prescription of the Engineer in Charge and shall adhere to the minimum LPM (liters per minute) and LPF (liters per flush) mentioned. The contractor shall employ 100% zero ODP (ozone depletion potential) insulation; HCFC (hydro-chlorofluorocarbon)/ CFC (chlorofluorocarbon) free HVAC and refrigeration equipment's and halon-free fire suppression and fire extinguishing systems.
The contractor shall ensure that all composite wood products/agro-fibre products used for cabinet work, etc. do not contain any added urea formaldehyde resin.

40 RESOURCES CONSUMED DURING CONSTRUCTION:

The contractor shall ensure that the water and electricity is not wasted during construction. The Engineer in Charge can bring to the attention any such wastage and the contractor will have to ensure that such bad practices are corrected.

The contractor shall install necessary meters and measuring devices to record the consumption of water, electricity and diesel on a monthly basis for the entire tenure of the project.

The contractor shall ensure that all run-off water from the site, during construction is collected and reused to the maximum.

No light shall be turned on during the period between 6:00 AM to 6:00 PM, without the permission of the Engineer in Charge.

41 CONSTRUCTION WASTE

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

a) All construction debris generated during construction shall be carefully segregated and stored

in a demarcated waste yard. Clear, identifiable areas shall be provided for each waste type and measures employed to segregate the waste on site into inert, chemical, or hazardous wastes.

b) All construction debris shall be used for road preparation, back filling, etc, used if described in the schedule of quantities and as per the instructions of the Engineer in Charge, with necessary activities of sorting, crushing, etc.

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

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

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

42 EQUIPMENT:

To ensure energy efficiency during and post construction all pumps, motors and engines used during construction or installed shall be subject to approval and as per the specifications of the Engineer in Charge.

All lighting installed by the contractor around the site and at the labour quarters during construction shall be CFL bulbs of the appropriate illumination levels. This condition is a must, unless specifically prescribed.

The contractor is expected to go through all other conditions of the LEED & GRIHA rating stipulations.

Failure to adhere to any of the above-mentioned items, without approval of the engineer in charge, shall be deemed as a violation of contract and the contractor shall hold liable compensation as per terms of the agreement.

43 WATER POLLUTION:

The contractor will take all precautionary measures to prevent the wastewater during construction accumulating anywhere.

The wastewater arising from the project is to be disposed off in the manner that is acceptable to the Engineer-in-charge and conforming to Pollution Control norms.

44 AIR AND NOISE POLLUTION

Contractors will use dust screens and sprinkle water around the site to arrest spreading of dust in the air and surrounding areas.

Contractor will ensure that all vehicles, equipment and machinery are used for environmental emission standards/norms.

For controlling the noise from Vehicles, Plants and Equipments, the Contractor will conform the following:

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

Servicing of all construction vehicles and machinery will be done regularly and checked and if found defective will be replaced.

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

As per the Standards/Guidelines for control of Noise Pollution from Stationary Diesel be less then 94+10 log 10 (KVA). The standards also suggest construction of acoustic enclosure around the DG set and provision of proper exhaust muffler with insertion loss of minimum 25dg(A) as mandatory.

Ambient noise levels should conform to residential standards both during day and night.

Adequate measures to reduce air and noise pollution during construction keeping in mind CPCB norms on noise limits.

45 RISK FROM ELECTRICAL EQUIPMENT:

The contractor will comply the relevant industrial electrical safety legislations.

The contractor will take adequate precautions to prevent danger from electrical equipment i.e. no material will be so stacked or placed as to cause danger or inconvenience to person or the public.

All necessary fencing and lights will be provided to protect the public.

All electric machines to be used in the construction will conform to the relevant Indian Standards (IS) codes, will be free from patent defect, will be kept in good working order, will be regularly inspected and properly maintained as per IS provision and to the satisfaction of the Engineer-in-charge.

In case of any breach of the above provisions, the electric supply given for the work shall be disconnected & the contractor shall only be responsible for the loss/slow progress of the work.

46 PLANTATION/ PRESERVATION / CONSERVATION MEASURES:

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

All fossils, coins, articles of value of antiquity, structures and other remains or things of geological or archaeological interest, discovered on any project location during excavation / construction shall be property of the Government, and shall be dealt with as per provisions of the relevant legislation. The contractor will take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He will, immediately upon discovery thereof official instructions of Engineer-In-Charge for dealing with the same, till then all work shall be stopped.

47 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, material, 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 Ten(10) days of award of the contract failing which Rs.1000/- per day shall be recovered (non refundable) from the contractor till the date of actual submission.

The programme chart should include the following:

Descriptive note explaining sequence of the various activities.

Network (PERT / CPM / BAR CHART).

Programme for procurement of materials/equipments/labour by the contractor.

If at any time, it appears to the Engineer-in-Charge that the actual progress of work does not conform to the approved programme referred above, the contractor shall produce a revised programme showing the modifications to the approved programme to ensure completion of the work. The modified schedule of programme shall be approved by the Director.

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

48 PROGRESS REPORT:

The contractor shall submit monthly progress report of the work in computerized form. The progress report shall contain the following information, apart from whatever else may be required as specified. Contractor shall give the Engineer-in-charge on 7th day of each month a progress report of work done during previous month failing which Rs.200/- per day shall be recovered (non-refundable) from the contractor till the date of its actual submission.

Project information, giving the broad features of the contract.

Introduction, giving a brief scope of the work under the contract and the broad structural or other details.

Construction schedule of the various works with a bar chart for the next quarter showing the milestone, targeted tasks and upto date progress.

Progress chart of the various components of the work that are planned and achieved for the month as well as cumulative upto the month, with reasons for deviations, if any in a tabular format.

Plant and machinery statement, i/c those deployed on the work and their working status.

Manpower statement indicating individually the names of all the staff deployed on the work along with their designations.

Financial Statement including the broad details of all the running account payments received upto date, such as gross value of work done, advances taken, recoveries effected, amounts withheld, net payments received etc.

Statement showing the extra & substituted items submitted by the contractors and the payment received against then, items pending for sanction / decision by the department, broad details of the bank guarantees, indicating clearly their validity periods, broad details of the insurance policies taken by the contractor, if any, the advances received and adjusted.

Progress photographs in colour of the various items / components of the work done upto date to indicate visually the actual progress of work.

Quality assurance and quality control tests conducted during the month, with the result thereof.

If the work is carried out in more than one shift or during the night, no claim on this account shall be entertained. The contractor has to take permission from the police authorities and Engineer in Charge etc. if required for work during night hours. No claim / hindrance on this account shall be considered if work is not allowed during night time. The requisite supervision shall be made available by the department along with the necessary issue of material under joint custody.

Existing drains, pipes, cables, overhead wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. In case the same are to be removed and diverted, the same shall be payable to the contractor. The contractor shall work out the cost and the same shall be approved by the Engineer-in-Charge. 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.

The Contractor shall be responsible for the watch and ward / guard of the building's safety, fittings and fixtures & protection of flooring doors & windows etc. provided by him/ supplied to him against pilferage and breakage during the period of installations and thereafter till the entire work as per agreement is physically handed over to the department. No extra payment shall be made on this account.

49 QUALITY ASSURANCE:

The contractor shall establish, document and maintain and effective quality assurance system as outlined in the specifications and various codes and standards.

The bidder shall understand the scope of the balance work, drawing, specifications and standards etc. attached with the tender or to be followed and shall seek clarification, if any before submission of the tender.

The quality assurance system plans / procedures / method statement to be followed shall be furnished in the form of a quality assurance manual. It should cover quality assurance, plan procedure, specifications, frequency of the inspection, testing, acceptance criteria, method of sampling, testing etc to be followed for quality and the details of the personal responsible. It is obligatory on the bidder to obtain the approval of every quality assurance documents with Engineer-in-charge before he start using particular document for execution of work.

The approval of quality assurance by Engineer-in-charge does not absolve the contractor of the contractual obligations towards executing the work as per the laid down the specification of the work.

The contractor shall produce the quality control, records, on the formats approved by Engineer-in-charge in the quality assurance plan.

The contractor shall ensure towards the enforcement of quality assurance plan by his all specialized agencies as approved by the Engineer-in-charge.

The Engineer-in-charge reserve the right to inspect / witness, review any or stages of the work at shop / site as deemed necessary for quality assurance and / or timely completion of work.

The contractor has to ensure the deployment of quality assurance and quality control engineer (s) depending upon the quantum of work. This QA/QC group shall be fully responsible to carry out the work as per standards and all codes requirements. In case Engineer-in-charge feels that contractor's QA/Q Engineer(s) are incompetent or insufficient, contractor has to deploy other experiences Engineer(s) as per site requirement and to the full satisfaction of Engineer- in-charge.

The contractor is required to review the quality assurance program at all appropriate stages to ensure the quality, completion of activities in time etc. and if required should deploy additional manpower and resources to ensure the quality and timely completion of the project.

If the contractor fails to deploy the quality assurance team, the necessary recovery shall be made from the contractor's bill as per the rates provided for in the schedule – F (Clause 36(i)) of the agreement.

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

The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and clearance of the same before use in the work. The contractor shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight / dimensions as may be necessary for execution of work. The sealed samples are to be handed over to the approved testing lab by contractor at his own cost.

The Cement Godown of capacity to store a minimum of 1000 bags of cement shall be constructed at site of work for which no extra paymentshall be made. The Godown shall be provided with a single door with two locks. The keys of one lock shall remain with Engineer-in-charge of the work and that of other lock with the authorized agent of the contractor at the site of work so that the cement is issued from godowns according to the daily requirement with the knowledge of both parties. The account of daily receipt and issue of cement shall be maintained by the contractor in Cement Register in the prescribed Performa.

50 TESTING OF MATERIALS:

Mandatory Tests as per frequency prescribed in CPWD specifications-2019 (Vol.1 & 2) are to be carried out in field / approved laboratory by the contractor at his own cost. The records for such testing shall be maintained by the contractor in prescribed Performa approved by the Engineer-in-charge.

90 % of the total tests shall be done at the laboratory established at the site by the contractor and remaining 10% in the laboratories approved by the engineer-in-charge. This percentage may be varied by the Engineer-in -charge depending on the site conditions.

51 TESTING OF MATERIALS AT SITE:

A site laboratory with the minimum following equipment (conforming to I.S. standards) shall be established and maintained by the contractor within one month from the award of work:-

Details of the equipment to be kept in the lab are given below:

51.1 Balances:
7 kg. to 10 kg. capacity, semi-self indication type – accuracy 10gm.
500 gm. Capacity, semi-self indicating type –accuracy 1gm
Pan balance-5 kg. capacity –accuracy 10 gms.

51.2 **Ovens**:
- electrically operated, thermostatically controlled upto 110^0C – sensitivity 1^0C.

51.3 Sieves: as per IS 460-1962.

a. I.S. sieves-450 mm internal dia, of sizes 100 mm , 80 mm ,63 mm 50mm,40 mm,25mm, 20mm, 12.5mm,10mm, 6.3mm, 4.75mm, complete with lid and pan.

b. I.S. sieves -200mm internal dia, (Brass frame) consisting of 2.36 mm , 1.18mm, 600 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan Sieve shaker capable of 200 mm and 450mm dia sieves, manually operated with timing switch assembly.

51.4 Equipment for slump test-slump cone, steel plate, tamping rod, steel scale, scoop.

51.5 Dial gauges, 25mm travel -0.01 mm/ Division least count -2 nos.

51.6 100 tonnes compression testing machine, electrical cum manually operated.

51.7 Graduated measuring cylinders 200ml capacity -6 Nos.

51.8 Enamel trays (for efflorescence test for bricks).

i) 300mm x 250 mm x 40 mm – 2 Sets.
ii) Circular plates of 250 mm dia. – 4 nos.

51.9 Hammer for concrete testing.

51.10 Moisture meter for timber.

51.11 ISI Marked 150x150x150 mm CC Cube moulds – minimum 48 Nos.

51.12 All necessary tests as per the Contract/CPWD specifications/relevant BIS codes shall be carried out on all the materials whether ISI marked or otherwise. Wherever Contract /CPWD specifications/relevant BIS codes do not specify the frequency of tests, the same shall be carried out as per the directions of the Engineer-in-Charge. Nothing extra whatsoever shall be payable on this account.

52 Testing at Manufacturer's Place:

All materials which are specified to be tested at the manufacturer's works shall satisfactorily pass the tests in the presence of the authorized representative of Engineer-in-charge before being used in the 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.

The standard sectional weights referred to in Table 5.4 Para 5.3.4 in CPWD Specifications 2019 shall be considered for conversion of length of various sizes of 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 coefficient 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 coefficient & 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 Table -5.4 Para -5.3.4 of CPWD specifications.

53 Maintenance of Register of tests:

a. All the registers of tests shall be maintained by the contractor. The registers shall be in prescribed Performa approved by the Engineer-in-charge.

b. All Samples of materials including Cement Concrete Cubes shall be taken jointly with Contractor by JE and out of this at least 50% samples shall be taken in presence of Engineer in charge. If there is no JE, all Samples of materials including Cement Concrete Cubes shall be taken by Engineer-in-charge jointly with Contractor. All the necessary assistance shall be provided by the contractor. Cost of sample materials is to be borne by the contractor and he shall be responsible for safe custody of samples to be tested at site.

c. All the test in field lab setup at Construction Site shall be carried out by the Engineering Staff deployed by the contractor which shall be 100% witnessed by JE. At least 20% of the tests are to be witnessed by the Engineer-in-charge.

d. All the entries in the registers will be made by the designated Engineering Staff of the contractor and same will be regularly reviewed by Engineer-in-charge.

e. Contractor shall be responsible for safe custody of all the test registers.

54 Maintenance of Material at Site (MAS) Register

54.1 All the MAS registers including Cement, Steel and Paints register shall be maintained by the contractor. The registers shall be in prescribed Performa approved by the Engineer-in-charge.

54.1.1 Each of the entry of receipt of material at site shall be 100% test checked by JE.

54.1.2 Each MAS Register shall be checked by JE at least twice a week and at least once a week by Engineer-in-charge. If there is no JE then MAS registers will be checked by Engineer-in-charge at least twice aweek.

54.1.3 Cement Register shall be reviewed by Engineer-in-charge at least once a month.

54.1.4 Hindrance register shall be maintained at site & particular hindrance shall not be considered by the competent authority unless it is at least mentioned in hindrance register.

55 Submission of copy of all test registers, MAS registers & hindrance register along with each alternate running account bill and final bill is mandatory. The receipt of registers shall be acknowledged by the Engineer-in-charge by signing the copies and registering to confirm receipt in Project Office. If all the test registers and MAS registers are not submitted along with each alternate running account bill and final bill no payment shall be released to the contractor.

56 Tool & Plants

The contractor shall, at his own cost and risk, provide and operate all the required equipment, T&P and machinery as required at site. The contractor shall, however, be required to provide and operate following minimum equipment, T&P & machinery at Site:

Sl. No.	Name of Equipment	Nos.
1	Excavators (JCB/ Poclain)	1
2	Builders hoist	1
3	Mortar mixer with hopper of full bag capacity (diesel)	1
4	Mortar mixer with hopper of full bag capacity (electrical)	1
5	Needle vibrator (electrical)	2
6	Needle vibrator (petrol)	2
7	Plate vibrator (Electrical /petrol)	1
8	Bar bending machine.	1
9	Bar cutting machine.	1
10	Wood thickness planer	1

11	Drilling machine	2
12	Welding machine	2
13	Steel shuttering for slab etc.	750 sqm
14	Beam bottom/side shuttering of waterproof ply.	375 sqm
15	Column shuttering (steel) in sets of various sizes of columns.	200 sqm
16	Steel scaffolding	~~2000~~ 1000 cum space.
17	Grinding / polishing machines	3
18	Air compressors (diesel)	1
19	Pump (electric)	1
20	Pump (diesel)	1
21	Total Station equipment	1
22	Electrical Chase Cutter	1
23	Electrical hammer Drill Machine	1
24	Insulation Testing Magger of all rating and earth tester.	1
25	Hydraulic Crimping Machine	1
26	JCB/ Poclain	

These equipment/T&P/machinery shall be the mandatory requirement over and above those pertaining to arrangement of concrete from RMC producing plants as mentioned elsewhere in the tender documents. Nothing extra whatsoever shall be payable on this account. All the equipment, T&P and machinery shall be kept in good condition. In case the requirement at any stage exceeds that given above the same shall be arranged as per need by the contractor at his own cost.
Equipment like JCB/Poclain/ excavators/Transit mixer etc. shall be allowed to be moved away from the site when, in the written opinion of Engineer-in-Charge, the same are no longer required at site of work.

All the equipment shall be brought, installed, and commissioned at the site of work at least one week before their actual planned use at site. To maintain the horizontal & vertical profile of the building the contractor has to do the total station survey with the least count of 1 second at his own cost and nothing extra shall be paid for this.

In case the contractor fails to arrange the above T& P at site within 10 days of the notice from the Engineer-in-Charge to do so, recoveries at the following rates shall be made.

Sl. No.	**Name of Equipment**	**Quantities**	**Recovery rate**
1.	Concrete Batch Mix Plant capacity 1 to 3 cum per hours (fully automatic with computer control).	1	Rs. 1,000 /day
2.	Steel shuttering for slab etc.	750 sqm	Rs 10/sqm/day
3.	Beam bottom/side shuttering of waterproof ply.	375 sqm	Rs 10/sqm/day
4.	Column shuttering (steel) in sets of various sizes of columns.	200 sqm	Rs 10/sqm/day
5.	Steel scaffolding	2000 cum space.	Rs 3/cum/day

Recoveries as per Sl. No.1 above will not be applicable in case RMC is arranged from the approved plant as per Direction of Engineer-in-charge.

57 Scaffolding, if required, shall be arranged by the agency at their cost, nothing extra shall be paid separately.

58 Temporary Electricity connection will be provided for the work on request from the agency & recovery shall be made as per reading of energy meter and as per usual charges applicable time to time.

59 **GENERAL**

59.1 The order of preference in case of any discrepancy as indicated in condition No. 8.1 under"Conditions of Contract" given in standard CPWD contract form may be read as the following:

i) Nomenclature of items as per schedule of quantities.
ii) Particular specification and special condition, if any.
iii) CPWD specifications.
iv) Architectural Drawings
v) Indian standard specifications of B.I.S.
vi) Sound Engineering Practice

59.2 Wherever any reference to any Indian Standard Specifications of BIS or other international standards of ASTM / BS / EN occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued there-to or revisions thereof, if any, up to the date of receipt of tenders.

59.3 The contractor shall work according to the programme of work as approved by the Engineer-in-charge, for which purpose, the contractor shall submit a programme of the work within 7 days from the stipulated date of start of the work based on computer software mutually agreed or in other format decided by Engineer-in-charge and as per clause 5 of GCC 2023 shall update the same every fortnight.

The contractor shall submit a monthly progress report of the work in a computerized form. The progress report shall contain the following, apart from whatever else may be required as specified:

(i) Project information, giving the broad features of the contract of the work under the contract, and the broad structural or other details.

(ii) Introduction, giving a brief scope of the work under the contract, and the broad structural or other details.

(iii) Construction schedule of the various components of the work through a bar chart for the next three quarters (or as may be specified), showing the milestones, targeted tasks and upto date progress.

(iv) Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative upto the month, with reasons for deviations, if any, in a tabular format.

(v) Plant and machinery statement, indicating those deployed in the work, and their working status.

(vi) Man-power statement, indicating individually the names of all the staff deployed in the work, along with their designations and ID card.

(vii) Financial statement, indicating the broad details of all the running account payments received upto date, such as gross value of work done, advances taken, recoveries effected, amounts withheld, net payments, details of cheque payments received, etc.

(viii) A statement showing the extra and substituted items submitted by the contractor, and the payments received against them, items pending for sanction/decision by the Department, broad details of the Bank Guarantees, indicating clearly their validity periods, broad details of the insurance policies taken by the contractor, if any, the advances received and adjusted.

(ix) Progress photographs, in colour, of the various items/components of the work done upto date, to indicate visually the actual progress of the work.

(x) Quality assurance and quality control tests conducted during the month, with the results thereof.

(xi) Videography at various stages of construction right from the day of start of work to date of completion/occupation, covering all major events, inspections, visits by dignitaries etc.

59.4 The working drawings appearing at para 8.1(iii) of conditions of contract in the form CPWD-7, shall mean to include both architectural and structural drawings respectively. The structural and architectural drawings shall be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, final decision, in writing of the Engineer-in-charge shall be obtained by the contractor before proceeding further.

59.5 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions / instructions including issue of identity cards to all persons authorized by him to do work / visit the work site and nothing shall be payable on this account.

59.6 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor (s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed, so as not to interfere with the operations of other contractors, or heshall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of Engineer-in-Charge. The contractor shall be responsible for any damage due to hindrance caused by him.

59.7 Cast iron pipes and fittings without ear shall be used. However, pipes and fittings with ears may be accepted without any extra payment. In such cases, clamps are not required and no extra payment shall be made for fixing the pipes in a different manner.

59.8 Any cement slurry added over base surface for bond or for continuation of concreting, for protecting reinforcement bars, its cost shall be deemed to have been included in the respective items, unless specified otherwise and nothing extra shall be payable nor extra cement shall be considered in the cement consumption on this account.

59.9 Stacking of materials and excavated earth including its disposal shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth ifrequired at any stage shall have to be done by the contractor at his own cost.

59.10 No claim for idle establishment & labour, machinery & equipment, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.

59.11 Only Star headed Stainless Steel screws shall be used unless otherwise specified.

59.12 Work shall be carried out in professional manner with finished product serving the intended purpose with specified strength, durability and aesthetics.

59.13 Work activities shall be executed in well thought out sequences such that consequent activities not adversely affecting previously done work. Nothing extra shall be payable to protect the works already done.

59.14 The contractor shall prepare all the needed shop drawings well in advance and get them approved before placing the order and execution of the item.

59.15 The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer - in -Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications.

59.16 The contractor shall not store /dump construction material or debris on metalled road.

59.17 The contractor shall get prior approval from Engineer-in-charge for the area where the construction material or debris can be stored beyond the metalled road. This area shall not cause any obstruction to the free flow of traffic / inconvenience to the pedestrians. It should be ensured by the contractor that no accidents occur on account of such permissible storage.

59.18 The contractor shall ensure that 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 are fully covered. The contractor shall take every necessary precautions that the vehicles are properly cleaned and dust free to ensure that enroute their destination, the dust, sand or any other particles are not released in air / contaminate air.

59.19 The contractor shall provide mask to every worker working on the construction site and involved in loading, unloading and carriage of construction material and construction debris to prevent inhalation of dust particles.

59.20 The contractor shall provide all medical help, investigation and treatment to the workersinvolved in the construction of building and carry of construction material and debris relatable todust emission.

59.21 The contractor shall ensure that C&D waste is transported to the C & D waste site only and due record shall be maintained by the contractor.

59.22 The contractor shall compulsory use of wet jet in grinding and stone cutting.

59.23 The contractor shall comply all the preventive and protective environmental steps as stated in the MoEF guidelines, 2010 or amended thereafter.

59.24 The contractor shall carry out on-Road-Inspection for black smoke generating machinery. The contractor shall use cleaner fuel.

59.25 The contractor shall ensure that all DG sets, comply latest emission norms notified by MoEF.

59.26 The contractor shall use vehicles having pollution under control certificate. The emissions can be reduced by a large extent by reducing the speed of a vehicle to 20 kmph. Speed bumps shall be used to ensure speed reduction. In cases where speed reduction cannot effectively reduce fugitive dust, the contractor shall divert traffic to nearby paved areas.

59.27 The contractor shall ensure that the construction material is covered by tarpaulin. The contractor shall take all other precaution to ensure that no dust particles are permitted to polluteair quality as a result of such storage.

59.28 The paving of the path for plying of vehicles carrying construction material is more permanent solution to dust control and suitable for longer duration projects.

59.29 The agency is permitted for erect the site office, store yard and ground water extraction facility (if permitted by the statutory authorities) temporarily near the place of construction free of cost only after getting specific approval of Engineer in-charge. Contractor shall remove such structures on completion of work.

59.30 Entry to the campus may be restricted from particular entrance gate and agency has to follow security rules of the campus & nothing extra shall be payable on this account.

59.31 The contractor shall make necessary arrangement to follow the guidelines / instruction issued by the concerned government authority for controlling and containing the spread of COVID-19 like situation and nothing shall be paid extra in this regard.

59.32 The contractor shall make the barricading with M.S. Profile sheet of minimum 6 metre height all round of site before commencement of work as per direction of Engineer–in-Charge. The contractor should visit the site and see thoroughly the required length of barricading. The cost of barricading shall be paid to contractor as per SOQ.

59.33 If it is required during construction to cut a tree or more trees than contractor is liable to take necessary permissions from Govt. Deptt. and expenditure incurred for taking permissions etc. may be reimburse to contractor after submission of vouchers/ bills.

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B. Particular specifications for Civil Work:

1. 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 to II (with up to date correction slips as on submission of bid (Hereinafter to be referred to as CPWD Specifications) and instructions of Engineer-in-Charge. Whenever CPWD Specifications are silent, the latest IS Codes / Specifications shall be followed. However, **all hardware material such as nuts/bolts/screws/washers etc. to be used in the work shall be countersunk Stainless steel in woodwork, sanitary, plumbing and drainage work.**

2. The Contractor shall have to engage highly experienced skilled labour, deploy modern T & P and other equipments to execute the work. Many items like stone slab in platform, wall and floor tiles and plaster, factory made UPVC windows fixing with dash fasteners and sealing with poly sulphide sealants, Railing in balcony and staircase and other specialized flooring work, woodwork, will specially require engagement of well skilled workers having experience particularly in execution of such items.

3. Samples of all material and fittings to be used in the work in respect of brand, manufacture and quality shall be got approved from the Engineer-in-Charge, well in advance of actual execution and shall be preserved till the completion of the work. Articles bearing IS certification mark shall only be used unless no manufacturer has got ISI mark for that particular material. Any material / fitting whose sample has not been approved in advance and any other unapproved material brought by the contractor shall be immediately removed as soon as directed failing which the Engineer-in-charge shall have the power to remove the same at cost of the contractor.

4. Unless otherwise specified in the schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, floors including terrace, leads and depths and nothing extra shall be payable on these accounts.

5. The contractor shall give a performance test of the entire installation(s) as per the standing specifications before the work is finally accepted and nothing extra what-so-ever shall be payable to the contractor for the test.

6. Any cement slurry added over base surface (or) for continuation of concreting for better bond is deemed to have been built in the items and nothing extra be payable (or) extra cement considered in consumption on this account.

7. The Contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department/arranged by the contractor.

8. For water proofing treatment of all types of work; the Contractor(s) shall submit for the approval of the Engineer-in-Charge, the names of specialized agencies, of repute along with their technical capability proposed to be engaged by him within three months from the date of award who have executed satisfactorily at least one similar work of equal or more magnitude or two similar works of minimum 50% magnitude (Financial) of water proofing items.

   The contractor has to submit guarantee bond for water proofing work executed under water proofing sub head. Final payment for water proofing shall be released only after submission of valid guarantee bond (Annexure-1) by the contractor.

9. SAMPLES FOR TESTING

Samples of materials required for testing shall be provided free of charge by the contractor. The cost of tests shall also be borne by the contractor.

If any load testing or special testing is to be done for concrete whose strength is doubtful, the cost of the same shall be borne by the contractor.

In case there is any discrepancy in frequency of testing as given in list of mandatory tests, and that in individual sub-heads of work as per CPWD specifications higher of the two frequencies of testing shall be followed and nothing extra shall be payable on this account.

10. Payment for items of "RCC work', brick work and concrete work above different floor shall be made at the rates provided for these items. For operation for these rates, the floor level shall be considered as top of the main structural slab in that floor viz. Top of RCC slab in main room and not top of any sunken or depressed floor for laboratory Kitchen / W.C. and toilet slabs.

11. CEMENT

11.1 The contractor shall procure 43 grade (conforming to IS 8112) ordinary Portland cement, as required in the work, from reputed manufacturers of cement having a production capacity not less than one million tonnes or more per annum, such as ACC, Ultra-Tech, Jay Pee Rewa, Vikram, Shree Cement, Birla Cement, JK Cement as approved by the Ministry of Industry, Government of India, and holding license to use lSI certification mark for their product. Engineer-in-charge may change the brand of Cement depending upon availability in local market, if needed. In case of non-availability of OPC, PPC conforming to IS: 1489 (part-1) of equivalent grade may be considered only in non structural work with the approval of Engineer-in-charge IIM Udaipur.

11.2 The supply of cement shall be taken in 50 kg. bags bearing manufacturer's name and ISI marking. Samples of cement arranged by the contractor shall be got tested by him in accordance with provisions of relevant BIS codes as soon as it is brought at site. In case the test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected, and it shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer- in-charge to do so.

11.3 The cement shall be brought at site in bulk supply of minimum 20 tonnes or as decided by the Engineer- in- charge. Cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) to be constructed by the contractor at his own cost as per sketch available in NIT with weatherproof roofs and walls. The size of the cement godowns is indicated in the sketch for guidance and a store of minimum 2000 bags capacity storage shall be constructed. The actual size of godowns shall be as per site requirements and nothing extra shall be paid for the same. The decision of the Engineer-in- charge regarding the capacity needed will be final.

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

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

11.6 The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-in-charge. If he does not do so within 3 days of receipt of such notice, the Engineer-in-charge shall get it removed at the cost of the contractor.

12. STEEL REINFORCEMENT

12.1 The contractor shall procure TMT steel reinforcement bars Fe 500D conforming to the relevant manufacturers' specifications from the main producers only.

12.2 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.

12.3 Samples shall also be taken and got tested by the contractor 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 BIS codes, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time of written orders from the Engineer-in-charge to do so.

12.4 The steel reinforcement bars shall be brought to the site in bulk supply of 9 tonnes or more, or as decided by the Engineer-in-charge.

12.5 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.

12.6 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:

12.7

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

12.8 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.

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

13. RCC WORK (DESIGN- MIX CONCRETE)

13.1 The RCC work shall be done with Design Mix Concrete as per CPWD Specifications - 2002 unless otherwise specified. In the nomenclature of items wherever letter M has been indicated, the same shall imply for the Design Mix Concrete. For the nominal mix in RCC, CPWD Specifications and relevant IS Codes shall be followed. The Design Mix Concrete will be designated based on the principles given in IS: 456-2000. The contractor shall design mixes for each class of concrete indicating that the concrete ingredients and proportions will result in concrete mix meeting requirements specified. In case of use of admixture and or white cement, the mix shall be designed without these admixtures. The specifications mentioned here-in- below shall be followed for Design Mix Concrete.

13.2 Coarse Aggregate

As per CPWD specifications.

15.3 Fine Aggregate

As per CPWD specifications.

15.4 Water

It shall conform to requirements laid down in IS 456: 2000 and CPWD specification.

15.5 Cement: - Cement arranged by the Contractor will be OPC (grey) of Grade-43 conforming to IS: 8112. The record of white cement shall be kept in the same Performa and same manner as applicable for the grey cement.

15.6 Admixtures: - Wherever, required, admixtures of approved quality shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The chloride content in the admixture shall satisfy the requirements of BS:5075. The total amount of chlorides In the admixtures mixed concrete shall also satisfy the requirements of IS: 456-2000.

15.6.1 Admixtures may be added (By maintaining the minimum cement content as specified above) in case of specific technical requirement so as to meet the workability slump requirement or for any other reason. But nothing extra is to be paid to the contractor on account of adding admixtures.

The minimum cement content and maximum water cement ratio of concrete of various grades shall be as below:

Sl. No.	Grade Designation	Minimum Cement content (Kg. per cum)	Maximum Water Cement Ratio
(i)	M-25	320	0.50
(ii)	M-30	330	0.45
(iii)	M-35	340	0.45

Note 1: In case where the quantity of cement required is higher/lesser than the specified in the nomenclature of items of Schedule of quantity to achieve desired strength based on an approved mix design, it shall be payable to the contractor/ recoverable from the contractor.

I) In the designation of a concrete mix letter M refers to the mix and number to the specified characteristic compressive strength of 15x15cmx15cm – cube 28 days expressed in N/mm^2.

II) If design mix allows lesser/higher use of cement than the cement specified in the nomenclature of items of Schedule of quantity to achieve desired strength without adding admixture, then payment/recovery @ quoted by the agency per MT shall be made for higher/lesser consumption of cement.

III) It is specifically highlighted that in addition to the above requirement the maximum cement content for any grade shall be limited to 400kg/cum.

IV) The minimum/maximum cement content for design mix concrete shall be maintained as per the quantity mentioned above.

15.7 The concrete mix design/laboratory tests with and without cement admixture if to be used by the contractor will be carried out by the contractor from laboratory at approved by Engineer-in-charge at his own cost.

The various ingredients for mix design/laboratory tests shall be sent to the laboratory through the Engineer-in-charge and the samples of such aggregate, cement shall be preserved at site by the contractor.

15.8 The contractor shall submit the mix design report from any of the approved laboratory for approval of Engineer-in-charge within 30 days from the date of issue to letter of acceptance of

the tender. No concreting shall be done until the mix design is approved. In case of white Portland cement and the likely use of admixtures where CC / RCC is done using concrete pumps in concrete with ordinary Portland / white Portland cement the contractor shall design and test the concrete mix by using trial mixes with white cement and /or admixtures also for which nothing extra shall be payable.

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

15.10 Approval of Design Mix:

The mix design for a specified grade of concrete shall be done for a target mean compressive strength $\tau_{ck} = f_{ck}+1.65s$.

Where, f_{ck} = Characteristic compressive of 28 days
s = Standard deviation which depends on the degree of quality control.

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

Grade of Concrete	For 'good' quality of control
M25	5.0
M30	6.0

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

15.11 Batching

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

15.12 All other operations in concreting work like Mixing, Slump, Laying placing of concrete, compaction curing etc. not mentioned in this particular specification for Design Mix of concrete shall be as per CPWD specification.

15.13 Work Strength Test

Test specimen

Work strength test shall be conducted in accordance with IS:456 on random sampling. Each test shall be conducted on six specimens, three of which shall be tested at 7 days and remaining three at 28 days.

Test results of sample

The test result of the sample shall be average of the strength of three specimen. The individual variation shall not be more than 15% of the average. If more the test results of the sample are invalid. 90% of the total test shall be done at the laboratory established at site by contractor and remaining 10% in any other laboratory as directed by the Engineer-in-charge.

Lotsize

The minimum frequency of sampling of concrete of each grade shall be according with the following:

Quantity of concrete in the work cubic metre per day	Number of samples.
1-5	1
6-15	2
16-30	3
31-50	4
51 & above	4+ one additional sample for additional 50 cubic metre or part thereof.

Note: At least one sample shall be taken from each shift.

15.14 Acceptance Criteria

15.14.1 Compressive Strength: The concrete shall be deemed to comply with the strength requirements when both the following condition are met:

a) Any individual test result is not less than (f_{ck} -4) N/mm^2

b) The mean of test result from any group of four consecutive samples is greater than or equal to (f_{ck}+.825 x established standard deviation) (rounded off two nearest 0.5 N/mm^2) or (f_{ck} +4) N/mm^2, whichever is greater.

15.14.2 Flexural Strength: When both the following conditions are met, the concrete complies with the specified flexural strength.

(a) The mean strength determined from any group of four consecutive test results exceeds the specified characteristic strength by at least 0.3 N/mm^2

(b) The strength determined from any test result is not less than the specified characteristic strength/ 0.3 N/mm^2.

15.14.3 Quantity of Concrete Represented by Strength Test Results: The quantity of concrete represented by a group of four consecutive test results shall include the batches from which the first and last samples were taken together with all intervening batches.

For the individual test result requirements is strength $\geq$ (f_{ck} - 4) N/mm^2, or in item (b) of 15.14.2. Only the particular batch from which the sample was taken shall be at risk.

Where the mean rate of sampling is not specified the maximum quantity of concrete that four consecutive test results represent shall be limited to 60 m^3.

All test specimens shall be made compacted, cured and tested in compliance with IS:526 and test result interpreted in accordance with IS:456 for acceptance of concrete strength, field specimens test results shall not be less than values given in table 5.6 of CPWD Specifications (Vol.-I) 2019.

15.14.4 If the concrete is deemed not to comply pursuant to 15.14 the structural adequacy of the parts affected shall be investigated and any consequential action as needed shall be taken.

15.14.5 The concrete of each grade shall be assessed separately.

15.14.6 Concrete is liable to be rejected of it is porous or honeycombed, its planning has been interrupted without providing a proper construction joint the reinforcement has been displaced beyond the tolerance specified, or construction tolerance have not been met. However, the hardened concrete may be accepted after carrying out suitable remedial measured to the satisfaction of the Engineer-in-charge for which nothing extra ispayable to the contractor.

15.15 Only MS centering and scaffolding material unless otherwise specified shall be used for all RCC work. Only M.S. centering/shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. work to give an even finish of concrete surface. However, Laminated shuttering-Ply may be used for certain situations like Beam Bottoms, Beam Corners, Beam Sides, RCC slab sides and staircases etc. for which no deduction / extra shall be made on this account.

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

15.17 In case of rejection of concrete as governed by the para “Acceptance Criteria” as above, the work for which samples have failed shall be redone at the cost of contractors. However, the Engineer-in-Charge may order for additional tests (like cutting cores, ultrasonic pulse velocity, and rebound hammer test etc.) to be carried out at the cost of contractor to ascertain, if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The Contractor shall take remedial measures necessary to retain the structure as approved by the Engineer-in-Charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with Para 5.4.10.5 D (D-3) of CPWD Specification.

15.18 Engineer-in-charge may allow the use of nominal mix RCC in smaller members like lintel, chajjas & shelf etc. at his discretion.

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

The item for shuttering in staircase includes shuttering in steps form.

15.20 Measurement

As per CPWD specifications.

15.21 Tolerances

As per CPWD specifications.

15.22 Rate

15.22.1 The rate includes the cost of material and labour involved in all the operations described above except for the cost of centering, shuttering & reinforcement which will be paid separately.

15.22.2 In case of actual average compressive strength being less than specified strength which shall be governed by para ‘Acceptance Criteria’ as above the rate payable shall be worked out accordingly on prorate basis.

15.22.3 In case of rejection of concrete on account of unacceptable compressive strength governed by para ‘Acceptance Criteria’ as above the work for which

samples have failed shall be redone at the cost of contractors. However, the Engineer-in-charge may order for additional test (like cutting cores, ultrasonic pulse velocity test, load tests on structure of part of structure etc.) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The contractor shall take remedial measures necessary to retain the structure as approved by the Engineer-in-charge without any extra cost. However, for payment the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with relevant para.

15.22.4 Necessary arrangements shall be made for field tests and all required equipments shall be arranged by establishing field lab by the agency for mandatory tests of the material as specified in CPWD specifications or as per direction of Engineer-in-charge. Nothing extra shall be paid on this account.

16. The Concrete mix design / laboratory tests with admixture (if to be used by contractor at his own cost) and without admixture will be carried out by the contractor through govt. institute, IITs, NITs, Central & State research Centre or Centrally funded laboratories.

The expenditure on account of conducting design mix from the laboratory/ test house shall be borne by the Contractor.

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

In the event, if the above-mentioned laboratories are unable to carry out the requisite design / testing, the contractor may have it done from any other laboratory with prior approval of the Engineer-in-Charge.

17. READY MIX CONCRETE (RMC) FROM RMC PRODUCER

17.1 The contractor shall be allowed to arrange Ready MIX concrete (RMC) from the RMC producing plants approved by the Engineer-in-charge.

17.2 The contractor shall, within 15 days of award of the work, submit the text of MOU proposed to be entered between purchaser (the contractor) and supplier (RMC producer) to the Engineer-in-Charge for his approval. The contractor shall draw the MOU with approved RMC producer and submit the copy to Engineer-in-Charge within a week of such approval. The contractor will not be allowed to use ready mixed concrete without completion of above stated formalities.

17.3 Notwithstanding the approval granted by Engineer-in-Charge in aforesaid manner or provisions in CPWD specifications 2019, the contractor shall be fully responsible and accountable for quality of concrete including input control, transportation and placement etc.

17.4 For all purposes the contractor shall carry out fully the responsibilities of the “placement contractor’ and the “manufacturer of concrete’.

17.5 The Engineer-in-Charge will reserve the right to inspect at any stage and reject the concrete if he is not satisfied about quality of product at the user’s end.

17.6 The Engineer-in-charge reserves the right to exercise control over the:-

17.6.1 Ingredients, water and admixtures purchased, stored and to be used in the concrete including conducting of tests for checking quality of materials, recording of test results and declaring the materials fit or unfit for use in production of mix.

17.6.2 Calibration checks of the RMC plant.

17.6.3 Weight and quantity check on the ingredients, water and admixtures added for batch mixing.

17.6.4 Time of mixing of concrete.

17.6.5 Testing of fresh concrete, recordings of results and declaring the mix fit or unfit for use. This will include continuous control on the workability during production and taking corrective action, if required.

17.6.6 For exercising such control, the Engineer-in-charge shall periodically depute his authorized representative at the RMC plant. It shall be responsibility of the contractor to ensure that all necessary equipment, manpower & facilities are made available to Engineer-in-Charge and/or his authorized representative at RMC plant.

17.7 All required relevant records of RMC shall be made available to the Engineer-in-Charge or his authorized representative. The Engineer-in-Charge shall, as required, specify guidelines & additional procedures for quality control & other parameters in respect of materials, production & transportation of concrete mix which shall be binding on the contractor & the RMC plant. Only concrete as approved in design mix by Engineer-in-Charge shall be produced in RMC Plant and transported to the site. 43-Grade OPC (Conforming to IS-8112) of brand/make/source as approved by Engineer-in-Charge shall only be used for production of concrete.

17.8 It shall be the responsibility of the contractor to ensure fulfillment of all the specification criterion of RMC at the point of placement of RMC.

18. QUALITY CONTROL OF READY-MIXED CONCRETE

It shall be the responsibility of the contractor to ensure that RMC producer provides all necessary testing equipments and takes all necessary measures to ensure Quality Control of ready mixed concrete. In general the required measures shall be:-

18.1 **Control of purchased material quality:-** RMC producer shall ensure that all the materials purchased and used in the production of concrete conform to the stipulation of the relevant agreed standards and the requirements of the concrete mix design and quality control procedures. This shall be accomplished by visual checks, sampling and testing, certification from material supplier and information/data from materials supplier. Necessary equipment for the testing of all material shall be provided and maintained in calibrated condition at the plant by the RMC producer.

18.2 **Control of material storage:** Adequate and effective storage arrangement shall be provided by RMC producer at RMC plant for reliable transfer and feed systems, drainage of aggregates, prevention of freezing or excessive solar heating of aggregate, prevention of contamination etc.

18.3 **Record of mix design and mix design modification: -** RMC producer shall ensure that record of mix design and mix design modification is readily available in his computer at RMC plant for inspection of Engineer-in-Charge or his authorized representative at any time. Any modification in the mix design shall be done only after the approval of Engineer-in-Charge.

18.4 **Transfer and weighing equipment: -** RMC producer shall ensure that a documented calibration procedure is in place. Proper calibration records shall be made available

indicating the date of next calibration due & corrective action taken. RMC producer shall ensure additional calibration checks whenever required by E-in-C in writing to contractor. RMC producer shall also maintain a daily production record including details of customers to whom RMC was supplied including details of mixes supplied. A record shall also be maintained of what materials were used for each day's production including water and admixtures. The accuracy of measuring equipment shall be within
±2% of quantity of cement & ±3% of quantity of aggregate, admixture and water being measured.

18.5 **Maintenance of Plant, Truck Mixers and Pumps: -** Plant, Truck Mixers and Pumps should be well maintained so as to not hamper any operation of production, transportation and placement of concrete.

18.6 Production of concrete at RMC producing plant

18.6.1 Weighing (correct reading of batch data and accurate weighing) :-For each load, written, printed or graphical records shall be made of the weights of the materials batched, the estimated slumps, the total amount of water added to the load, the delivery tickets number for that load and the time of loading the concrete into the truck.

18.6.2 Visual observation of concrete during production and delivery or during sampling and testing of fresh concrete (assessment of uniformity, cohesion, workability, adjustment to water content).: The workability of the concrete shall be controlled on a continuous basis during production. The batch mix found unfit shall not be loaded into the truck for transportation. Necessary corrective action shall be taken in the production of mix as required for further batches.

18.6.3 Adequate testing equipment at the plant including equipment for measuring surface moisture content of aggregates shall be provided by the RMC producer.

18.6.4 Making corresponding adjustments at the plant automatically or manually to batched quantities to allow for observed, measured or reported changes in materials or concrete qualities.

18.6.5 Sampling of concrete, testing, monitoring of results.

18.6.6 Diagnosis and correction of faults identified from observations/complaints.

18.6.7 Control of designed and the prescribed mixes: a quality control system shall be operated to control the strength of designed mixes to the required levels. The system shall include continuous analysis of results from cube tests.

18.6.8 Ready mix concrete shall be arranged in quantity as required at site of work. The ready mix concrete shall be supplied as per the pre-agreed scheduleapproved by Engineer-in-Charge. Nothing extra shall be payable on this account.

18.7 The Engineer-in-charge reserves the right to approve RMC producing plants not mentioned in the list of approved RMC plants if they fulfill all the necessary conditions.

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

18.9 In case of rejection of concrete as governed by the para “Acceptance Criteria” as above, the work for which samples have failed shall be redone at the cost of contractors. However, the Engineer-in-Charge may order for additional tests (like cutting cores, ultrasonic pulse velocity, and rebound hammer test etc.) to be carried out at the cost of contractor to ascertain, if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The Contractor shall take remedial measures necessary to retain the structure as approved by the Engineer-in-Charge without any extra cost. However, for payment, the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with Para 5.4.10.5 D (D-3) of CPWD Specification 2019 Vol-I.

18.10 Engineer-in-charge may allow the use of nominal mix RCC in smaller members like lintel, chajjas & shelf etc. at his discretion.

19. WOOD WORK

19.1 The samples of species of timber to be used shall be deposited by the contractor with the Engineer-in-Charge before commencement of the work. The contractor shall produce cash vouchers and certificates from standard kiln seasoning plant operator about the timber to be used on the work having been kiln seasoned by them, failing which it would not be accepted as kiln seasoned. Necessary tests for the moisture content and volumetric changes of the kiln seasoned timber shall be got carried out by the contractor from the approved laboratory.

19.2 Factory made shutters as specified, shall be obtained from factories to be approved by the Engineer-in-Charge and shall conform to relevant IS Code. The contractor shall inform well in advance to the Engineer-in-Charge the names and address of the factory where from the contractor intends to get the shutters manufactured. The contractor will place order for manufacture of shutters only after written approval of the Engineer-in-Charge in this regard is given. The contractor is bound to abide by the decision of the Engineer-in-Charge and recommend a name of another factory from the approved list in case the factory already proposed by the contractor is not found competent to manufacture quality shutters. Shutters will however, be accepted only if they meet the specified requirements.

19.3 The contractor will also arrange stage wise inspection of the shutters at the factory approved by the Engineer-in-Charge or his authorized representative. The contractor will have no claim if the shutters brought at site are rejected by the Engineer-in-Charge in part or in full lot due to bad workmanship/quality. Such shutters will not be measured and paid. The contractor shall remove the same from the site of work within 7 days after the written instructions in this regard are issued by the Engineer-in-Charge.

19.4 Wood work shall not be painted, oiled or otherwise treated before it has been approved by the Engineer-in-Charge. All portion of timber including architrave abutting against masonry, concrete, stone or embedded in ground shall be painted with approved wood preservative or with boiling coal tar.

20 ALUMINIUM WORK:

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

20.1 The work shall be carried out through an approved specialized firm, who shall furnish all materials, labour, accessories, equipment, tool and plant and incidentals required for providing and installing powder coated / anodized aluminium doors, windows, claddings, louvers and other items as per architectural drawings. The specialized agency shall be got approved from Engineer-in-Charge before execution.

20.2 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.

20.3 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 wellin advance of commencing the work.

20.4 Samples

Samples of doors, windows, louver etc. shall be fabricated, assembled and submitted to the 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.

20.5 Sections

Aluminum 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 aluminum 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.

20.6 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 alignment corner joints, T-joints, 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 architect.

20.7 Anodizing (This specification is applicable to Aluminum sections anodized wherever mentioned in schedule of quantities.)

20.7.1 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. Colouranodizing would be done only by electro colour process. No visual variation in colour shallbe permitted. The tenderer shall clearly indicate the shade variation tolerance as measured by standard equipments.

20.7.2 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.

20.7.3 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

everywhere. 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-Chargeand the contractor shall arrange all the equipment required for these tests at site. Nothing extra shall be paid for above.

20.7.4 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.

20.7.5 A thick layer of clear transparent lacquer based on methacrylates 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 aluminium 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.

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

20.8 Protection of Finish

All aluminium 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.

20.9 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 intheir 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.

20.10 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 finalposition 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 fromthe 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.

20.11 Powder coating on aluminum sections & fittings/fixtures:

20.11.1 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 75 microns.

20.11.2 The pure polyester powder coating shall be got executed from specialised agency. The contractor shall submit the 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 the approval of specialised agency**.**

20.11.2.1 The pure polyester powder shall have following properties:

20.11.2.1.1	Free Flow-ability	:	Satisfactory
20.11.2.2	Particle size	:	< 100 microns suitable for electrostatic spray.
20.11.2.3	Specific gravity	:	1.1 to 1.5 depending on the colour.
20.11.2.4	Shelf life	:	6 months.
20.11.2.5	Stoving Schedule	:	200^0 C for 10 mins. (metal temp.)

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

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

20.11.4 The properties of cured powder films shall be:

20.11.4.1	Scratch hardness	:	Equal to or more than 4 Kg.
20.11.4.2	Impact resistance	:	Min 150 Kg cm
20.11.4.3	Pencil hardness	:	3H to 4H
20.11.4.4	Salt spray resistance	:	500 Hrs.
20.11.4.5	Water soaks at room Temperature	:	No change after 500 Hrs.
20.11.4.6	Detergent resistance	:	No attack after 500 Hrs.
20.11.4.7	Cross Hatch adhesion	:	GT= O (ASTM D-3359)
20.11.4.8	Cured Film thickness	:	Min 75 microns.

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

20.11.6 The surface of aluminium shall be prepared and pretreated as follows before powder coating: -

20.11.6.1 Removal of all foreign matter.

20.11.6.2 Chromatisation of aluminium 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 degreaseshall be as per requirement of the pure polyester powder manufacturer.

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

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

20.12 Fittings:

20.12.1 EPDM Gaskets:

The 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.

20.12.2 Polysulphide:

The gaps between frames and supports and also any gaps in the door windows section shall be raked out as directed and filled with Polysulphide of required shade as per Manufacturers' specifications of approved make and quality to ensure complete water tightness.

20.12.3 The various tests on aluminium sections shall be conducted in accordance with the CPWD specifications and the relevant IS Codes.

20.12.4 Acceptance Criteria:-

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

20.12.5 Measurements:-

Measurements shall be as per CPWD specifications. Payment by weight shall be made for aluminium sections including beading. All fixing angles, fittings and fixtures such as handles etc. shall not be included in the weight to be paid and will be paid for separately. 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.

20.13 Rates:-

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

21. uPVC Doors and Windows:

Installation of UPVC Windows shall be done by manufacturer or his approved fabricator and the window as well as installation must carry a manufacturing warranty for a period of 10 years against manufacturing defect and for leak proof installation. The contractor shall make window opening with accuracy as required by manufacturer to fix up the windows.

22. FLOORING

22.1 The material used shall be as per the nomenclature of item conforming to the texture, colour of samples approved by Engineer-in-Charge.

22.2 Only machine cut stone slabs of marble, granite, kota, Jaisalmer etc. shall be used for flooring work.

22.3 Whenever flooring is to be done in patterns of Marble, Kota, Mosaic, Granite, the contractor shall get samples of each pattern laid and approved by the Engineer-in-Charge before final laying of such flooring for which nothing extra shall be payable.

22.4 Different stones used in pattern flooring shall be measured separately as defined in the nomenclature of the item and nothing extra for laying pattern flooring shall be paid over and above the quoted rate.

22.5 The proper gradient shall be given to flooring for toilets, verandah, kitchen, court yard, etc. as per the direction of Engineer-in-Charge.

22.6 The tread and risers of staircase / steps shall be provided with single slab of granite stone.

22.7 Wherever the thickness of granite and marble has been mentioned as 18mm, no further negative tolerance shall be admissible. The tolerance in thickness on the plus side shall be up to + 2mm.

22.8 Wherever the total thickness of flooring is 38 to 50 mm, the thickness of bed mortar shall very according to the thickness of stone within permissible limits maintaining the total thickness of flooring as specified. Thickness of mortar shall also be adjusted to provide offsets at meeting locations of room with balcony / verandah/ corridor. Nothing extra/no deduction shall be made on this account.

22.9 Whenever the Kota stone/marble stone/granite flooring are to be provided in treads of staircase. It should be provided in one piece with pre finished nosing and pre polished exposed surfaces and edges. Granite stone flooring to be provided on top of cooking platform shall be pre polished with pre finished nosing. It should be provided in not more than 2 (Two) pieces on any side of platform.

22.10 The rate quoted for different items of flooring include cleaning of existing slab surface from building rubbish, deposited mortar / concrete if any in addition to all the provisions above.

22.11 Finished floors and existing flooring at ground floor to be protected by suitable means till handing over of building. Nothing extra shall be paid for such protection.

23. STAINLESS STEEL FITTINGS.

23.1 The stainless steel fittings and fixtures shall be machine made and free of fabrication marks, residual effects of welding / riveting etc.

23.2 The fittings shall be finished in a Satin fish (brushed finish-satin's commercial purpose) except wherever specified otherwise. The brush effect shall be uniform and without any variations.

23.3 Irrespective of the stipulations contained above, the contractor shall produce samples for all the fittings in advance and a written approval for the chosen sample shall be obtained form the Engineer-in-Charge. The decision of the Engineer-in-Charge in respect of the specifications, quality and make of fittings to be used at site shall be final and binding on the contractor. Nothing extra shall be payable on this account.

23.4 All the 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. The quoted rates shall be deemed to be all inclusive for a complete item fit for use including all material. Labour, T&P, Specials, fixing arrangements, nuts, bolts, screws, bushes, all required connection pieces etc. as well as making good the surface wherever required.

23.5 All the accessories including brackets, nuts, bolts, screws, bushes etc. shall be of the quality and make specified by the manufacture of the fittings.

23.6 All the fittings including accessories shall be accompanied with certificate of origin and representative test certificate of conformance with relevant code (s) form the manufacture with

each lot supply. The test certificate should clearly indicate the lot numbers of the supplied fittings.

24. SANITARY INSTALLATIONS, WATER SUPPLY AND DRAINAGE.

24.1 The entire responsibility for the quality of work will rest with the building (main) contractor only and he shall submit a guarantee bond as per Performa (Annexure-II).

24.2 The tendered rates shall include the cost of cutting holes in walls, floors, RCC members etc. wherever required and making good the same for which nothing extra shall be paid.

24.3 The Centrifugally Cast (Spun) Iron pipe wherever necessary shall be fixed to RCC columns, beams etc. with dash fasteners of approved quality.

24.4 The contractor shall give a satisfactory performance test of the entire installations(s) before the work is finally accepted and nothing extra shall be payable to the contractor on this account.

24.5 "P' or "S' traps in WCs shall be of deep seal type and shall have a minimum water seal as per CPWD specifications. Floor traps shall have a minimum water seal of 50mm.

24.6 The contractor shall be responsible for all the protection of sanitary, water supply fittings and fixtures against pilferage and breakage during the period of installation until the handing over of the entire work.

24.7 The pig lead to be used in jointing 100mm, 75mm, 50 mm Centrifugally Cast (Spun) Iron pipes shall not be less than 0.980 Kg., 0.880 Kg. and 0.770 Kg. Per joint respectively.

24.8 The contractor shall submit completion plans for water supply, internal sanitary installations and building drainage work within thirty days of the date of completion. These plans are to be submitted on drawings prepared preferably through computers (1 original copy + 3 photocopies) alongwith their CD's on suitable scales to show the general arrangement and desired details. In case the contractor fails to submit the completion plans as aforesaid the recovery shall be made as mentioned in particular specification and Special Conditions for works.

25. Stone Masonry:

26. Stone Masonry Work:

26.1 Random Rubble masonry brought to course (Broken Coursed) as per the mockup approved by the Engineer-in-charge and detailed specifications, with **Nimbahera stone**, in above finished ground level and up to floor five level. Masonry work, in cement mortar 1:6 (1 cement: 6 coarse sand). Relevant specifications shall be followed as per item number 7.8.2 and 7.2.1. In addition to the same, the following also needs to be followed.

26.2 Stones are laid randomly and brought to course at window sill level, lintel level and bottom of slab level on each floor. Stones should be small enough so that these could be lifted by hand. Minimum size however should be such that it does not pass through a ring of 15 cm internal diameter and a rectangular slit of 10 cm width. Height of stones may be up to 30cm. Length of a face stone at its base should not be less than its height nor greater than three times the height. Breadth of a stone at base should not be greater than three-fourth of the thickness of wall nor less than its height. At least one-third of the stones (by volume) should tail into the work for a depth not less than twice their height.

26.3 Dressing of Stone. Stone should be hammer dressed on the face, sides & bed so as to give them approximately rectangular shape. Bushing on the face should not be more than 2 cm from the general wall surface for the exposed face.

26.4 Laying of Stone All courses should be laid truly horizontal, and vertical joints should be truly vertical. Stones should be solidly bedded in mortar by hammering them down to position with a wooden mallet. No pinning should be done in the face. Stone chips, not exceeding 10 percent of volume of masonry may be used in hearting to avoid thick mortar joints. Stone chips should be used only for filling interstices between adjacent stones and not below bed of hearting stones to bring them in level with face stones. Stones shall be laid so as to break vertical joints as much as possible, avoiding long vertical joints.

26.5 Bond or Through Stone: Through stone shall be provided in every course, at not more than 1.8m intervals. These stones should be marked with white paint at the face for subsequent check and verification during construction. Where bond stones of suitable length are not available these could be made of precast cement concrete.

26.6 Quoin Stone: Quoins that are corner stone's should be laid as headers & stretchers alternatively. Length of these stones should be 45cm or more.

26.7 Jamb: Stones used in jambs should be similar to those in quoin, excepting the length of the stone which should be 45cm or equal to thickness of wall whichever is less.

26.8 Joint: All bed joints should be horizontal and side joints vertical. All joints should be completely filled with mortar and thickness of joints should not exceed 20 mm. In case plastering or pointing is required, joints should be racked to a depth 20 mm while mortar is still green. Deep groove pointing is to be provided where shown in drawings.

27. WATER PROOFING TREATMENT (BRICK – COBA)

27.1 Treatment for roof surface with integral cement based compound (Brick – Coba).

27.2 The brick bats shall be from well burnt bricks. The proprietary water proofing compound shall bear I.S.I. mark and shall conform to IS: 2645. Before execution of work, water proofing compound has to be brought to site and a certificate of its conforming to I.S. code should be produced. The proprietary water proofing compound shall be added at the rate recommended by the specialist firms but not exceeding 3 percent by weight of cement. The Engineer-in-Charge reserves the right to collect the random sample from material brought at site and get it tested from laboratory of his choice. The material which does not conform to the specification shall have to be removed forthwith by the contractor.

27.3 The finished surface after water proofing treatment shall have minimum slope of 1 in 80. At no point shall the thickness of water proofing treatment be less than 65 mm.

27.4 While treatment of roof surface is done, it shall be ensured that the outlet drain pipes have been fixed and mouths at the entrance have been eased and rounded of properly for easy flow of water.

27.5 The surface where the waterproofing is to be done shall be thoroughly cleaned with wire brushes. All loose scales mortar splashes etc. shall be removed and dusted off. The surface shall be treated with neat cement slurry admixed with proprietary water proof compound to penetrate into crevices and fill up all the pores in the surface. This cement slurry shall be applied at the junction of parapet and terrace slab including the face of the parapet.

27.6 After the slurry coat is laid, layer of well burnt brick bats shall be laid in cement mortar of mix as specified in the nomenclature of the item but not leaner than 1:5(1 cement : 5 coarse sand) admixed with proprietary water proofing compound to required gradient and joints ;filled to half the depth. The brick bat layer shall be rounded at the junction with the parapet and tapered towards top for a height of 300 mm. Curing of this layer shall be done for 2 days.

27.7 After curing, the surfaces shall be applied with a coat of cement slurry admixed with proprietary water proofing compound.

27.8 Joints of brick bat layer shall be filled fully with cement mortar of mix as specified by the specialist firm but not leaner than 1:5 (1 cement: 5 coarse sand) admixed with proprietary water proofing compound and finally top finished with average 20 mm thick layers of cement mortar 1:4 (1 cement: 4 coarse sand) and finished smooth with cement slurry mixed with proprietary water proofing compound.

27.9 Curing of water proofing treatment shall be done for a minimum period of two weeks by flooding the water by making kiaries etc.

27.10 **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 up to 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.

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

28. VACUUM DEWATERING CONCRETE

28.1 Vacuum processing removes surplus water from the concrete to provide quicker setting and earlier maximum strength properties. Vacuum dewatering takes place immediately after the screeding operation.

28.2 Upon the surface of the wet concrete is placed a bubble formed two layer composite plastic called as a filter pad. The top cover is a fibre reinforcement coated plastic cloth that acts as a sealing membrane. It is placed over the filter pads, projecting slightly outside on all sides. The border of the top cover rests directly upon the wet concrete to produce an air tight seal.

The filter pad and top cover unit together called as suction mat is connected with suction hose to a Vacuum pump. The normal atmospheric pressure in the pump is reduced to 80% of the atmospheric pressure compresses the concrete.

Concrete is subjected to pressure of:

Air pressure	1.00 Kg. /Sq. cm
Depression	0.20 Kg. /Sq. cm
Effective	0.80 Kg. / Sq. cm

28.3 This pressure of about 0.80 kg/sq. cm compresses the concrete and compacts the aggregate. At the same time the excess water which is not required for the Hydration process of the cement is extracted from the concrete and continuously discharged with the air. After completion of dewatering, the Vacuum treated concrete surface should be such as which can be immediately walked upon without leaving foot prints.

28.4 Floating and Trowelling

Immediately after Vacuum dewatering the surface is power floated with a skim-floater. The floater disc leaves a rather rough surface which is suitable for parking decks and industrial floors for which a non-slippery surface is required. For achieving a smoother surface, the surface is trowelled with the same machine provided with trowelling blades.

The floating and trowelling operations should take place within one hour from concreting.

28.5 Curing

After trowelling, which is at the last step of the Vacuum dewatering method, concrete is cured in the normal way. The surface is covered with a plastic sheet and curing compound may be used. In hot climate concrete is to be covered with wet burlap and kept moist. Curing must beattended with care to prevent damage from wind and sun in order to achieve optimum finished quality.

28.6 Cleaning of Equipment

The filter pads and all other equipment should be completely cleaned at the end of the day's concreting as per specialist's standards and shall be got checked by Engineer-In-Charge before commencement of next day's concreting.

28.7 7Base

If the floors are placed directly on the ground, it shall be ensured that the base surface have a sufficient bearing capacity.

28.8 Services

The position of the pipes for water and cutouts for utilities like drainage, heating, electric supply

and telephones must be fixed before V.D. concreting starts, so that they do not hinder the concreting work.

28.9 Joints

Through vacuum processing, shrinkage is reduced by 50% to 75% compared to that normal concrete. Correspondingly joint spacing can be increased on Vacuum dewatered floors. Joint-less bays upto approx. 200 sqm. are possible, however the stability of the base and the construction including reinforcement is to be calculated with regard to traffic loads.

28.10 Cement

Cement (Ordinary Portland) shall be used as binding agent. The total filler content consisting of cement and fine particles should be limited to minimum.

28.11 Water

The slump must be controlled between 8 to 12 cm for optimum workability of concrete for VD applications.

28.12 Shop Drawings

Shop drawings shall be prepared prior to commencement of the work for planning of joints and the quantum of the day's concerting.

28.13 Admixture

A pre test of the admixtures if used, is to be carried out in order to determine their suitability for vacuum dewatered concrete.

28.14 Standards

DIN 1045 or equivalent International Standards are valid for Vacuum dewatered concrete flooring.

28.15 Quality

The improved properties of Vacuum dewatered concrete would be ascertained by taking cube specimens and getting them tested through specialized equipment.

28.16 Vacuum Dewatering (VD) process

The machineries used and the standard work cycle process for VD concreting shall be as per the approved specialist's standard requirements.

Tremix and Dynapak are the approved specialists.

28.17 Leveling

Surface vibrator available in lengths of 3 to 12m comprising of a light alloy double beam (with rods to prevent deflection) must be used for leveling.

28.18 Drietop Floor Hardener

Drietop Floor hardener FH manufactured by M.C. Bauchemie or approved equivalent.

28.19 Execution

When the surface is free from residual bleed water and is sufficiently hardened to allow heavy traffic and when the surface leaves any impression of about 2 to 3mm the try shake, surface hardener like Drietop FH manufactured by MC- Bauchemie (India) Private Ltd. can be broadcasted. The broadcasting should be done in two operations which are perpendicular to each other. The surface can be cured in a normal way. The floors can be cured in a normal way. After completion of curing the surface should give a look of well prepared surface which is free from oil, grease and remains of form oil or curing compound. The surface should be free from dust, laitance and completely dried. Surface driers can be used if residual moisture is observed on the surface

28.20 **Measurement:-** The mode of measurement shall as follows:

28.21 The length, breadth and depth or thickness shall be measured correct to a cm and the consolidated cubical contents of the concrete shall be calculated to the nearest 0.01 cubic metre.

28.22 Rates

The rate shall include the cost of material, labour, machinery/equipment and testing for Vacuum dewatering processing involved in all operations described above including specialist's supervision, if so requited by Engineer-In-Charge. (Reinforced steel used in the flooring shallbe paid separately)

26 SPECIALISED WORK

Following specialized works should be got executed only through agencies specialized in the field and the contractor shall be required to submit the details of such agencies to the Engineer-in-Charge and obtain necessary approval:-

I. Water proofing treatment
II. Internal water supply and Sanitary work
III. Aluminum windows & partitions
IV. Course Random and Rubble masonry
V. Ready Mix Concrete.
VI. UPVC Doors/Windows

The specialized agency should have an experience of minimum five years in his area of specialisation.

The specilised agency should have successfully completed at least one work of similar nature having a magnitude equal to the quantum of respective work provided in the tender.

The specialised agency shall have sufficient experience in execution of turnkey projects.

The contractor shall submit the following details of the specialised agency before execution of work:

Proof of the agency in operation since last five year.

list of works carried out by the agency in last five years along with the name of work, name and address of clients, year of execution, value of work done and brief specification of the work.

Completion certificate of work of one work of similar nature of magnitude equal to the quantum of work proposed in the tender.

27 Specialized Agencies

27.1 Specialized Agencies for items in case of Civil & Electrical works shall be approved by the Engineer in Charge / Director competent authority. The contractors shall quote the rates after careful study of contract conditions, specifications, drawings & schedule of quantities.

27.2 It shall be the responsibility of main contractor to sort out any dispute / litigation with the Specialized Agencies without any time & cost overrun to the Department. The main contractor shall be solely responsible for settling any dispute / litigation arising out of his agreement with the Specialized Agencies. The contractor shall ensure that the work shall not suffer on account of litigation/ dispute between him and the specialized agencies / sub-contractor(s). No claim of hindrance in the work shall be entertained from the Contractor on this account. No extension of time shall be granted and no claim what so ever, of any kind, shall be entertained from the Contractor on account of delay attributable to the selection/rejection of the Specialized Agencies.

27.3 For specialized items, the main contractor can not work as a specialized agency unless his name is already included in the list of approved specialized agencies for these items. The contractor shall get these items executed through the specialized agencies as approved by Engineer in Charge / Director competent authority.

28 RATES

28.1 The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work, profile, setting lay out on ground, establishment of reference bench mark(s), installing various signage, taking spot levels, survey with total station, construction of all safety and protection devices, compulsory use of helmet and safety shoes, and other appropriate safety gadgets by workers, imparting continuous training for all the workers, barriers, preparatory works, construction of clean, hygienic and well ventilated workers housings in sufficient numbers as per drawing supplied by Engineer in charge, working during monsoon or odd season, working beyond normal hours, working at all depths, height, lead, lift, levels and location etc. and any other unforeseen but essential incidental works required to complete this work. Nothing extra shall be payable on this account and no extension of time for completion ofwork shall be granted on these accounts.

28.2 The rates quoted by the tenderer, shall be firm and inclusive of all taxes and levies.

28.3 No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.

28.4 All ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, water storage tanks, installation and consumption charges of temporary electricity, telephone, water

etc. required for execution of the work, liaison and pursuing for obtaining various No Objection Certificates, completion certificates from local bodies etc., protection works, testing facilities / laboratory at site of work, facilities for all field tests and for taking samples including testing charges payable to the laboratories etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shallsubmit to the Engineer-in-Charge, a site / construction yard layout, specifying areas for construction, site office, positioning of machinery, material yard, cement & other storage, fabrication yard, site laboratory, water tank etc.

28.5 For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing the fact that the Contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them.

28.6 All material shall only be brought at site as per program 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.

29 GUARANTEE BOND FOR WATER PROOFING TREATMENT WORK

I. Ten Years Guarantee bond in prescribed Performa attached at 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 responsibility about performance/efficiency of water proofing treatment shall rest with thebuilding contractor.

II. Rs.10 % of the executed value of such items shall be retained as security deposit for water proofing work in addition to normal security deposit and the amount so withheld would be released after ten 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 information 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.

III. However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of Director, IIM, Udaipur, if so, decided by the Engineer-in- Charge.

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

30. GUARANTEE BOND FOR WATER SUPPLY AND SANITARY WORK:

I. Five Years Guarantee bond in prescribed Performa attached at 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 responsibility about performance/efficiency of water supply and sanitary work shall rest with the building contractor.

II. Rs. 5% of the executed value of such items shall be retained as security deposit for water supply & sanitary work in addition to normal security deposit and the amount so withheld would be released after ten 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 information 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.

III. However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of Director, IIM Udaipur, if so, decided by the Engineer-in- Charge. Such bank guarantee shall be valid for the entire liability period of five years and shall be recoverable by the Govt. in case the contractor fails to attend the defects within seven days.The security deposit against this item of work shall be in addition to the security deposit mentioned elsewhere in contract form.

IV. 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 anywhere 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.

31. GUARANTEE BOND FOR ALUMINIUM WORK:

I. Two Years Guarantee bond in prescribed Performa attached at Annexure-III 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 responsibility about performance/efficiency of aluminium work shall rest with the building contractor.

II. Rs. 5% of the executed value of such items shall be retained as security deposit for aluminium work in addition to normal security deposit and the amount so withheld would be released after two 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 information 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.

III. However, the security deposit deducted may be released in full against the bank guarantee of equivalent amount in favour of Director, IIM Udaipur, if so decided by the Engineer-in-Charge.

Such bank guarantee shall be valid for the entire liability period of two years and shall be recoverable by the Govt. in case the contractor fails to attend the defects within seven days. The security deposit against this item of work shall be in addition to the security deposit mentioned elsewhere in contract form.

32. STRUCTURAL STEEL WORK:

The contractor shall submit shop drawings of structural steel truss, girder, stanchion etc. duly prepared and certified by structural designer / Engineer for approval of Engineer-in-charge. Nothing extra shall be payable on this account. Only after the approval the contractor shall start the work for fabrication of steel structure.

33 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 anywhere 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 SPECIFICATIONS

1 **SUNKEN FLOOR SLAB, IT'S TREATMENT ETC**.

1.1 Brick bat aggregate shall be from well burnt bricks. The proprietary waterproofing compound and the quantity to be used as per para 6.1.1.

1.2 The surface shall be thoroughly cleaned with wire brushes. All loose scales shall be removed and dusted off. The surface bottom as well sides shall be treated with cement slurry admixed with proprietary water proofing compound to penetrate into crevices and fill up all the pores in the surface.

1.3 After the slurry coat is laid, layer of well burnt brick bats of about 40mm size shall be laid in cement mortar of mix as specified by the specialist firm but not leaner than 1:5 (1cement: 5 coarse sand) admixed with proprietary water proofing compound, the mortar being filled to half the depth of the brick bat layer. The bricks bat layer shall be rounded off at junctions with the beam/wall etc. and tapered towards top to a height of 150 mm along beams/wall etc. Curing of this layer shall be done for three days.

1.4 After curing, the surface shall be applied with a coat of neat cement slurry admixed with proprietary water proofing compound.

1.5 Joints of brick bat shall be filled fully with cement mortar of mix as specified by the specialist firm but not leaner than 1:4 (1cement: 4 coarse sand) admixed with proprietary water proofing compound and top finished with average 20mm thick layer of same mortar. This layer of mortar shall be continued to the sides of beam/wall etc. The height upto which this treatment is to be extended on the sides shall be as directed by the Engineer-in-Charge. The surface shall be finished smooth with cement slurry admixed with proprietary water proofing compound.

1.6 While the water proofing treatment is done, it shall be ensured that the outlet pipes are properly fixed and the gaps between the wall and pipes are properly filled with brick/stone aggregate and cement mortar admixed with proprietary water proofing compound and grouted with cement slurry admixed with proprietary water proofing compound.

1.7 Waterproof treatment shall be cured for a minimum period of two weeks.

1.8 Measurements

1.8.1 Measurements for the floor treatment shall be taken on the plan area of floor treated. Nothing extra shall be paid for rounding off at junctions and taking the treatment along the sides of beams and walls for about 150 mm.

1.9 Rate

1.9.1 The rate shall include the cost of all labour and materials involved in all the operations described above. Base treatment and side treatment will be paid separately under respective items.

1.10 Cut Brick (Marukona)

1.11 "Where cut brick (Marukona) as required C.P.W.D. Specifications 2019 Vol. I on account of available quality of bricks the same shall be replaced by cement concrete 1:2:4 and no extra payment for the provisions of C.C. 1:2:4 nor would the quantity of C.C 1:2:4 thus provided be deducted from measurements of brick work."

1.12 Specifications for moorum

1.13 The contractor has to bring moorum required for filling under floors, from sources, approved by the Engineer-in-charge. The filling material shall be moorum obtained from pits of weathered disintegrated rocks free from organic matters and should preferably contain siliceous material and natural mixture of clay of calcarious origin. The size of moorum shall not be more than 20 mm.

1.14 The moorum brought to site shall be directly used for filling and no claim for double handling shall be entertained. Filling shall be done in regular horizontal layers, each not exceeding 20 cm. in depth. The moorum shall be free from all roots, grass and rubbish and all lumps and clods, if any, shall be broken. Each layer shall be consolidated by breaking clods, watering and rammingwith steel rammers. The top surface of finally finished area shall be dressed.

1.15 Before filling is started in the area (under floors) contractor shall remove rank vegetation, grass, brushwood, shrubs and building rubbish etc. and nothing extra shall be paid for on this account.

2 SPECIFICATIONS FOR CEMENT CONCRETE INTERLOCKING PAVER BLOCK

The Cement concrete interlocking paver blocks shall be ISI Marked and of size, shape and shade as approved by the Engineer-in-charge. These shall be of make as specified in item nomenclature or equivalent brand and manufacture as approved by the Engineer-in-charge.

2.1 Technical Specifications of Paver Blocks:

i) The thickness of block shall not be less than 50mm and not more than 120 mm and shall also meet the thickness requirement specified under table I of IS: 15658:2006

ii) The Paver Block shall be factory made and manufactured using M30, M35, M40, M 50 and M55 grade of cement concrete having comprehensive strength not less than 30, 35, 40, 50, 55 N/sq. mm The water absorption after twenty-four hours of soaking in water shall notbe more than 7% The density of the concrete shall not be less than 22 KN/Cum

iii) The surface should be of Antiskid and Anti-glare type.

iv) The concrete pavers should have perpendicularities after release from the mould and some should be retained until the laying.

v) The Paver shall have a peripheral chamfer on the top edge to facilitate easy drain surface runoff. The size shall be 4 mm in height and 7.5 mm in total width.

vi) Pavers must have vertical spacer nibs on the sides. This is required to attain uniform interlocking space of 2-3mm all-round the joints. This will ensure that jointing sand gets filled inside the joints once compacted.

vii) The concrete mix design should be followed for each batch of materials separately and automatic batching plant is to be used to achieve uniformity in strength and quality.

viii) Pavers shall be manufactured in a single layer only.

2.2 The paver blocks shall be manufactured using standard (fast)colours/pigment. The thickness shall be 100mm +/- 2.0 mm.

2.3 The interlocking blocks shall be supplied at site only after attainment of required strength at factory itself. It shall be ensured by the contractor that required strength at factory itself. It shall be ensured by the contractor that interlocking paver blocks are free of cracks etc. edges are not chipped / broken and that there is no shade variation; otherwise, these shall be rejected and not allowed to be used in the work.

2.4 The leveling course of crush sand shall be laid, watered, if required and compacted to an average thickness of 50 mm using plate vibrator, Leveled properly and then slightly roughened using wire brush Then interlocking paver blocks shall laid in level, in a workman like manner and bedded properly in position with wooden mallets without use of chips or under priming of any sort and without any damage to the interlocking paver block. The pockets formed (at the edges of the pathway adjacent to the kerb etc; due to shape of the interlocking block) shall be filled with cement concrete of nominal mix 1: 1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 10 mm nominal size) admixed with pigment of required shade, neatly leveled and finished smooth. After it has set, joints between the interlocking paver blocks shall be filled with fine (sieved) crush sand and cured properly. Green work shall be protected from rain or other damaged properly, as required.

2.5 At least one sample (consisting of 3 units) in interlocking paver blocks shall be tested for every 500 sqm area of pavement or part thereof or at frequency as directed by the Engineer-in- charge. The contractor's rate for the items involving the use of materials shall be deemed to cover the cost of samples. The cost of packaging, sealing, transportation, loading, unloading etc. shall be borne by the contractor. Testing charges shall be borne by the contractor.

2.6 The rate is inclusive of the cost of all inputs of labour, material, T & P etc. involved in the work. However, for payment area shall be measured in sqm upto two places of decimals. Allincidental charges of any kind including cartage, storage, wastage and safe custody of materialetc. shall be borne by the contractor and no claim whatsoever shall be entertained on this account.

Annexure - I

GUARANTEE TO BE EXECUTED BY CONTRACTORS FOR REMOVAL OF DEFECT AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS
(Ref. para 29 of Particular Specifications and Special conditions)

The Agreement made this ……day of ……two thousand and …… between .....son of ……..of ……..(hereinafter called the **Guarantor** of the one part) and the DIRECTOR, IIM UDAIPUR (hereinafter called 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 **GUARANTOR** agreed to give a guarantee to the effect that the said structures will remain water and leak-proof **for ten years** from the date of giving of water proofing treatment.

NOW THE **GUARANTOR** hereby guarantees that water proofing treatment given by him will render the structures completely leak-proof and the minimum life of such water proofing treatment shall be tenyears 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 water 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 **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 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 WHEREOF these presents have been executed by the Obligor ……. and by …….. and for and on behalf of the DIRECTOR, IIM UDAIPUR on the day, month and year above written.

Signed, sealed and delivered by OBLIGOR in the presence of –

1. ……
2. ……

Signed for and on behalf of THE DIRECTOR, IIM UDAIPUR by ..... in the presence of –

1. ……..
2. ……..

Annexure –II

GUARANTEE BONDS/AFFIDAVIT FOR ALUMINIUM WORK

GUARANTEE TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF ALUMINIUM WORKS / UPVC WINDOWS
(Ref. para 31 of Particular Specifications and Special conditions)

The agreement made this_____day of_____two thousand and _____ between_____S/o_____(hereinafter called the GUARANTOR of the one part) and the DIRECTOR, IIM UDAIPUR (hereinafter called the Government of the other part).

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

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

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable, after the expiry of maintenance period prescribed in the contract for the minimum life of **2 (Two)** years, to be reckoned from the date after the expiry of maintenance period prescribed in the contract.

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

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

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

IN WITHNES WHEREOF those presents have been executed by the obligator _____ and_____by for and on behalf of the DIRECTOR, IIM UDAIPUR on the day , month and year first above written.

Signed sealed and delivered by OBLIGATOR in presence of :.

1. _____
2. _____

SIGNED FOR AND ON BEHALF OF THE BOARD OF GOVERNORS, IIM UDAIPUR BY_____in the presence of :

1. _____
2. _____

Annexure –III

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

(Ref. para 30 of Particular Specifications and Special conditions)

The agreement made this _____ Day of _____ Two thousand …….. between M/s _____ S/o _____ (Hereinafter called the GUARANTOR of the one part) and the Director, IIM Udaipur(hereinafter called the Government of the other part).

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

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

NOW THE GUARANTOR hereby guarantee that the work executed by him will remain structurally stable after the expiry of maintenance period prescribed in the contract for the minimum life of **5 Years (five years)** to be reckoned from the date after the expiry of maintenance period prescribed in the contract**.**

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

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

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

IN WITNESS WHEREOF these presents have been executed by the obligator _____ and_____by_____for and on behalf of the Director , IIM UDAIPUR 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 Director, IIM UDAIPUR BY_____in the presence of :-

1._____ 2. _____

LIST OF APPROVED MATERIALS (CIVIL)

Note:

1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender, shall be used in the work.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.
3. Whenever the specified brand of material is not available then the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.

	MATERIALS	BRAND/MAKE
1.	(a) Acrylic Exterior paint	Apex Ultima of Asian Paints, Weather Coat all Guard of Berger, Weather Shield Max of Dulux.
	(b) Acrylic Emulsion paint	Royal Luxury Emulsion of Asian Paints, Silk Luxury emulsion of Berger Paint, Velvet touch emulsion of Dulux.
	(c) Acrylic Distemper	Royal Luxury Emulsion of Asian Paints, Silk Luxury emulsion of Berger Paint, Velvet touch emulsion of Dulux.
	(d) Synthetic Enamel Paint	Apcolite of Asian Paint, Luxol of Burger Paint and Dulux Paint.
2.	Epoxy Adhesive	FOSROC, Aquomix , Choksey, BAL-ENDURA, Berger Paints India Ltd.
3.	Aluminium Composite Panel	Alpolic, Aluco Bond, Reynobond, Euro bond, Alstrong, Aludecor.
4.	Aluminum Door window hardware (ISI Mark only)	Shalimar, Archie, Classic (ISI)
5.	Aluminium Extrusions / sections	Hindalco, Indian Aluminium Co., Jindal
6.	Annealed Float Glass	Saint Gobain, Modi Guard, Asahi
7.	Auditorium Chairs/ Furniture	Godrej, Wipro, Methodex, Bonton, Penworker, Durian, Harman Miller, Featherlite, Haworth & Geeken
8.	Bitumen	Indian Oil, Hindustan Petroleum, Bharat Petroleum
9.	Calcium Silicate Board / Tiles	Aerolite, Hilux, Starpan
10.	CC Pavers / Grass Pavers*	Nitco, Ultra, KJS Concrete, Duracrete, Mehtab Tiles, Kaptim, Khalsa, Dalal
11.	Centrifugally Cast-Iron Pipe & Fittings	NECO, SKF, BIC, RIF, KAPILANSH, HIF, Electrosteel,
12.	C.I. Hubless pipe	SKF, NECO, Kapilansh
13.	Ceramic Tiles	Kajaria, Somany, Nitco, Johnson, RAK Ceramics
14.	Chequered	Dura, Eurocon, Modern, Hindustan, Johnson, NITCO
15.	CI Manhole Cover	SKF, NICO, Hepco, Kapilansh
16.	CI Double flanged non-return valves	Kirloskar, Sant, Kartar
17.	CI / SCI Spun pipes and fittings	NECO, HEPCO, Bengal Iron Corporation, Kapilansh
18.	Cover Block	Khalsa, Balaji, Simcom
19.	CP fittings	Jaquar, Marc, Kohler, Hindware , Shakti, Prayag Polymers(P), Ltd.
20.	CPVC Pipes & Fittings	Astral, Ashirvad, Prince, Supreme, Finolex,VECTUS , Prayag
21.	CRCA Steel sheet	TATA, Jindal, Sail
22.	Curtain Carrier / Drapery Rod	Marvel, Vista levlor, Johnson.
23.	Dash fastener, Expansion Bolt	Hilti, Bosch, Fischer
24.	Hydraulic Door closer, Floor springs	Dorma, Hettich, Hafele, dorset, Hardwin, kelvin, Godrej
25.	Ductile Iron Pipe (Water Supply)	Electro steel, Kesoram, Electro Spun, TATA DUCTURA,

		Swastic
26.	EPDM Gasket	Hanu, Anand, Lescuyer
27.	GRC	Unistone, Dalal, Swastic
28.	Epoxy Grouting Compound	Pidilite, Ferrous Crete (Ferro-102), MYK- LATICRETE, Berger Paints India Ltd., Ultratech
29.	Epoxy Primer & Paints	Berger, Pidilite, CICO, BASF, SIKA, Asian Paints
30.	Elastomeric Antifungal Exterior Paint	Ultima of Asian Paints, Weathershield of ICI Dulux, Alguard of Berger
31.	Fire Check door	Navair, Godrej, Shakti
32.	Float Glass Mirror	Modifloat, Saint Gobain, Asahi, TATA float
33.	Flush Doors (ISI Mark only)	Century, Archid, Greenply, Marino, Duro, Jayna, Gujcon, Durian, A1 flush door, M.P. Wood
34.	Friction Stay	Albihari, Geze, Hettich, Securistyle, Ebco
35.	Galvanized/Stainless Steel Anchor Fasteners	Shakti, Arrow, Hilti, Fischer
36.	GI Pipe & fittings	Tata, Zenith, Jindal, Prakash Surya, Swastik
37.	GI Sheet	Sail, TATA, Jindal, National, Bhushan
38.	Geotextile	Manas, Osian, Wadhwa
39.	Gun Metal Gate Valve , Ball valve	Zoloto, Leader, SANT
40.	Glass Mosaic Tile	Bisazza, Italia, Palladio, Mridul
41.	Gypsum Board (False Ceiling)	Boral Gypsum, India Gypsum, Saint- Gobain
42.	Gypsum Plaster	Asian Paints, Fosroc, BASF, Sika, Saint-Gobain, Pidilite
43.	FRP Door	Fiberways, Jayna, Shiv Shakti
44.	Hardener	Hardcrete of Snowcem India, Pidilite, CICO., Berger Paints India Ltd.
45.	HDPE Pipes	VECTUS, Emco, Polyfins, Pioneer, Plyfab, Jain Irrigation, Kissan
46.	Jet Assembly for EWC/Health Faucet	Parryware , Jaquar, Marc, Hindware
47.	Kitchen loft tank	Sintex, Tirupati Structurals Ltd, KMS Plast world P.Ltd. Planet Plastics, Sri Kamakshi Traders, Sreyah Novel InC.
48.	Kerb Stone	Mehtab, Hindustan, Concreto, Kaptim, K.K., Khalsa
49.	Laminate and Veneers	Merino, Greenlam, Formica, Kitlam,
50.	Locks / Latch	Godrej, Harrision, Dorma, Yale, dorset, Hafele
51.	Marine Plywood / BWP Ply/Plywood	Duro, Century, Kitply, Greenply, Archidply
52.	Melamine Polish	Asian Paints, Pidilite, ICI Dulux, Berger
53.	Metal False Ceiling	Nitobond, Armstrong, Trac, Durlum, Lafarge, Anutone, Hunter Douglas, Hi-steel
54.	Mineral Fibre/ GRG Ceiling	Armstrong, Daiken, Anutone, Diamond, Credence
55.	M.S. Pipe (Railing)	Jindal, Tata, RINL, Prakash Surya, Apolo
56.	M.S. Tubes	SAIL, Tata, Apolo, Prakash Surya, RINL, JSW and JSPL
57.	Multi-coat Synthetic Plaster/ Textured Exterior wall paint	Spectrum, Heritage, Ultratech, Asian Paints, Berger Paints India Ltd.
58.	PL.AL.PL. Pipes	Kitech, Vectus, Jindal
59.	Polycarbonate Sheet	Bayer, Macrolux, Danpalon, DPI Daylights, Fibreways
60.	Polysulphide / Silicon Sealant	Pidilite, Fosroc, Tuffseal, Berger Paints India Ltd.
61.	POP (Plaster of paris)	JK-Laxmi, Sriram Nirman, Sakarni
62.	PPR Pipes	SFMC, SAFE, Poineer Industries, Vectus
63.	Precast CC interlocking Tiles	Hindustan, Paver India, KK, Dalal, Unistone
64.	Pre-coated Profile Sheet	Tata, Bhushan (Jindal), National, Jindal
65.	Pre-laminated Particle Board	Ecoboard, Action-Tesa, Duro, Century Ply, Greenlam
66.	Pressed steel door frame	M/s Engineers & Fabricator, Raipur, M/s J.K. Enterprises, Jaipur, M/s Jangid Engineering Works, Jaipur, M/s Swastik Super Industries, Mohali, M/s SKS

		Steel Industries, New Delhi.
67.	PTMT Water supply fittings	Prayag, Polytuff, Estylo, Plasto, Shakti
68.	PVC Cistern	Steelbird, Jindal, Prayag, Commander, Shakti, Jaquar, Hindware
69.	PVC Connection Pipe	Supreme, Prince, Finolex
70.	PVC Rainwater Pipe & Fitting (SWR) Pipes	Finolex, Kisan, Kasta, Supreme, Astral, Prince, Vectus
71.	PVC Shutter	Polygreen, Rajshri, Plastogreen, Sintex
72.	PVC Water storage Tank (Only ISI)	VECTUS, Water well, Plasto, Sintex, Gangotri
73.	Ready Mix Concrete (RMC)	ACC, L&T, Grasim, Ultratech, RMC Ind, Supermax
74.	Ready Mix Plaster	Ready Plast (Ultratech), Silico Plast, Perma Plast, Insta Plast
75.	Road Safety Products	Shakti or equivalent
76.	Rust Remover	Perma, Sunanda, Dr. Fixit, Fosroc, Sika
77.	SBR Polymer	Perma, Sika, Roff Bond, Fosroc
78.	Sluice Valve	Kirloskar, Venus, Kalpana, SANT, KARTAR, Zoloto
79.	Solid PVC frames and shutters	Polygreen, Rajshri, Plastogreen, Sintex
80.	Stainless Steel	Jindal, Salem or equivalent
81.	Stainless steel Sink with or without Draining board.	Nirali, Hindware, Frankee, Neelkanth, Jaquar, Prayag
82.	Stainless steel Door/Window fittings & Fixtures	Dorset, Prayag, Dorma, Ozone, Hettich, Kich, Geze
83.	Structural steel section	TATA, SAIL, RINL, JSW Steel Ltd., Jindal Steel & Power Ltd. (JSPL)
84.	Super plasticizer / admixture	Sika, Fosroc, Chouksey Chemicals, BASF, Asian Paints, Berger Paints India Ltd.
85.	Tactile	Somany, Johnson, Dura, Dalal & NITCO
86.	Tensile Fabric	Bluestone, Encon, Structure Flex
87.	Telescopic Drawer Channels	Godrej, Hetich, Ebco
88.	Tile Adhesive	Ferrous Crete (Ferro-1122), Ardex Endura (Gold Star), PIDILITE (Fevimate XL), WEABR(Saint-Gobin) Sika, Thermoshield, Asian Paints, Berger Paints India Ltd., Ultratech (tile-fixo)
89.	Towel Ring/Towel Rod/Towel Rack	Marc, Jaquar, Kohler, Grohe, Hindware, Prayag
90.	Tubular Seallar Window/ M.S. Tubular Window	M/s Engineers & Fabricator, Raipur, M/s J.K. Enterprises, Jaipur, M/s Swastik Super Industries, Mohali(Punjab) M/s Jangid Engg. Jaipur
91.	UPVC Pipes & Fittings	Astral, Flowguard, Ashirvad, Prince, Supreme, Finolex,VECTUS, Prayag
92.	Urinal, Washbasin, Orrisa Pattern W.C., Wall mounted European W.C.Seat with Cistern.	Hindware, Parryware, Jaquar, Cera, Kohler, Grohe
93.	Vitrified Tile, Rectified Tile	Johnson, Marbonite, Somany, Kajaria, NITCO, RAK
94.	Wall Putty	JK, BIRLA, SARAPUTTY, Asian Paints, Berger Paints India Ltd
95.	Waste Pipe	Kamal, Viking, Jaquar
96.	Water Proofing Compound (Liquid)	Pidilite, Cico, Impermo, Fosroc, BASF, Ardex Endura, Sika, Asian Paints, Berger Home Shield.
97.	Water Proofing membrane-PU based.	Asian Paints, Berger Home Shield or equivalent
98.	White Cement	JK White, Birla White, Grasim
99.	Wire Meshdoor	A-1 Teak, Century, Greenply, M.P. Wood
100.	Wooden Frames	A-1 Teak, Century, Greenply, M.P. Wood
101.	Wooden Flooring	Armstrong, Squarefeet, Action Tesa, Vista
102.	Wood polymer composite (WPC) Door frames and shutters	Sintex, Rajshri, Plastiwood, Alstone, Polygreen
103.	UPVC Windows	Fenesta, Aluplast, Kommerling, Duraplast

104.	Metal Fire Check Doors	Shakthi Hormann, Steeltech, MPP, ASES (Agni Suraksha) & Navair.
105.	Non-Metallic Fire Check Doors	Tata Pravesh, Promat, Godrej, Shakthi Hormann, ASES (Agni Suraksha) & Navair

* Paver blocks produced at site under controlled condition may also be allowed after approval of Engineer-in-charge.

Note: 1) In case approved make for any material/item is not specified in the NIT, the decision of finalizing a particular brand shall rest with Engineer in charge , Director IIM Udaipur or his successor there off.

2) In case of non-availability of a particular material/item from specified manufacturers/makes, the decision of Engineer in charge , Director IIM Udaipur or his successor there off in selection of alternate manufacture/ make is final.

SPECIAL CONDITIONS FOR ELECTRICAL WORKS FOR COMPOSITE TENDERS

1. For electrical works, the bidder should have valid electrical license from competent authority in the name of the contractor. However, the contractors is allowed to participate in tender with an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate contractors having eligibility as applicable to the main contractor and valid electrical license.
   Or
   else If the main agency does not have electrical license, then the main agency shall have to submit credential of the proposed associated agencies for verification and approval of the department. Consent letter of such selected agencies for association shall also be enclosed in the prescribed format**.** Main agency may propose up to three names of eligible associates for the specific electrical component for individual E&M services within one month of award of work.

2. After obtaining concurrence of department for such association, the main agency shall finalize one associate for execution of the Electrical component of the work. The main contractor has to enter into an agreement with the contractor associated by him for execution of Electrical component.
3. All technical discussions shall be attended by the associate agency and the main agency. Commercial / Technical submissions for the individual electrical works shall be signed and submitted by the associate agency along with the main agency.

4. Price-bid for electrical components shall be submitted by the main agency.

5. Award of work shall be made by the Engineer-in-charge to the main agency for complete work.

6. The main contractor shall be entirely responsible and answerable for all the works done by his associated electrical contractors regarding their quality, adherence to the laid down specification, terms and conditions, warranty/guarantee etc. and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.

7. The manufacturer's guarantee/warrantee for all the electrical accessories shall be for a minimum period as specified for the individual E&M services in the NIT from the date of taking over of the installation by the department. Necessary documents of handing / taking over of the installation will be duly signed by the three parties namely Engineer-in-charge the main contractor and the associate contractors. The main contractor will ensure that the maintenance during the DLP shall also be carried out by the associate contractors. As specified in the NIT guarantee is to be provided free of cost as per item in the schedule of quantity and specification thereof.

8. The main contractor shall also give necessary general power of attorney under the contract to the associated electrical contractors to enable him to receive instructions from electrical engineers of the department at site, sign the site order book, bills MBs for acceptance of measurement and receive stipulated materials etc.

9. The main contractor shall be responsible for coordinating the activities of all the works and will ensure progress of all works as per the laid down program. The main contractor shall also arrange for proper storage of the electrical accessories at site and will be responsible for their watch and ward.

10. Associate electrical agencies shall submit the fortnightly labour report. Material for use at work shall be procured by the electrical agencies. For this purpose, invoice / delivery challan shall be submitted to the department by the associate agencies.

11. All the materials intended to be used in the work shall be got approved by Engineer-In-Charge before use at site.

12. Fish wire shall be provided in each conduit where wiring is not carried out.

13. Extra item substitute item deviation etc. shall be carried out only with written permission of Engineer in Charge /competent authority.

14. For Composite Tenders:

14.1 The Institute will call tenders for the composite work. The cost of tender document and Earnest money will be fixed with respect to the combined estimated cost put to tender for the composite tender.

14.2 The tender document will include following three components:

Part -A: CPWD - 6, CPWD-7/8 including schedule A to F for the civil & electrical component of the work, Standard General conditions of Contract for CPWD 2023 amended / modified upto last date of receipt of tender or latest edition as applicable with all amendments / modifications up to last date of receipt of tender.

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

Part-C: General / specific conditions, specifications and schedule of quantities applicable for Electrical component of the work (Director/Engineer in charge of Work shall be competent authority under clause 2 and clause 5 as mentioned in schedule A to F) General / specific conditions, specifications and schedule of quantities applicable to electric component(s) of the work.

14.3 The tenderer must associate with himself, agencies of the appropriate class or experience eligible to tender for each of the electric component individually.

14.4 The eligible bidders shall quote percentage rate overall for the entire work i.e. including both Civil & Electrical.

14.5 After acceptance of the tender by a competent authority, the Engineer in charge shall issue letter of award on behalf of the IIM,Udaipur.

14.6 Entire work under the scope of composite tender including civil and all electric components shall be executed under one agreement.

14.7 The main contractor has to associate agency(s) for electric component(s) conforming to eligibility criteria as defined below and has to submit details of such agency(s) to Engineer-in-charge within one month of award of work. Name of the agency(s) to be associated shall be approved by Engineer-in-charge.

14.8 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 competent authority, who had earlier approved the same. 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.

14.9 The main contractor has to enter into an agreement with contractor(s) associated by him for execution of electric component(s). In case of a change of associate contractor, the main contractor has to enter into an agreement with the new contractor associated by him.

14.10 It will be obligatory on the part of the firm/ agency to sign the tender documents for all components before the first payment is released.

Annexure-1

PROPOSAL FOR ASSOCIATING ELECTRICAL AGENCIES for ELECTEICAL INSTALLATION

The contractor shall submit the credentials of Associated agency for electrical works who fulfill the following requirements and get it approved from the Engineer-in-charge within a month of award of work. Joint ventures are not accepted.

The associated agency for electrical works:

(d) Should have satisfactorily completed the works as mentioned below during the last Seven years ending**.**

(e) Three similar works each costing not less than **Rs. 41.08 Lakh** or two similar works each costing not less than **Rs.61.62 Lakh or** one similar work costing not less than **Rs.82.16 Lakh.**

Similar work shall mean work of **"Internal Electrical Work".**

" The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion of last date of submission of bids".

(f) Should have had average annual **financial turnover** of **Rs. 51.35 Lakh** on construction works during the immediate last three consecutive financial years ending 31st March 2023. The value of annual turnover figures shall be brought to the current value by enhancing the actual turnover figures at simple rate of 7% per annum.

Should not have **incurred any loss (Profit after tax should be positive)** in more than two years during the last five consecutive years ending **31st March 2023, duly audited and Certified by Chartered Accountant**

Following documents of the associated agency shall be submitted to the Engineer-in-charge for approval of associated agency within a month of award of work:

1. List of eligible similar nature of work completed during the last seven years ending previous day of last date of submission of bid -**Form 'C'**

a. If private works are shown in support of eligibility, certified copy of the tax deducted at source certificate (TDS), G.S.T. deposited in the State where the work is executed, shall be submitted along with the experience certificate and the T.D.S. amount shall tally with the actual amount of work done).

b. Works executed outside India shall not be considered as eligible works.

2. Certificate of completed works duly certified by officer not below the rank of Executive Engineer-Performance report of works referred in Form C-(Form-D)

3. Structure & Organization - **Form 'E'**

4. **Site Visit**: The associated agency is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment and submit the undertaking as per **Form 'G'**

5. The agency should not have been blacklisted or banned by any Govt. Department, Government Organization, PSU, University, Autonomous Institute etc. A notarized certificate duly notarized worth Rs.500/- on Non-Judicial Stamp Paper to this fact should be executed. (Form J)

6. Copy of PAN Card issued by Income Tax Department.

7. Certificate of Registration for EPF (irrespective of employee strength)

8. Certificate of Registration for ESI (irrespective of employee strength)

9. Valid Electrical license issued by competent authority in the name of associated Contractor.

We hereby propose to associate electrical agency M/s _____ for executing the electrical works as per details mentioned above. Their credentials as required above with consent letters are also attached as per Annexure-2

Contractor's signature

Annexure-2

CERTIFICATE FOR ASSOCIATING ELECTRICAL AGENCY

This is certified that we have not deviated from the technical specification and commercial provisions provided in the tender.

The Price bid is unconditional.

This is certified that we have engaged M/s……. as Electrical contractor of appropriate class as detailed below:

(i) Name of contractor

(ii) Address

(iii) Class of registration in CPWD, (if any)

(iv) Maximum ceiling limit to execute electrical work.

(v) Validity of registration

(vi) License no. with validity

NOTE: All columns of above Performa must be filled in.

Contractor's Signature

CONSENT LETTER

I hereby give my consent to work as an electrical contractor till the completion of the work. I will be responsible for the necessary action to hand over the installation and for rectification of defects and repair during the guarantee / warranty and maintenance period. I will execute the work as per CPWD specification and additional conditions of the contracts.

I will also engage a suitable Engineer for the work as per the conditions of the contract. I further certify that the above particulars pertaining to me are correct.

Signature of Electrical Agency

Annexure-3

(Non-judicial Stamp Paper of Rs.500)
Memorandum of Understanding

This Memorandum of Understanding (MOU) is made on the…….. at ……

Between

…….(main contractor) having its registered office at……which expression shall unless repugnant to the subject or context include its administrators, successors and assigns.

And

…….(Associate Electrical contractor) having its registered office at……represented by ……which expression shall unless repugnant to the subject or context include its administrators, successors and assigns.

Whereas, Indian Institute of Management Udaipur, have issued tender papers to quote for the following work to M/s .....(main contractor)

Name of Work: Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).

Whereas, This Memorandum of Understanding has been entered into to execute Electrical works for the above work by M/s……. (Elect. Contractor) (Associate electrical contractor).

Whereas, both the parties have gone through and understood the various conditions & clauses of the tender and willingly agree to abide by them.

This MOU shall be valid till the duration of completion of above work and shall be extended if so, required by the IIM Udaipur.

In witnesses thereof we have put our hand and seal on dated ……

For…….(Main contractor) **For…(Associate Electrical contractor)**

Witness

ADDITIONAL TERMS & CONDITIONS
(Electrical & Mechanical Works)

1. For electrical works, the bidder should have **valid electrical license from competent authority in the name of the contractor. However, the contractors is allowed to participate in tender with an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate eligible contractors having valid electrical license of eligible class.**

2. In case the main contractor himself meets the required eligibility criteria as laid down by the department for any minor/electrical component(s) of work, he shall be allowed to execute this minor component(s) after due verification & approval of the Engineer-in-charge of this component.

3. The main contractor if required has to submit the following documents for association of electrical contractor:

a) Copy of valid Electrical License with appropriate authority with an undertaking that it shall be get renewed time to time during currency of agreement.

b) Willingness letter from the proposed associate agency.

c) Undertaking from proposed associate that all the provisions of integrity Pact applicable on main contractor shall also be applicable on him.

d) Work experience as applicable to the main contractor.

After approval of the agency for association to the Engineer-in-charge of this component, the main contractor has to enter in agreement with the approved associate contractor for execution of minor/electrical component (internal & external electrical installation) as per stipulated technical specification and term & condition.

4. The main contractor/associates are advised to visit the site of work / all architectural drawings to have an idea of the scope / nature of work. Failure to do so shall not absolve their responsibility to do the work as specified in agreement.

5. In the event of the concerned E&M agency not performing satisfactorily or failure of associate/ sub-contractor to complete the E&M work, the main contractor on the written direction of the department, shall remove the Associate/sub-contractor deployed on the work and shall submit name of new associate who fulfill the conditions mentioned in NIT to execute the leftover work without any loss of time or variation in cost to the department in this regard. Such associates shall also enter into agreement / contract with the main contractor and shall meet all the guarantee for the equipment already supplied for which payment has been released by the Department in part or full.

6. If any equipment supplied for the work, during the currency of the earlier associate / sub-contractor and paid in part or full by the department, becomes redundant or not in a position to be installed and commissioned and put to beneficial use, the main contractor shall be liable for replacement of such equipment(s) at no cost to department**.** Prior approval of Engineer-in-charge is required for change in associated contractor.

7. The main contractor shall not indulge in procurement of items and getting the work done on labour contract with the associate electrical contractor. The whole E&M component shall be executed by the eligible associate electrical contractor on a turnkey basis i.e. procurement of material, engaging labour, execution, testing & commissioning etc. The associate electrical contractor shall submit the completion certificate of E&M work executed by him along with necessary test reports, guarantee bond/certificate, completion plan etc.

8. The main contractor shall be responsible and liable for proper and complete execution of all components of work. Main contractor is also responsible to ensure coordination among various associates / sub contractor to complete the whole scope of work.

9. The associate or sub contractor shall attend the inspection of the work by the Engineer-in-Charge of E&M works as and when required.

10. All sundry fittings, assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items which are useful and necessary for proper assembly and efficient working of the various components of the work shall be deemed to have been included in the tender, whether such items are specifically mentioned in the tender documents or not.

11. The several documents forming the contract are to be taken as mutually explanatory to one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scale and additional/special conditions in preference to general conditions.

12. In the case of discrepancy between the schedule of quantities, the specification and/or the drawings, the following order of preference shall be observed: -

i) Nomenclature of items as per schedule of quantities.
ii) Particular specification and special condition, if any.
iii) CPWD specifications.
iv) Architectural / Electrical Drawing
v) Indian standard specifications of B.I.S.
vi) Sound Engineering Practice
vii) Manufactures Specification

13. A reference made to any Indian Standard Specifications in these documents, shall imply reference to the latest version of that standard, including such revisions/amendments as issued by the Bureau of Indian Standards up to last date of submission of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work at site.

14. **Works to be done by the contractor:**

Unless and otherwise mentioned in the tender documents, the following works shall be done by the contractor, and therefore their cost shall be deemed to be included in their tendered cost:-

(i) Foundations for equipment and components where required, including foundationsbolts.
(ii) Cutting and making good all damages caused during installation and restoring the same to their original finish.
(iii) Sealing of all floor openings provided by him for pipes and cables, from fire safety point of view, after laying of the same.
(iv) Painting at site of all exposed metal surfaces of the installation other than pre-painted items like fittings, fans, switchgear/distribution gear items, cubical switchboard etc. Damages to finished surfaces of these items while handling and erection, shall however be rectified to the satisfaction of the Engineer-in-Charge.
(v) Testing and commissioning of completed installation.

15. **Storage and Custody of Materials:**

The contractor has to make his own arrangement for the storage of the material at site & necessary watch and ward of the same till handing over of the complete work to the department. No extra payment will be made on this account.

16. **Electric Power Supply and Water Supply:**

Electric Power and water supply will be arranged by the contractor at the site for installation purpose. However, for testing purpose after complete installation of the electrical items, electricity supply will be made available on chargeable basis to the contractor. Contractor will take due care to ensure safety of electrical installation during execution of work. The agency should follow the existing electrical rates and regulations amended upto date. Any consequences arising out of this connection will solely responsibility of the agency. IIMU shall not be responsible in this matter in any way.

17. **Tools for handling and Erecting:**

All tools and tackles required for handling of equipment and materials at site of work as well as for their assembly and erection and also necessary test instruments shall be the responsibility of the contractor.

18. **Payment Terms:**

Payment shall be made as per the relevant clauses of form PWD 7/8 forming part of the tender documents.

19. **SECURITY DEPOSIT**

Security deposit shall be released only after the completion of the Defect Liability Period (DLP).

20. **Co-ordination with other agencies:**

The work will be carried out in close coordination with the building work and other agencies, so as the work of other agencies are not hindered. Conduits will be laid in the slab within the specified time and it will have to be ensured that the casting of slabs is not delayed for want of

laying of conduits. The conduits will also be laid in walls before the Plaster work is undertaken so as to avoid breaking cutting of plaster while making chase for laying of conduits subsequently. The contractor will have to employ adequate labour for carrying out the work. No claim regarding the idle labour for any reason will be entertained by the Department.

The main contractor shall be responsible for coordinating the activities of all works and essential progress of works as per milestone and laid down programme.

21. Care of buildings:

Care shall be taken by the contractor to avoid damage to the building during execution of his part of the work. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove, at his costs, all unwanted and waste materials arising out of his work, from the site.

22. Structural Alterations to Buildings:

a) No structural member in the building shall be damaged/altered, without prior approval from the competent authority through the Engineer-in-charge.
b) Structural provisions like openings, cutouts, if any, provided by the department for the work, shall be used. If any modifications or fresh provisions are required, such contingent works shall be carried out by the contract at his cost after approval of the engineer-in-charge.
c) All such openings in floors provided by the department shall be closed by the contractor after installing the cables/conduits/rising mains etc. as the case may be, by any suitable means as approved by the Engineer-in-charge without any extra payment.
d) All chases required in connection with the electrical works shall be provided and filled by the contractor at his own cost to the original architectural finish of the buildings.

23. Addition to an installation:

Any addition, temporary or permanent, to the existing electrical installation shall not be made without a properly worked out scheme/design by a qualified Electrical Engineer to ensure that such addition does not lead to overloading, safety violation of the existing system.

24. Drawings:

a) The work shall be carried out in accordance with the drawings and the tender documents and also in accordance with modification thereto from time to time as approved by the Engineer-in-charge.
b) All wiring diagrams shall be deemed to be 'Drawings' within the meaning of the term as used in Clause 11 of the conditions of contract (PWD 7 or PWD 8). They shall indicate the main switch board, the distribution boards (with circuit numbers controlled by them), the runs of various mains and sub mains and the position of all points with their controls.
c) All circuits shall be indicated and numbered in the wiring diagram and the points shall be given the same number as the circuit to which they are electrically connected.
d) After award of the work, the firm will be required to submit the drawings for the proposed work including layout plan, conduit routes etc. Work will be carried out as per the approved drawings.

25. The contractor shall take all safety precautions to avoid accidents by exhibiting caution boards, red flags, red lights and by providing necessary barriers and all other measures required from time to time. The contractor shall be responsible for all damages and accidents due to negligence on his part.

26. The contractor shall give due notices to Municipality, Police and/or other authorities that may be required under the law/rules under force and obtain all requisite permissions/licenses for temporary obstructions/enclosures and pay all charges which may be leviable on account of his execution of the work under the agreement. Nothing extra shall be payable on this account.

27. All tools, plant and machinery provided by the contractor shall, when brought at the site, be deemed to be exclusively intended for the construction and completion of this work and the contractor shall not remove the same or any part thereof (save for the purpose of moving it from one part of the site to another) without the consent of the Engineer-in-charge.

28. All materials shall be got checked & approved by the Engineer-in-charge on receipt of the same at site before use in the work. The rejected material is to be removed from the site immediately.

29. No foreign exchange shall be made available by the department for the purchase of equipment, plants, machinery, materials of any kind or any other items required to be carried out in execution of work.

30. The contractor shall give the Engineer-in-charge in every fortnight, a progress report of the work

done during the previous fortnight and the targets for the next fortnight. The progress of work will be reviewed periodically by the Engineer-in-Charge with the contractor and shortfalls,if any, sorted out. The contractor shall thereupon take such action as may be necessary to bring back his work to schedule without any additional cost to the department.

31. It shall be responsibility of the main contractor to sort out any dispute involved with the associated contractor without any time and cost overrun to the department. The main contractor shall be solely responsible for settling the dispute/litigation arising out of his agreement with the associate contractor. The contractor shall ensure that the work shall not suffer on this account.

32. The contractor will have to ensure that the skilled labour i.e. wireman etc., engaged in the execution of the work must possess valid electrical license, otherwise he will not be permitted to execute the work.

33. The associate contractors executing the electrical works must possess the valid electrical contractor license otherwise they will not be permitted to execute the electrical works.

34. The contractor shall be responsible for removal of all defects in the work during the defect liability/guarantee/warranty period. The department shall carry out routine maintenance only. However, if any failure is noticed during this period which is attributable to poor quality of material and bad workmanship, the contractor will be required to rectify the same at his own cost, failure of which the department will be at liberty to get the defects rectified at the risk & cost of the contractor. The contractor will also be required to carry out his own inspection/testing during the guarantee/warranty period and attend to any defect taking place during this period.

35. Material required for the work shall be brought at site at the appropriate time keeping in view the requirement of material depending on progress of the work.

36. In case the main contractor fails to make the payment to the contractor associated by him as per mutually agreed terms & conditions and associated contractor makes a written complain to Engineer-in-charge, he shall serve the notice to main contractor to show cause within 7 days that why recovery for non-payment to associated contractor shall not be made from the next running/final bill. In case no cause is shown by the main contractor within the giving time or the cause shown is not to the satisfaction of Engineer-in-charge, the Engineer-in-charge will recover the due amount from the main contractor and pay to associate contractor.

37. In case sufficient amount is not available, the same shall be recovered from any other amounts available with the department/Government. **Also, Engineer-in-charge can make payment to the associate contractor directly in such situation, subject to mutually agreed terms and condition between main contractor and associate contractor**

38. If the main contractor fails to associate contractor for execution of this minor/electrical components within prescribed time or furnishes incomplete details or furnishes details of ineligible agencies even after the main contractor is given due opportunity, the entire scope of such component of works shall be withdrawn from the main contractor and the same shall be got executed by the Engineer-in-Charge at the risk and cost of the main contractor.

39. The main contractor/associates are advised to visit the site of work / all architectural drawings to have an idea of the scope / nature of work. Failure to do so shall not absolve their responsibility to do the work as specified in agreement.

40. In the event of the concerned E&M agency not performing satisfactorily or failure of associate/ sub-contractor to complete the E&M work, the main contractor on the written direction of the department, shall remove the Associate/sub-contractor deployed on the work and shall submit name of new associate who fulfils the conditions mentioned in NIT to execute the leftover work without any loss of time or variation in cost to the department in this regard. Such associates shall also enter into agreement / contract with the main contractor and shall meet all the guarantee for the equipment already supplied for which payment has been released by the Department in part or full.

41. If any equipment supplied for the work, during the currency of the earlier associate / sub-contractor and paid in part or full by the department, becomes redundant or not in a position to be installed and commissioned and put to beneficial use, the main contractor shall be liable for replacement of such equipment(s) at no cost to department**.** Prior approval of Engineer-in-charge t is required for change in associated contractor.

42. The main contractor shall not indulge in procurement of items and getting the work done on labour contract with the associate. The whole E&M component shall be executed by the eligible associate contractor on a turnkey basis i.e. procurement of material, engaging labour, execution, testing & commissioning etc. The associate electrical contractor shall submit the completion certificate of E&M work executed by him along with necessary test reports,

guarantee bond/certificate, completion plan etc.

43. The main contractor shall be responsible and liable for proper and complete execution of all components of work. Main contractor is also responsible to ensure coordination among various associates to complete the whole scope of work.

44. The associate shall attend the inspection of the work by the Engineer-in-Charge of the work as and when required.

45. BYE-LAWS AND REGULATIONS

The work shall be carried out to the satisfaction of the Owner's site representative and in accordance with the Specifications, Regulations of the Electric Supply Authority, Indian Electricity Rules and Regulations, latest Indian Standards and as per the requirements of the Chief Fire Officer.

46. FEES AND PERMITS

The Contractor shall pay any and all fees and obtain permits required for the installation of this work. On completion of the work, the contractor shall obtain and deliver to the Owner, certificate of final inspection and approval by the local fire authority (CFO/ Municipal, State/Central govt. whichever is applicable).

47. SHOP DRAWINGS

i) All the shop drawings shall be prepared on computer through AutoCAD System based on Architectural Drawings, site measurements and Interior Designer's Drawings. Within six weeks of the approval of the associate, contractor shall furnish, for the approval ofthe engineer-in-charge, two set of detailed shop drawings of all equipment and materials including layouts for all conduit layouts, distribution panels, and any other requirement to be fabricated or purchased by the contractor.

ii) These shop drawings shall contain all information required to complete the Project as per specifications and as required by the engineer-in-charge. These drawings shall contain details of construction, size, arrangement, operating clearances, performance characteristics and capacity of all items of equipment, also the details of all related items of work by other contractors. Each shop drawing shall contain tabulation of all measurable items of equipment/ materials/ works and progressive cumulative totals from other related drawings to arrive at a variation-in-quantity statement at the completion of all shop drawings.

Each item of equipment/material proposed shall be a standard catalogue product of an established manufacturer strictly from the list of approved manufacturers attached in these minor/electric components.

When the engineer-in-charge makes any amendments in the above drawings, the contractor shall supply two fresh sets of drawings with the amendments duly incorporated along with check print, for approval. The contractor shall submit a further six sets of shop drawings to the engineer-in-charge. No material or equipment may be delivered or installed at the job site until the contractor has in his possession the approved shop drawing for the particular material/equipment/ installation.

iii) Shop drawings shall be submitted for approval sufficiently in advance of planned delivery and installation of any material to allow engineer-in- charge ample time for scrutiny. No claims for extension of time shall be entertained because of any delay in the work due to his failure to produce shop drawings at the right time, in accordance with the approved programme.

iv) Manufacturers' drawings, catalogues, pamphlets and other documents submitted for approval shall be in three sets. Each item in each set shall be properly labelled, indicating the specific services for which material or equipment is to be used, giving reference to the governing section and clause number and clearly identifying in ink the items and the operating characteristics. Data of general nature shall not be accepted.

v) Samples of all materials like conduits, accessories, switches, wires, control cables etc shall be submitted to the engineer-in-charge prior to procurement. These shall be submitted in two sets for approval and retention by engineer-in-charge and shall be retained for reference and verification till the completion of the Project.

vi) Approval of shop drawings shall not be considered as a guarantee of measurements or of building dimensions. Where drawings are approved, said approval does not mean that the drawings supersede the contract requirements, nor does it in any way relieve the contractor of the responsibility or requirement to furnish material and perform work as required by the contract.

vii) Where the contractor proposes to use an item of equipment, other than that specified or detailed on the drawings, which requires any redesign of the structure, partitions, foundation, wiring or any other part of the mechanical, electrical or architectural layouts; all such re-design, and all new drawings and detailing required therefore, shall be prepared by the contractor at his own expense and gotten approved by the engineer-in-charge.

viii) The contractor shall prepare composite working drawings and sections at a suitable scale, not less than 1:50, clearly showing how his work is to be installed in relation to the work of other trades. If the Contractor installs his work before coordinating with other trades, or so as to cause any interference with work of other trades, he shall make all the necessary changes without extra cost to the engineer-in-charge.

ix) Within four weeks of approval of all the relevant shop drawings, the contractor shall submit three copies of a comprehensive variation in quantity statement, and itemized price list of recommended (by manufacturers) imported and local spare parts and tools, covering all equipment and materials in this contract.

48. ACCESSIBILITY:

The Contractor shall verify the sufficiency of the size of the shaft openings, clearances in wall cavities and suspended ceilings for proper installation of his conduit's cables, cable trays, panels etc. His failure to communicate insufficiency of any of the above shall constitute his acceptance of sufficiency of the same**.** The Contractor shall locate all equipment which must be serviced, operated or maintained in fully accessible positions. The exact location and size of all access panels, required for each concealed control damper, valve or other devices requiring attendance, shall be finalized and communicated in sufficient time, to be provided in the normal course of work. Failing this, the Contractor shall make all the necessary repairs and changes at his own expense. Access panel shall be standardized for each piece of equipment / device / accessory and shall be clearly nomenclature / marked.

49. MATERIALS AND EQUIPMENT:

All materials and equipment shall confirm to the relevant Indian Standards and shall be of the approved make and design. Makes shall be strictly in conformity with the list of approved manufacturers attached in these minor/electric components.

The Contractor shall be responsible for the safe custody of all materials and shall insure them against theft or damage in handling or storage etc. A list of items of materials and equipment, together with a sample of each shall be submitted to the Owner's site representative within 15 days of the award of the contract.

The quantity of material in the BOQ is indicative. The contractor has to assess the actual requirement of material at the site before placing the order, keeping in view the drawing and site requirement from the shortest route. No claim for payment for unused excess material shall be entertained.

50. COMPLETION CERTIFICATE:

On completion of the electrical installation a certificate shall be furnished by the Contractor countersigned by the licensed supervisor, under whose direct supervision the installation was carried out. This certificate shall be in the prescribed form as required by the local, state/central govt./ municipal / fire authorities concerned.

51. COMPLETION DRAWINGS:

Upon completion of the work and before issuance of certificate of virtual completion the contractor shall submit to the engineer-in-charge three set of layout drawings in progressive manner for individual systems drawn at approved scale indicating the complete wiring system as installed. Drawing shall be prepared on AUTO-CAD (latest version). Along with the hard copies, the contractor shall submit copies of all drawings on CD and one set of all drawings on RTF shall also be submitted. These drawings must provide:

a. Single line distribution diagram including submain circuit wiring etc.
b. Location of all DB's, switch board, panels etc.
c. Any other relevant drawings.

52. OPERATING INSTRUCTION & MAINTENANCE MANUAL:

Upon completion and commissioning of part Electrical system **t**he contractor shall submit a draft copy of comprehensive operating instructions, maintenance schedule and log sheets for all systems and equipment included in this contract. This shall be supplementary to manufacturer's operating and maintenance manuals.

Upon approval of the draft, the contractor shall submit three (3)complete bound sets of type written operating instructions and maintenance manuals. These manuals shall also include basis of design, detailed technical data for each piece of equipment as installed, spare parts manual and recommended spares for maintenance of each equipment.

53. ON SITE TRAINING:

Upon completion of all work and all tests, the Contractor shall furnish necessary operators, labour and helpers for operating the entire installation for a period of thirty (30) working days of ten (10) hours each, to enable the engineer-in-charge and his duly authorized representatives to get acquainted with the operation of the system. During this period, the contractor shall train the engineer-in-charge's personnel in the operation, adjustment and maintenance of all equipment installed**.**

54. MAINTENANCE DURING DEFECTS LIABILITY PERIOD:

Complaints

The Contractor shall receive calls for any and all problems experienced in the operation of the system under this contract, attend to these within 24 hours of receiving the complaints and shall take steps to immediately correct any deficiencies that may exist.

Repairs

All equipment that require repairing shall be immediately serviced and repaired. Since the period of Mechanical Maintenance runs concurrently with the defects liability period, all replacement parts and labour shall be supplied promptly free-of-charge to the engineer-in- charge.

55. METHOD OF MEASUREMENT

The works shall be measured in accordance with relevant IS codes notwithstanding any general or local custom except where otherwise specifically described or prescribed in the contract.

56. DEMONSTRATION TO ENGINEER-IN-CHARGE:

At completion, devices subject to manual operation shall be operated at least four times in presence of engineer-in-charge's site representative to demonstrate satisfactory operation.

57. PREPARATION AND APPROVAL OF DRAWING

On award of the work, the contractor must prepare working drawings and submit them to the Engineer-in-Charge for approval. This drawing shall be prepared after considering all the services, viz. conduits, HVAC ducts / AC duct / AC piping, horticulture, plumbing etc. The work is to be executed as per approved drawings.

58. The associate shall attend the inspection of the work by the Engineer-in-Charge as and when required.

59. The rates quoted shall be inclusive of all taxes and duties, no extra shall be paid on this account.

ADDITIONAL SPECIFICATIONS
(For Internal & External Electrical Work)

1.0 All the works shall be carried out as per CPWD General Specifications for Electrical Works Part-I (Internal) 2023 & Part-II (External) 2023, amended up to the last date of submission of tender.

2.0 **Conformity to IE act, IE Rules, and standards:**

All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 1910 and Indian Electricity Rules, 1956 amended up to the last date of submission of tender unless specified otherwise. A list of rules of particular importance to electrical installations under these General Specifications for internal works is given for reference.

3.0 General requirements of components:

3.1 **Quality of material:** All materials and equipment supplied by the contractor shall be new. They shall be of such design, size and materials as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.

The model of equivalent make shall be approved by Engineer – in- charge on producing relevant paper of the model and equivalent make shall be equal or more rich specification.

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

3.3 Samples of all materials, fittings and other materials/articles required for execution of the work shall be got approved from the Engineer-in-charge. Materials / articles manufactured by the firms of repute as indicated in tender documents and approved by the Engineer-in-charge shall

only be used. **The date of manufacturing of all the equipment and materials shall not be more than Six months old from the date of award of work**.

All the materials and equipment shall be procured directly from the manufacturer or authorized dealers only.

3.4 Even ISI marked materials shall be subjected to quality test at the discretion of the Engineer-in-charge besides testing of other materials as per the specifications described for the item/material. Whenever ISI marked, materials are brought to the site of work; the contractor shall, if required by the Engineer-in-Charge, furnish manufacturers test certificates to establish that the materials procured by the contractor for incorporation in the work satisfy the provisions of IS codes relevant to the material and/ or the work done.

3.5 The MCB should be 10 KA breaking Capacity and of same make as that of MCB DBs.

3.6 The fan box cover shall be made from 3mm thick phenolic laminated sheet as per CPWD specification.

3.7 The contractor shall provide junction boxes/looping boxes with cover of required sizes even in PVC conducting and such boxes shall be measured as a part of conduit/wiring without any extra payment.

3.8 The junction boxes & looping boxes shall be covered with approved makes of phenolic laminated sheet. For telephone, television & fire alarm system shall be provided at all the floors within scope of work without any extra cost as per requirement & layout approved by Engineer-in-charge.

3.9 The agency must provide the ferruling on the wiring and cable, cable tagging, marking as required.

4.0 Ratings of components:

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

4.2 All conductors, switches and accessories shall be of such size as to be capable of carrying the maximum current, which will normally flow through them, without their respective ratings being exceeded.

5.0 Conformity to standards:

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

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

5.3 The connections of switches, sensors, earthing conductors & interconnections cables shall be made by adequate rating thimbles of approved standard makes only and nothing extra on this account shall be paid.

5.4 Material to be used in the work shall be ISI marked. The make of material have been indicated in the list of acceptable makes. No other make will be acceptable. The material to be used in the work shall be got approved from the Engineer-in-charge before its use at site. The Engineer-in-charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.

5.5 Modular type switches / sockets / telephone outlets / TV sockets are to be provided wherever indicated in the items. The same shall be of only one make. The modular plates of switches, sockets, telephone & TV sockets etc. shall be in two parts i.e. plates with frames within quoted rates.

6.0 **Interchangeability:**

Similar parts of all switches, lamp holders, distribution fuse boards, Switch gears, ceiling roses, brackets, pendants, fans and all other fittings of the same type shall be interchangeable in each installation.

7.0 Inspection of materials and equipment:

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

a) Inspection of materials / equipment to be witnessed at the Manufacturer's premises in accordance with relevant BIS / Agreement Inspection Procedure.

b) To receive materials at site with Manufacturer's Test Certificate(s)

c) To inspect materials at the authorized dealer's godown to ensure delivery of genuinematerials at site.

d) To receive materials after physical inspection at site.

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

a) Material will be ordered & delivered at site only with the prior approval of the department to ensure timely delivery.

b) As and when the order is placed for the fittings / fixtures, cables, switchgears, poles, rising main, other main items etc, its copy shall be endorsed to the Engineer-in-charge.

c) The firm will be required to procure material like exhaust fans, MCB's & DB's, switches & sockets, wires & cables, conduits and switchgears etc directly from the manufacturer/ authorized dealers to ensure genuineness & quality and as per the approved makes only. Proof in this regard shall be submitted by the contractor if required by the department.

d) Inspection at factory or at godown of the manufacturer, as required, shall be arranged by the firm for a mutually agreed date. Certificate for genuineness of the fittings shall have to be provided duly signed by the manufacturer's officer not below the rank of Regional Manager.

e) Delivery of material shall be taken up only with the consent of department, after clearance of the material.

f) Department shall reserve the right to waive inspection in lieu of suitable test certificate, at its discretion.

7.3 Similarly, for fabricated equipment, the contractor will first submit dimensional detailed drawings for approval before fabrication is taken up in the factory. Suitable stage inspection at factory also will be made to ensure proper use of materials, workmanship and quality control.

7.4 The contractor shall give a trial run of the equipment and machinery for establishing its capability to achieve the specifications within laid down tolerances to the satisfaction of the Engineer-in-charge before commencement of work.

8.0 Workmanship:

8.1 Good workmanship is an essential requirement to be complied with. The entire work of manufacture/fabrication, assembly and installation shall confirm to sound engineering practice.

8.2 **Proper supervision/skilled workmen**: The contractor shall engage suitably skilled/licensed workmen of various categories for execution of work duly supervised by technical representative having appropriate qualification and experience to ensure proper execution of work. They will carry out instruction of Engineer-in-charge and his authorized representatives during the progress of work.

8.3 **Fabrication in reputed workshop:** Switch boards and LT panels shall be fabricated in a factory/workshop having modern facilities like quality fabrication, seven tank processes, powder / epoxy paint plant, proper testing facilities, manned by qualified technical personnel. These shall be as per make / item approved.

8.4 The contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipment to execute the work.

9.0 **Provisions for services and proper planned work**:-

9.1 The main contractor shall leave such recesses, holes, openings, etc., as may be required for the electric, air conditioning and other related works. The main contractor has also to fix inserts, sleeves, brackets, conduits, base plates, insert plates, clamps etc if any at the time of casting of concrete, stonework & brick work. These inserts, sleeves, brackets, conduits, base plates, insert plates, clamps etc shall be arranged by the contractor and shall be paid accordingly if these are not the part of equipment for which it is being provided.

9.2 The contractor shall ensure quality construction in a planned and time bound manner. Any substandard material or work which is not within permissible tolerance limits shall be summarily rejected by the Engineer-in-Charge.

9.3 The contractor shall make sample as per the timeline mentioned in the milestone given of this tender document using all approved materials, for approval of Engineer-in-charge before commencement of execution of mass scale work.

9.4 Check nuts shall be provided while terminating the M.S. conduits in switchboard boxes for which nothing extra shall be paid.

9.5 All distribution boards shall be marked with circuits controlling the rooms/area/SDB controlled.

9.6 While deciding the size of switch boxes for light points / fan point / exhaust fan point, two extra modules shall be provided for each fan point for fixing of regulator (fan regulator is to be provided under different item). Wherever extra modules are available, the same shall be provided with blanking plates without any extra cost.

9.7 Contractor will not provide any ceiling rose/connector/looping box etc wherever false ceiling is being provided. The point wiring in that case will be extended up to the fitting/fan etc. directly without provisions of any termination arrangement in between. The wire from the end points up to the fixture shall be considered to be included in the point wiring. Nothing extra shall be paid for the same.

9.8 Wherever providing rigid conduits is not possible, flexible conduit pipe shall be provided for drawing/running the wires. However, such arrangement has to be kept minimum and only with the prior approval of Engineer-in-charge or his authorized representative.

9.9 Earthing and all items of work that cannot be checked later on are to be got approved from Engineer-in-charge or his authorized representative before proceeding further.

9.10 The firm shall use only electrically operated chase cutting machine for cutting the chases in the wall for recessed conduit wiring.

9.11 The contractor shall follow the shortest route for circuits, sub main, point wiring etc.

9.12 Colour coding as per specification shall be adopted in the wiring system.

9.13 Tinned copper earthing lugs / Thimbles / ferrules shall be provided for termination of earth wire to all Metallic outlet boxes / fittings / fixtures / fan regulator / MCB DB / switch board / Meter board etc., properly crimped / brazed / soldered for which nothing extra shall be paid.

9.14 A suitable brass / tinned copper neutral link shall be fixed at suitable place in the Metallic Outlet boxes of all sizes to terminate neutral wire properly. Nothing extra shall be paid on this account.

9.15 To facilitate drawing of wires 16 / 18 SWG GI fish wire shall be provided along with laying of recessed conduit. Nothing extra shall be paid on this account.

9.16 All hardware items such as screws, thimbles, connectors, earth / neutral terminals, wires etc. which are essentially required for completing any item as per specifications will be deemed to have been included in the item even when the same have not been specifically mentioned.

9.17 All hardware material such as nuts / bolts / screws / washers etc. to be used in the work shall be zinc / cadmium plated iron. The galvanised boxes of modular switch / sockets etc. shall be of the same make as of switch / socket etc.

9.18 While laying conduit, suitable minimum number of junction boxes shall be left for pulling the wires. These shall be placed in such a way that the same do not remain noticeable.

9.19 The ceiling roses, wherever required to be provided are included in the scope of work without extra payment and the same shall also be of modular type & of the same make as that of switches & sockets along with earthing provision.

9.20 The work will be carried out in close coordination with the building work and other agencies. Conduits will be laid in the slab within the specified time and it will have to be ensured that the casting of slabs is not delayed for want of laying of conduits. The conduits will also be laid in walls before the Plaster work is undertaken so as to avoid breaking cutting of plaster while making chase for laying of conduits subsequently. The contractor will have to employ adequate labour for carrying out the work. No claim regarding the idle labour for any reason will be entertained by the Department.

9.21 Suitable back plates providing for fixing the wall brackets and ceiling flush fittings shall be supplied by the contractor free of cost.

9.22 It shall be responsibility of contractor to provide polythene/PVC plastic cover for all SDBs/meter boards/feeder pillars/panels etc so as to protect them from wear & tear/damage during execution stage. Contractor shall provide the covers for the materials if any being supplied departmentally also. Nothing extra shall be paid on this account.

9.23 contractor is fully responsible for any kind of damage to the LT/HT cable during execution of work. No joints shall be allowed if the cable is damaged. Contractor has to replace the full length at his own cost.

9.24 An earth termination with earth stud of brass/tinned copper i/c 2 No. metallic washers or suitable earth bar of Brass/tinned copper with tinned copper thimbles/ferrules/lugs should be suitably fixed at suitable place in the Metallic outlet box for termination of protective earth conductor. Nothing extra shall be paid on this account.

9.25 In the outlet boxes, phase from one switch to other switch shall be looped with suitable size of solid copper conductor. Nothing extra shall be paid on this account. Stranded conductor shall not be accepted.

9.26 Only required number of knockouts should be removed from Metallic outlet boxes for entry of conduits. If more than required number of knockouts is removed, the Metallic outlet box shall not be accepted.

9.27 Separate G.I. boxes shall be used for staircase light switches and bell push. Nothing extra shall be paid on this account.

9.28 Metal sheath of Co-axial T.V. cable shall be terminated using 'U' shape thimble/lugs/ferrules. Nothing extra shall be paid on this account.

9.29 The contractor have to submit the test certifacte of the 3-Phase energy meters along with the warranty cards.

9.30 The components of passive distribution network for data and voice consisting of 1) Category 6 UTP Ethernet Cable and CAT6 components and accessories, and, 2) fiber optic cable and fiber optics accessories shall be manufactured by a single manufacturer. The manufacturer shall warrant the passive networking distribution channel for a period of 15 years minimum.

9.31 The networking switches and its options such as modules etc should be of the same make so that software and firmware images and functionality is identical.

9.32 The upgrades or enhancement of software images and firmware for switches plus their options shall be free (without any extra cost) to the client for the entire life cycle of these switches.

9.33 The upgrades and enhancements of the software images, core software and firmware for all network or networkable devices - such as controllers, interfaces, network camera, ip telephones, epbax, fire alarm panels, PA main units etc – shall be free (without any extra cost) to the client for the entire life cycle of these products.

9.34 As far as possible, the successful tenderer will have to place order directly to the manufacturer OR it's authorized dealer.

9.35 The Engineer in charge have right to check the challans of supplier. Make of components required to be used by contractor to complete the installation, if not mentioned anywhere, shall be required to got it approved by Engineer in charge before installation in writing manner.

Technical specification of Lighting Fixtures

S.No.	Description	Value
1	Site Parameters	
1.1	Ambient Temperature	0˚C to 50˚C
2	Electricity Efficiency Management/Electronic Driver	
2.1	Input Operating Voltage	110 to 270Volts, AC 50Hz±2
2.2	AC Power Factor	Not Less than 0.95
2.3	Efficiency of driver	More than 85%
2.4	THD (AC current 110V to 250V)	Not more than 10%
2.5	LED Drive Current	Not more than 500mA
2.6	Led Efficacy	≥110lm/watt
3	Optical Management	
3.1	Colour Temperature	2700˚K to 6500˚K
3.2	LED life with L70 criteria	Above 50,000 operating hours
3.3	CRI	More than 70
4	Thermal Management	
4.1	Jn. Temperature of LED at 25˚C	≤65˚C
4.2	Heat Sink temperature rise above ambient	≤30˚C
5	General parameters	
5.1	Mounting Arrangement	Mounting Angle Adjustment facility should be provided
5.2	IP Clause & Environment Protection	Minimum IP 20 for indoor, IP 44 for semi covered area and IP 65 for outdoor
5.3	Overall system efficiency	Not less than 75%

Successful Contractor has to submit test report of similar LED light fixture for following parameters from any Government Approved Test Laboratories for approval. However, test certificates of the lot to be supplied are required to be produced before supply of material at site.

For LED

- LM 80 report of the LED chip being used

For Fixtures

- Endurance Test
- Thermal Test
- IP rating test
- Power factor, efficiency
- Harmonic test
- Surge test
- Mechanical strength test
- Dielectric test
- IR test
- Goniophotometer Reading for the LED Light

Contractor has to give five-year unconditional guarantee for replacement for
each light fixture. . This guaranteed support should be given by OEM. No payment will be given against LED luminaires in absence of guarantee support from OEM. The certificate should be in soft as well as hard copy. The guarantee should be in favor of:- Director, IIM Udaipur.

The electronic components used shall be as follows:-

(a) IC (Integrated circuit) shall be of industrial grade or above.
(b) Metallic film / Paper/Polyester Capacitor shall be rated for a sustained operating temperature of 105ºC.
(c) The resistors should be preferably made of metal film where suitable, of adequate rating. The actual rating versus loading shall be by a factor of >2.
(d) The junction temperature of the Switching devices such as transistors and MOSFETs etcshall not exceed 125ºC (allowing thermal margin of 25 ºC).
(e) The protective cum adhesive coating used on PCBs should be clear and transparent and should not affect colour code of electronic components or the product code of the company.
(f) The construction of PCBs and the assembly for components for PCBs should be as per relevant Indian / international standards.
(g) The electronics covered for this equipment shall pass all the tests covered under relevant Indian / International standards specification.
(h) The infrastructure for Quality Assurance facilities must be available at the manufacturing facility. In house testing facility for Quality Assurance should be present.
(i) The connecting wires used inside the luminaries, shall be low smoke halogen free, fire retardant e-beam cable and fuse protection shall be provided in input side.
(j) For outdoor fixtures, Care shall be taken in the design that there is no water stagnation anywhere. The entire housing shall be dust and water proof having IP66 or above protection and the light shall pass driving rain test/jet water test.
(k) The LED Module(s), Driver gear, etcshall be designed in such a way so that temperature of heat sink shall not exceed 30ºC above the ambient temperature.
(l) All the material used in the luminaries shall be halogen free and fire retardant confirming to UL94.
(m) The LED Luminaries shall have an input connector which shall be made of fire retardant material & its construction shall be water proof.
(n) The Contractor shall submit all the necessary support documents along with the compliance statement of all technical requirements w.r.t. Electrical, Optical, Thermal & environmental performance, including the Technical specification mentioned herewith.
(o) Each LED should have necessary lens /reflector for better distribution of light at surface.
(p) All the applicable test reports for complete fixtures and spare parts have to be submitted.
(q) The manufacturer should have in house testing facilities within the India for the fixtures intending to supply.

10.0 **Testing:**
All tests prescribed in this General Specification to be done before, during and after installation shall be carried out, and the details of test results shall be submitted to the Engineer-in-charge in approved format, that shall form part of the completion certificate of this component.

11.0 **Commissioning on completion:**
After the work is completed, it shall be ensured that the installation is tested and commissioned.

12.0 Completion plan and completion certificate along with guarantee:

12.1 The main contractor through his associate shall submit completion plan as required vide General Specifications for Electrical works (Part-I internal) 2023 and (Part-II External) 2023 as applicable

within time as stipulated in milestones.
In case, the main contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent as stipulated in clause–8B of General Condition of Contract – 2023 amended up to last date of submission of tender.

12.2 Three sets of completion plan as well as in soft copy drawn to a suitable scale indicating the following shall also be submitted:

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

(iii) Position of all points and their controls.

(iv) Types of fittings, viz. fluorescent, pendants, brackets, bulkhead, fans, exhaust fans etc.

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

12.3 Guarantee:

The complete installation will be handed over to the department after necessary testing and commissioning. The installation will be guaranteed against any defective design / workmanship. Similarly, the materials supplied by the contractor will be guaranteed against any manufacturing defect, inferior quality. The guarantee period will be for a period of 12 months from the date of handing over of installation to the department. Installation/ equipment or components thereof shall be rectified/ repaired to the satisfaction of the Engineer-in-charge. Guarantee on material/equipment given by the manufacturer whatsoever have to be submitted by the main contractor and his associate to the department.

13.0 The main contractor and his associate has to go through the site order book regularly and has to sign the same by authorised representative and carryout the instructions recorded therein by various officers of the department.

14.0 (All OFC splicings shall be done as per site requirement).
15.0 The Network will be made live with all type of configuration.

LIST OF APPROVED MATERIALS (ELECTRICAL)

Note :

1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender, shall be used in the work.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.
3. Whenever the specified brand of material is not available then the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.

Sl. No.	Item		Acceptable Makes
	ELECTRICAL INSTALLATION -		
1	FRLS PVC insulated Copper wire/TV/ Telephone Cable	:	R.R. Kabel /Finolex / Polycab/ KEI / LAPP/Havells (All with ISIMarked),
2	PVC Conduit & accessories (ISI Marked)	:	AKG/ BEC/ Polycab / Precision / Pressfit
3	Steel Conduit & its accessories	:	AKG / BEC/ RMCON/NIC / Pressfit (ISI Marked)
4	MCB / MCB- DB / Industrial socket and plug, Isolator, ELCBS (MCB & DB shall be same make)	:	L&T/Siemens/Schneider/Hager/Legrand
5	MCCB (ICS=100% ICU at 415V) / Changeover Switches. (MCB & DB shall be same make)	:	L&T/Siemens/Schneider/Hager / Legrand
6	Exhaust fan/Wall Fan	:	Almonard / Usha / Crompton / Bajaj/Havells/Orient/Atomberg
7	Ceiling Fan	:	Crompton / Usha / Havells /Orient/Atomberg/Bajaj
8	G.I. Pipe / M.S Pipe	:	Jindal (Hissar) / Tata /Prakash Surya/ TT Swastik / SAIL (All with ISI Marked)/Apollo
9	DWC HDPE Pipe	:	REX/Duraline/Gemini/Durton/Kisan/Jain Irrigation.
10	Modular 6/16 Amp. Switch / Socket / Blanking Plate / Metal Switch Box (the gauge of switch Box shall not less than 18 SWG & of the same make that of Switch) Front Plates, Telephone, T.V. Outlets Socket / Computer Socket / Fan Regulator. (ISI Marked)	:	Legrand (Myrius) / Schneider (Zencelo) / L&T (ORIS) / Northwest
11	Net Work cable, patch cord, jack panel, I/O, Cat 6, Patch Panel, Pig tail	:	Molex & Equivalent

Sl. No.	Item		Acceptable Makes
12	XLPE insulated PVC sheathed 1.1 KV grade Aluminium/Copper conductor Armoured Cable (ISI Marked)	:	R.R. Kabel / Finolex / Polycab / Universal (Satna) / Havells /Grandlay/ KEI
13	Gland/Lugs	:	Dowells/Comet/Jainson
14	Indoor Fitting /Outdoor Fiting / Street Light Fitting	:	Philips/Wipro/Trilux /Jaquar/ Crompton/Bajaj/Orient/Havells
15	Lighting Control System	:	Schneider/Seimens/Philips/Honeywell
16	Day Light/Occupancy Sensor	:	Legrand / Schneider/Johnson/Honeywell/Control/ Lutron / Hager/Wipro/Bajaj/Philips
17	LED Solar Street Light	:	Phillips / Wipro / Bajaj/ Crompton Havells.
18	Electronic Energy Meter	:	L&T / HPL / Secure / Elmeasure
19	Electrical Panel (TTA)/ Feeder pillar	:	L&T / Legrand /Schneider /Siemens
20	Ceiling rose	:	Antex/Leader/Emperor/Anchor/Kinjal/ Legrand/ Schindler
21	PVC Batten/Angle Holder	:	Aristo/Antex/Anchor/Kinjal/Leader
22	Geyser / Water heater	:	Bajaj /Crompton/V-Guard/ Racold /Usha/Jaquar
23	Solar Water Heating System	:	Tata BP Solar/Honeywell / Racold / Photon/V-Guard / Sudarshan Saur Solar Water Heating System
24	DPL Trunking and Raceway	:	Legrand/Honeywell MK/OBO
25	Raising Main, Bus Trunking (Sandwich/Air Insulated) & Tap-off boxes)	:	Legrand/Schneider / L&T /Siemens / Precision/C&S
26	LX singlemode tranceivers		Cisco or Equivalent
27	Single Mode Fiber Optics Components – Cables, LIUs, Shelves, Pigtails, Patch- cords, Connectors, Couplers, Splices		Molex & Equivalent
	Outdoor pole mounted enclosure and wall mounted enclosures for faculty Housing		HENSEL, HOFFMAN, PANDUIT
29	IP66 rated 96 core External Splicing Kit for outdoor fiber optics cable		3M, RAYCHEM, TYCO
30	Networking Racks, Data Centre racks -Distribution Racks		, APW-VERO PRESIDENT, PANDUIT, PANNET, RITTAL
31	Networking switches – Edge/Access and all their accessories and options such as fiber optics interface modules and transceivers. SM fiber optics transceivers shall		CISCO or equivalent

	be original (OEM supplied). All these components shall be from a single OEM.		
32	Wireless Access Points		CISCO or equivalent

Note: 1) In case approved make for any material/item is not specified in the NIT, the decision of finalizing a particular brand shall rest with Engineer-in-charge, IIM Udaipur or his successor there off.

2) In case of non-availability of a particular material/item from specified manufacturers/makes, the decision of Engineer-in-charge, IIM Udaipur or his successor there off in selection of alternate manufacture/ make is final.

Integrity Letter

To,
……..,
……..,
……..

Sub: NIT No.: **……..**

Dear Sir,

It is here by declared that IIM Udaipur is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Tenderer will sign the integrity Agreement, which is an integral part of tender/bid documents, failing which the tenderer/Tenderer will stand disqualified from the tendering process and the bid of the Tenderer would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IIM Udaipur.

Yours faithfully,

Engineer-in-charge
IIM Udaipur

To,
The Engineer-in-charge
IIM Udaipur

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

Dear Sir,

I/We acknowledge that IIM Udaipur is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

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

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

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

Yours faithfully

(Duly authorized signatory of the Tenderer)

To be signed by the Tenderer and same signatory competent / authorised to sign the relevant contract on behalf of IIM Udaipur.

INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this .....day of ..... 20.....

BETWEEN
Director, IIM Udaipur, (Hereinafter referred as the, IIM, Udaipur 'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND
……..... (Name and Address of the Individual/firm/ Company) through ..... (Hereinafter referred to as the (Details of duly authorized signatory)

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

Preamble

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

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

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

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

Articles

Article -1: Commitment of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:

(a) No employee of the Principal, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(b) The Principal will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

(c) The Principal shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

(2) If the Principal obtains information on the conduct of any of its employees which is a

criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures .

Article 2: Commitment of the Bidder(s)/Contractor(s)

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiationor award of a contract.
2. The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

(a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

(b) The Bidder(s)/Contractor (s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

(c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/ PC Act. Further the Bidder(s)/ Contract(s) will not use improperly , (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

(d) The Bidder(s)/Contractor (s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor (s) of Indian nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participates in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

(e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

(f) Bidder(s) / Contractor(s) who have signed the Integrity Pact shall not approach the courts while representing the matter to IEMs and shall wait for their decision in the matter.

3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice, willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use coercive practices (which shall include the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property) to

influence their participation in the tendering process.

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the principal under law or the contract or its established policies and laid down procedures, the principal shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the principal absolute right:

1. If the Bidder(s)/Contractor(s) , either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor (s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes . The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the principal. Such exclusion may be forever or for a limited period as decided by the principal.
2. Forfeiture of Earnest Money Deposit Performance Guarantee/Security Deposit: If the Principal has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal apart from exercising any legal rights that may have accrued to the Principal, may in its considered opinion forfeit the entire amount of Earnest Money Deposit Performance Guarantee and Security Deposit of the Bidder/Contractor.
3. Criminal Liability: If the Principal obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of PC Act, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1. The Bidder declares that no previous transgressions occurred in the last 3 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the tender process.
2. If the Bidder makes an incorrect statement on this subject, he can be disqualified from the tender process or action can be taken for banning of business dealings/holiday listing of the Bidder/Contractor as deemed fit by the principal.
3. If the Bidder/Contractor can prove that he has resorted/recouped the damage caused by him and has installed a suitable corruption prevention system, the principal may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

4. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitmentin conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement by any of its Subcontractors/sub- vendors.
5. The principal will enter into pacts on identical terms as this one with all Bidders and Contractors.
6. The principal will disqualify Bidders who do not submit the duly signed Integrity Pact between the Principal and the Bidder along with the Tender or violate its provisions at any stage of the Tender process.

Article 6- Duration of the Pact

This Integrity Pact begins when both the parties have legally signed it. It expires for the Contractor 12 months after the completion of work under the contract or expiry of defect liability period or last payment made under the contract, whichever is later and for all other bidders, 6 months after the Contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Integrity Pact as specified above, unless it is discharged/determined by the competent authority of institute.

Article 7- Other Provisions

1. This Integrity Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal, who has floated the tender.
2. Changes and supplements as well as termination notice need to be made in writing.
3. If the Contractor is a partnership or a consortium, this Integrity Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In the case of a Company, the Integrity Pact must be signed by a representative duly authorized by board resolution.
4. Should one or several provisions of this Integrity Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.
5. Issues like Warranty /Guarantee etc. shall be outside the purview of IEMs.
6. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Pact, any action taken by the principal in accordance with this Integrity Pact or interpretation thereof shall not be subject to arbitration.
7. In view of the nature of integrity pact, the Integrity Pact is irrevocable and shall remain valid even if the main tender/contract is terminated till the currency of the integrity pact.
8. If any complaint regarding violation of IP is received directly by the principal in respect of the contract, the same shall be referred to the IEM for comments/recommendations.

Article 8 -Independent External Monitor (IEM)

(1) The principal appoints a competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission (Names and address of IEMs are as mentioned in Schedule-F). The task of the Monitor is to review independently and objectively whether and to what extent the parties comply with the obligations under this agreement.

(2) The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all contract documents, whenever required. It will be obligatory for him/her to treat the information and documents of the Bidders / Contractors as confidential.

(3) The Bidder(s)/Contractor(s) accepts that the IEM has the right to access without restriction to all project documentation of the principal including that provided by the Contractor, The Contractor will also grant the IEM, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same applicable to sub- contractors.

(4) The IEM is under contractual obligation to treat the information and documents of the Bidder{s}/Contractor(s)/ Sub-contractor(s) with confidentiality. The IEM has also signed 'Non-Disclosure of Confidential Information' and 'Absence of Conflict of Interest'. In case if any conflict of interest arising at a later date, the IEM shall inform the Engineer-in-Charge and recuse himself / herself from that case.

(5) As soon as the IEM notices, or believes it to notice, a v i o l a t i o n of t h i s agreement, he/she will inform the Management of the Principal and request the Management to discontinue or take corrective action , or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(6) The IEM will submit a written report to the Director within 8 to 10 weeks from the date of

reference or intimation to him by the principal and, should the occasion arise, submit proposals for correcting problematic situations.

(7) If the IEM has reported to the Director, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Director concerned has, within a reasonable time, not taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the IEM may also transmit this information directly to the Central Vigilance Commissioner.

(8) The principal will provide the IEM sufficient information about all meetings among the parties related to the project provided such meetings could have impact on contractual relations between the principal and the contractor. The parties will offer to the IEM the option to participate in such meetings.

(9) The word IEM or monitor would include both singular and plural.

Article 9- Legal and Prior Rights

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard to any of the provisions covered under this Integrity Pact.

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

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

WITNESSES:

1

(signature, name and address)

2

(signature, name and address)

Place: Dated:

Note: To be signed by the Bidder and the Engineer-in-Charge.

DRAFT AGREEMENT

AGREEMENT made this day of Two Thousand_____between the Indian Institute of Management Udaipur incorporated as Institutions of National Importance through its Director IIM Udaipur (hereinafter referred to as "The Institute and M/s_____(Hereinafter referred to as "The Contractor") which expression shall include his/their respective heirs, executors, administrators and assigns of the other part.

WHEREAS the Institute is desirous for "_____" and has caused drawings and specifications describing the work to be done and WHEREAS the said drawings as per list attached, the specifications, the priced Schedule of Quantities the conditions of tender and the conditions of contract have been signed by or on behalf of the parties hereto AND WHEREAS the contractor has agreed to execute upon and subject to the condition set forth (herein after referred to as 'the said conditions') the work shown upon the said drawings and described in the said specification and the said priced Schedule of Quantity 'at the respective rates mentioned in the priced Schedule of Quantities.

AND WHEREAS the contractor has deposited by Cash / FDR a sum of Rs._____/- (Rupees _____ only), with the Institute for the due performance of this agreement.

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of the payments to be made to the contractor as herein after provided the Contractor shall upon and subject to the said conditions execute and complete the works shown upon the said drawing and such further detailed drawings as may be furnished to him by the said Institute and described in the said specification, and the said priced Schedule of Quantities.

2. The Institute shall pay the contractor such sums as shall become payable hereunder at the time and in the manner specified in the said conditions.

3. Time is the essence of the agreement. In the event of the Contractor failing to comply with this condition, he shall be liable to pay compensation as per clause 2 of the condition of the contract as decided by the competent authority of the Institute in writing which shall be final and binding on the contractor.

4. The Drawings, specifications and priced Schedule of Quantities above mentioned shall form the basis of this contract and the decision of the Director or Arbitrator or Umpire as mentioned in the conditions of the Contract in reference to all matters of disputes as to material, workmanship or account and as to the intended interpretation of the clause of this agreement or any other document attached here to shall be final and binding on both parties and may be made a rule court.

5. The said contract comprises the work above mentioned, and all the subsidiary work connected therewith the same site all may be ordered to be done from time to time by the institute even though such works may not be shown on the drawings or described in the said specifications or thepriced Schedule of Quantities.

6. The institute reserves the right altering the drawings and nature of the work and of adding to or omitting any items of work or of having portions of the same carried out departmentally orotherwise and such alterations or variations shall not vitiate this contract.

7. The said conditions and appendix there to shall be read and construed as forming part of this agreement and the parties here to will respectively abide by and submit themselves to theconditions and stipulations and perform the agreement on their parts respectively in such conditions contained.

8. All other disputes and differences except those excluded specifically as per applicable GCC shall be dealt with as per provision at ~~**Sl. No.59**~~ **Clause 25 of GCC** i.e. "**Dispute Resolution" under particular specification and special conditions**

9. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in Udaipur and only courts in Udaipur shall have jurisdiction to determine the same.

10. The several parts of this contract have been read to us and fully understood by us. In witness whereof the parties hereto have set their respective hands the day and the year herein above written.

Engineer-in-charge

For and on behalf of the Director

In the presence of:

1.

2.

Contractor

On Non-Judicial Stamp Paper of minimum Rs. 100
(Guarantee offered by Bank to Institute in connection with the execution of contracts)
Form of Bank Guarantee for Earnest Money Deposit / Performance Guarantee / Security Deposit / Mobilization Advance

1. Whereas the Director, IIMU……..... , on behalf of the Indian Institute of Management, Udaipur
   (hereinafter called "The institute") has invited bids under ……(NIT Number) ……dated ……for……(name of work).....The Institute has further agreed to accept irrevocable Bank Guarantee for Rs. ……..(Rupees ……only) valid upto ……..(date)* …….as Earnest Money Deposit from ……..(name and address of contractor) ……..(hereinafter called "the contractor") for compliance of his obligations in accordance with the terms and conditions of the said NIT.

   Or**

2. Whereas the Director, IIMU……., on behalf of the Indian Institute of Management, Udaipur (hereinafter called "The Institute") has entered into an agreement bearing number …….. With ……..(name and address of contractor)…… ……..(hereinafter called "the contractor") for execution of work …..……(name of work) …….. The Institute has further agreed to accept irrevocable Bank Guarantee for Rs. ……..(Rupees ……only) valid upto ……..(date)* …….as Performance Guarantee / Security Deposit / Mobilization Advance from the said Contractor for compliance of his obligations in accordance with the terms and conditions of the agreement.
3. We, ……(indicate the name of the bank)……..(herein after referred to as "the Bank") , hereby undertake to pay to the Institute an amount not exceeding Rs. ……..(Rupees… ..... only) on demand by the Institute within 10 days of the demand.
4. 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 the demand from the Institute 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).
5. We, ……(indicate the name of the Bank)…..... , further undertake to pay the Institute 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 li9ability for payment there under and the Contractor shall have no claim against us for making such payment.
6. We, ……(indicate the name of Bank)…..... , further agree that the Institute 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 extended 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 Institute against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and wr 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 Institute or any indulgence by the Institute 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.
7. We, ……(indicate the name of the Bank)…….., further agree that the Institute 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 Institute may have in relation to the contractor's liabilities.

8. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor.
9. We, ……(indicate the name of the Bank)…….., undertake not to revoke this guarantee except with the consent of the Institute in writing.
10. This Bank Guarantee shall be valid up to.....unless extended on demand by the Institute. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs…….(Rupees…….....only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date…….

Witnesses:

1. Signature……..
   Name and address

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 or 90 days where only financial bids are invited and 180 days for two / three bid system from the date of submission of tender.

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

INFORMATION REGARDING ELIGIBILITY
LETTER OF TRANSMITTAL

From:

To

The Director
IIM Udaipur

Subject: Submission of Bid for the work "**.....**."
Sir,

Having examined the details given in **bid** document for the above work, I / we hereby submit the relevant information.

1. I / we hereby certify that the statement made and information supplied in the enclosed forms **A to J** and accompanying statement are true and correct.

2. I / we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.

3. I / we submit the requisite certified Solvency Certificate and authorize the **Engineer-in-charge, IIM Udaipur** to approach the bank issuing the Solvency Certificate to confirm the correctness thereof. I / We also authorize Engineer-in-charge, IIM, Udaipur to approach individuals, employers, firms & Corporation to verify out competence and general reputation.

4. I / we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following **eligible similar** works:

Name of work	Certificate From

Certificate:

It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I / we shall be liable to be debarred, disqualified / cancellation of enlistment incase of any information furnished by me / us found to be incorrect.

Enclosures: Seal of bidder

Seal of bidder

Date of submission:

Signature(s) of Bidder(s)

FORM 'A'

FINANCIAL INFORMATION

I. **Financial Analysis** – Details to be furnished duly supported by figures in Balance Sheet / Profit &Loss Account for 5 (five) years duly certified by the Chartered Accountant, as submitted by the applicant to the Income-Tax Department (Copies to be attached).

Note: The bidder should not have incurred any loss (profit after tax should be positive) in more than two years during available last five consecutive years' balance sheets, duly audited and certified by the Chartered Accountant. **(The balance sheet in case of Pvt./ Public Ltd. company means its standalone finance statement and consolidated financial statement both).**

Financial Years
(In lakh)

Sl. No	Details	(1)	(2)	(3)	(4)	(5)
		2022-23	2021-22	2020-21	2019-20	2018-19
i)	Gross annual turnover in works.					
ii)	Profit / Loss					

II. Financial arrangements for carrying out the proposed works.
Note: Attach additional sheets, if necessary

Signature of Chartered Accountant with seal

Signature (s) of Bidder(s)

FORM 'B'

FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

"It is to certify that as per the audited balance sheet and profit & loss account during the financial year _____, the Net worth of M/s_____(Name & Registered Address of individual / firm/company), as on_____(the relevant date) is Rs._____after considering all liabilities. It is further certified that the Net worth of the company has not eroded by more than 30% in the last three years ending on (the relevant date)"

Signature of Chartered Accountant	
Name of Chartered Accountant	
Membership no. of ICAI	
Date and seal	

FORM 'C'

Details of eligible similar nature of **works completed** during the last seven years.
(Ending up to previous day of last date of submission of online tender)

Sl. No.	*Name of work / Project and location*	*Owner or Sponsoring organisation*	*Cost of work (in crores)*	*Date of commence.-ment as per contract*	*Stipulated date of completion*	*Actual date of completion*	*Litigation Arbitration pending / in progress with details* *	*Name and Address/ Telephone number of officer to whom reference may be made.*	*Whether the work was done on back-to-back basis Yes / No*
1	2	3	4	5	6	7	8	9	10

*** Indicate gross amount claimed and amount awarded by the Arbitrator.**

Signature of Tenderer(s)

FORM 'D'

Performance Report Of Works Referred In Form 'C' – M/s …….
(Furnish this information for each individual work from the employer for whom the work was executed)

1. Name of work / Project & Location.

2. Agreement No.

3. Estimated Cost

4. Tendered Cost

5. Actual value of work done

6. Date of start

7. Date of completion

   a) Stipulated date of completion

   b) Actual date of completion

8. (a) Whether case of levy of compensation for delay has been decided or not **Yes/No**
(b) If decided, amount of compensation levied for delayed completion, if any

9. Performance report

i)	Quality of work	Outstanding/ Very good /Good/ Poor
ii)	Finance Soundness	Outstanding/ Very good /Good/ Poor
iii)	Technical Proficiency	Outstanding/ Very good /Good/ Poor
iv)	Resourcefulness	Outstanding/ Very good /Good/ Poor
vi)	General behavior	Outstanding/ Very good /Good/ Poor

Executive Engineer or Equivalent
(Seal of the organization)

Date:

FORM 'E'

Structure & Organisation

1.	Name and address of Tenderer	
2.	Telephone No. / Fax No. / email address	
3.	Legal status of the Tenderer (Attach copies of original document defining the legal status). The applicant is: a) An individual b) A proprietary firm c) A Firm in partnership d) A limited company or corporation	
4.	Particulars of registration with various Govt. bodies (Attach attested photocopies) a) Registration Number b) Organisation / Place of registration c) Date of validity	
5.	Name and title of Directors and officers with designation to be concerned with this work.	
6.	Designation of individuals authorized to act for the organization.	
7.	Has the Tenderer or any constituent partner in case of partnership firm Limited Company/Joint Venture, ever been convicted by the court of law? If so, give details.	
8.	In which field of Civil Engineering construction, the Tenderer has specialisation and interest?	
9.	Any other information considered necessary but not included necessary but not included above.	

Signature of Tenderer(s)

Form 'G'

FORMAT FOR UNDERTAKING FOR SITE INSPECTION

To
The Engineer-in-charge,
IIM Udaipur

I/we hereby give an undertaking for the given work as follows:

Sub: NIT No.: **……..**

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 one work which was already executed and Existing at site shall not form part of any of my bills & shall not be payable to me.I/we shall be paid for only the work which will be executed by me/us.

Submission of a bid by a I/we implies that I/we have read this notice and all other contract documents and has made myself / our self-aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. If any will be issued to us by the Government and local conditions and other factors having a bearing on the execution of the work.

Place:
Date:

Yours faithfully
(Signatures of Bidder(s))

Form 'H'

Declaration regarding local contents for preference make in India.

It is hereby clarified that I will follow the DIPP order No. P45021/2/2017-PP(BE-II) dated 28.05.2018 regarding PPP-MI and MEITY notification number 33(1)/2017-IPHW dated 14.09.2017, wherein it is the policy of the Government of India to encourage "Make in India" and promote manufacturing and production of goods and services in India with a view to enhancing income and employment. Therefore, convergence with other existing centrally sponsored and missions such as Make in India etc. shall be ensured during the designing and production.

Seal & Signature of the bidder(s)

Form 'I'

Undertaking for GST registration Certificate of the State i.e. other than (Rajasthan)

"If work is awarded to me, I/we shall obtain GST registration Certificate of the State, in which work is to be taken up within one month from the date of receipt of award letter or before release of any payment by the institute, 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 the institute or GST department in this regard".

Seal & Signature of the bidder(s)

Form 'J'

CERTIFICATE & DECLARATION

It has been certified that all information provided in tender form is true and correct to the best of my knowledge and belief. No forged / tampered document(s) are produced with tender form for gaining unlawful advantage. We understand that IIM, Udaipur is authorized to make enquiry to establish the facts claimed and obtain confidential reports from clients.

In case it is established that any information provided by us is false / misleading or in the circumstances where it is found that we have made any wrong claims, we are liable for forfeiture of EMD/SD and or any penal action and other damages including withdrawal of all work / purchase orders being executed by us. Further IIM, Udaipur is also authorized to blacklist our firm/company/agency and debar us in participating in any tender/bid in future.

I / We assure the Institute that neither I / We nor any of my / our workers will do any act/s which are improper / illegal during the execution in case the tender is awarded to us.

Neither I / We nor anybody on my / our behalf will indulge in any corrupt activities / practices in my / our dealing with the Institute.

Our Firm/ Company/ Agency is not been blacklisted or banned by any Govt. Department, PSU, University, Autonomous Institute or Any other Govt. Organization.

Date Signature of the Tenderer

Place Stamp

Note: This certificate should be executed on duly notarized Rs.500/- Non-Judicial Stamp Paper.

Form 'K'

Authority for signing the tender document.

Name of work: .....

NIT No.: .....

I, ... (***Name & Designation of owner/proprietor/authorized person***)

of Firm (**M/s ……**

…… (*Name & Complete address of*

the agency / company/ firm), hereby authorize **……**

(authorised signatory, *Designation*) to sign the tender document for the above cited work.

Sign. of the tender signing person

Attested by

Sign. of the authorised signatory of the firm

Note : This certificate should be executed on duly notarized Rs.500/- Non-Judicial Stamp Paper.

FORM 'L'

Undertaking structural stability and soundness of already completed building and infrastructure projects.

I/we undertake and confirm that any building/infrastructure constructed by our firm/partnership firm/ company has not suffered any failure, making it unfit for intended use, either due to structural design and defects or due to use of sub-standard materials or execution of sub-standard work, poor workmanship or any other reason during the last 15 (Fifteen) years.

I/we also undertake that in addition to the above the Engineer-in-Charge shall be free to debar us forever for tendering in IIM Udaipur

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

Signature of Notary with seal

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

Note: Affidavit to be furnished on a 'non-judicial' stamp paper of Rs. 500/- (Scanned copy of the notarized affidavit to be uploaded at the time of submission of bid.)

FORM 'M'

Furnish an affidavit on non-judicial stamp paper worth Rs.500/-

I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on **back-to-back basis.** Further that, if such aviolation comes to the notice of Institute, then I/we shall be debarred for bidding in IIM Udaipur in future forever. Also, if such a violation comes to the notice of the Institute before date of start of work, the Engineer-in-Charge shall be free to forfeitthe entire amount of Earnest Money Deposit / Performance Guarantee. (Scanned copy to be uploaded at the time of submission of bid).

Signature of Notary with seal

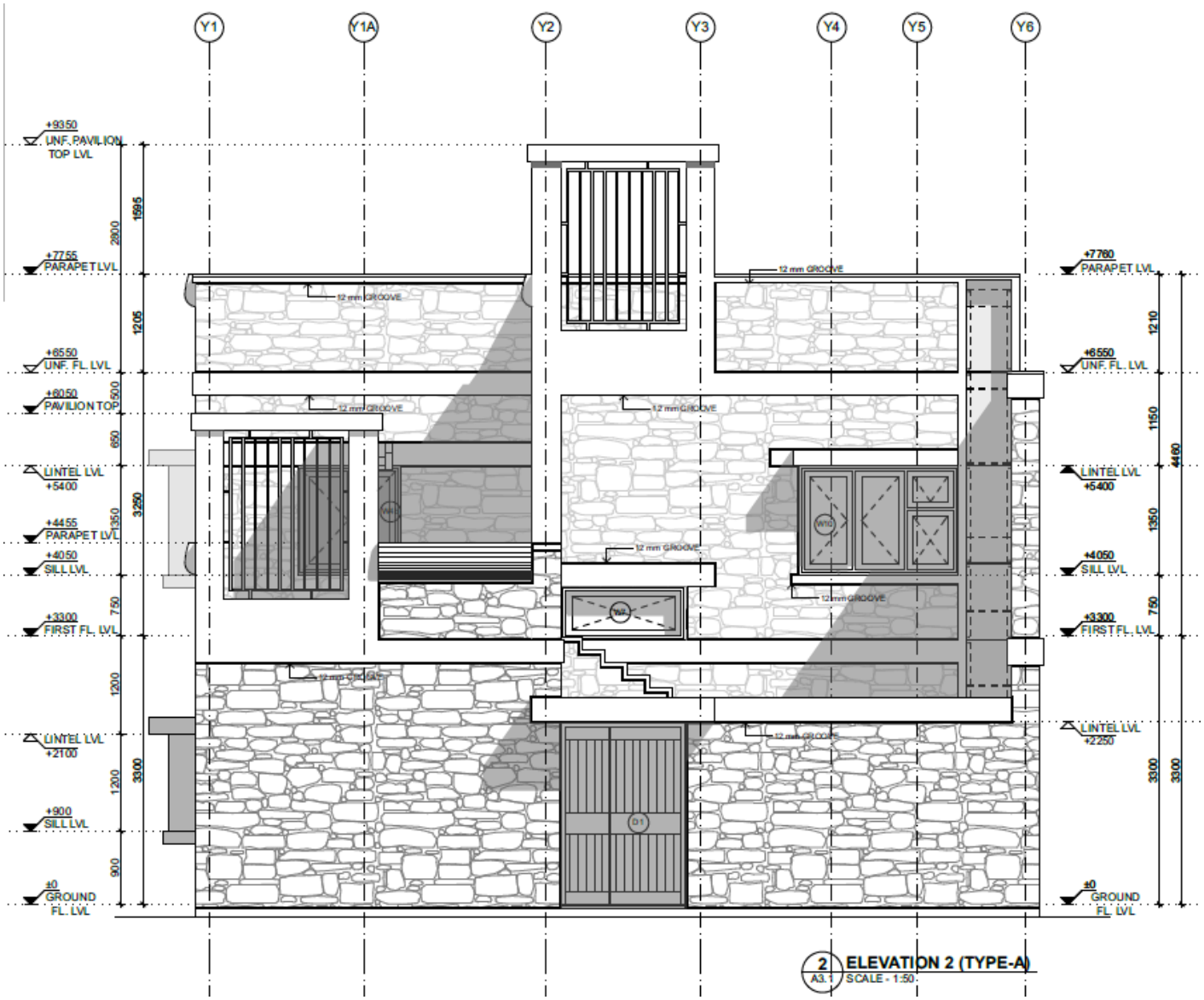
Signature of bidder or an Authorized person of the firmwith stamp

Note: Affidavit to be furnished on a 'non-judicial' stamp paper of Rs.500/-.

(Scanned copy of the notarized affidavit to be uploaded at the time of submission of bid.

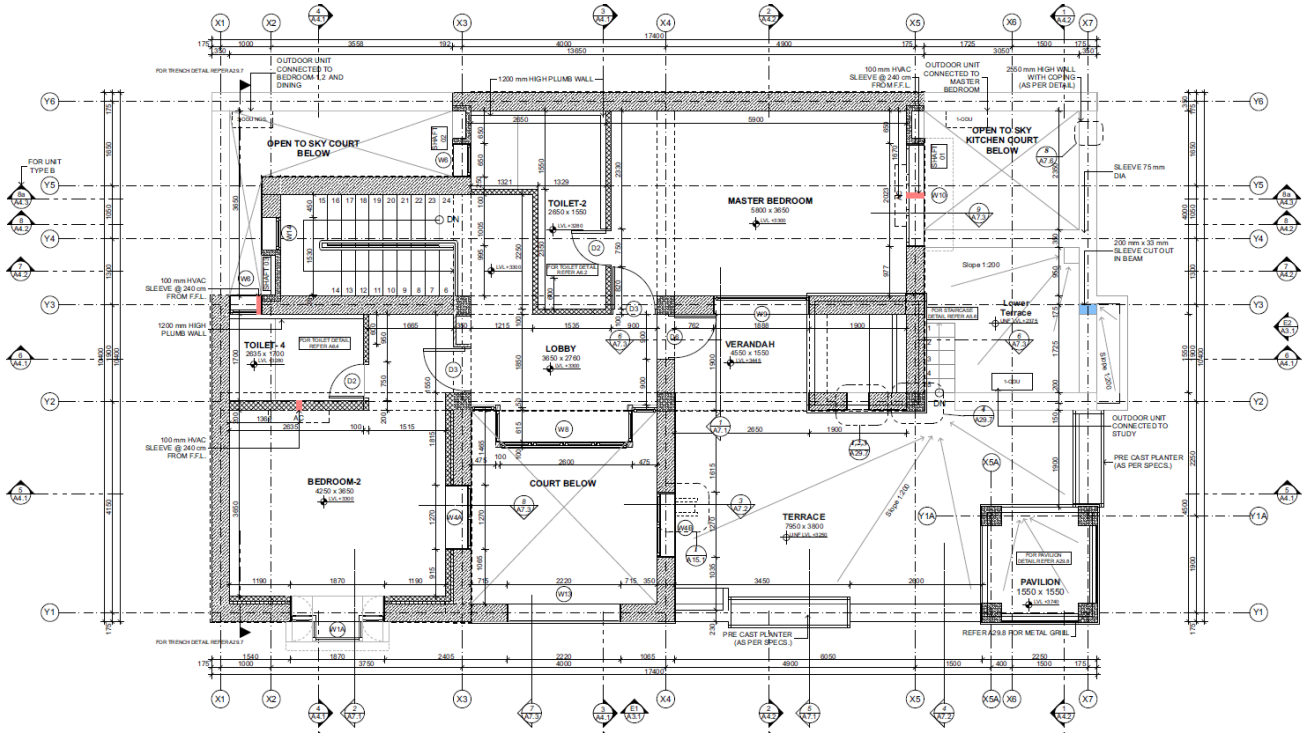
Preliminary Drawings

1. Elevation -1 & 2

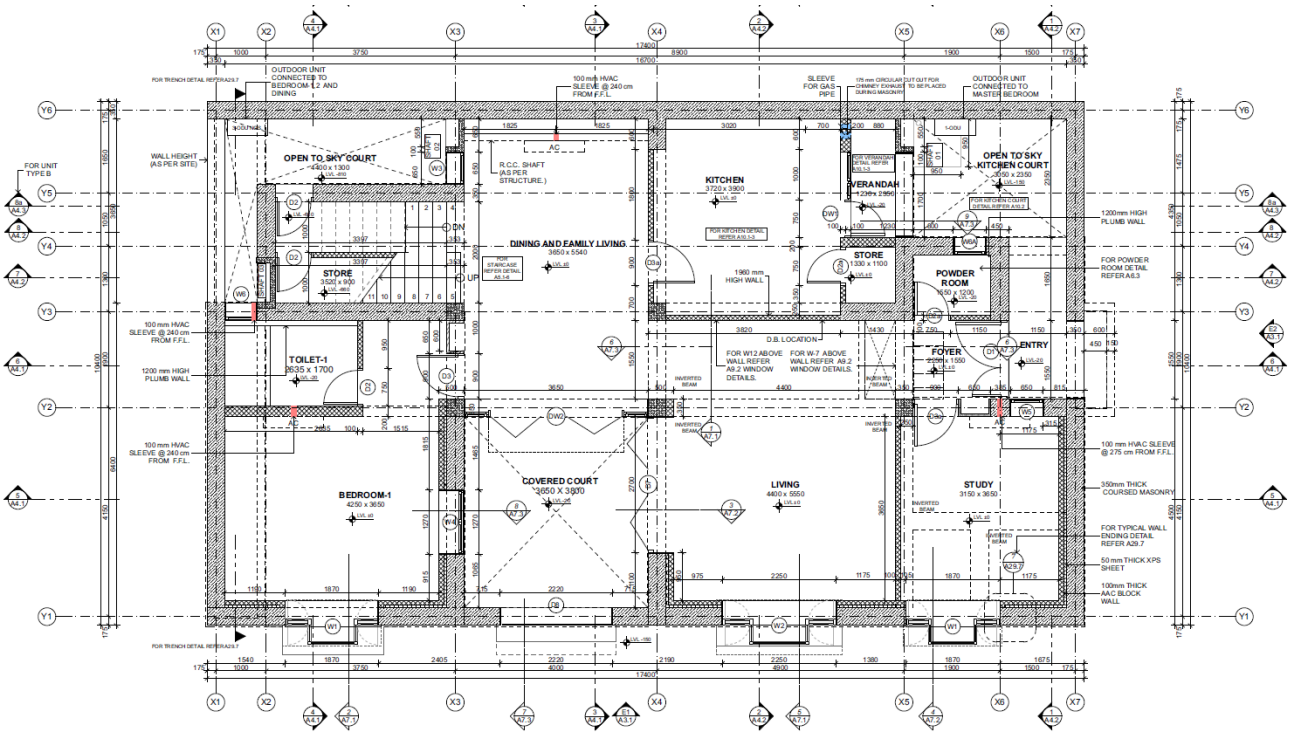


2 A3.1 ELEVATION 2 (TYPE-A)
SCALE - 1:50

2. Plan – 1st Floor



3. Plan- Ground Floor



Name of work : Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).					
BOQ Item No.	**Description of Item**	**Quantity**	**Unit**	**Rate (Rs)**	**Amount (in Rs.)**
Schedule A: Civil Work					
1.00	**EARTH WORK**				
1.01	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-incharge.All kinds of soil	100.00	Cum	177.50	17,750.00
1.02	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-incharge.				
A	Ordinary rock	217.00	Cum	498.90	1,08,261.00
B	Hard rock (Blasting Prohibited)	470.00	Cum	1,432.95	6,73,487.00
1.03	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.				
A	Ordinary rock	107.00	Cum	632.95	67,726.00
B	Hard rock (Blasting Prohibited)	250.00	Cum	1,523.05	3,80,763.00
1.04	Extra for lift of 1.5 m to 3.0 m or part thereof in excavation/ banking excavated or stacked materials for ordinary or hard rock	884.00	Cum	227.40	2,01,022.00
1.05	Excavating trenches of required width for pipes, cables, etc, including excavation for sockets, depth upto 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m :				
A	Ordinary rock -Pipes exceeding 80mm dia but not exceeding 300mm dia.	200.00	metre	998.65	1,99,730.00
B	Ordinary rock - Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	64.00	metre	1,149.10	73,542.00
C	Hard rock (Blasting Prohibited)-Pipes exceeding 80mm dia but not exceeding 300mm dia.	80.00	metre	2,047.30	1,63,784.00
D	Hard rock (Blasting Prohibited)- Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	60.00	metre	2,355.75	1,41,345.00

1.06	Filling available excavated earth / rock in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m. The size of rocks should not exceed 75 mm in the longest direction.	3,100.00	cum	196.00	6,07,600.00
1.07	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 lead and all lift.	100.00	cum	263.95	26,395.00
1.08	Carriage of rock with mechanical Transport (a) up to 1 km Including Loading, Unloading and stacking	14.84	cum	348.08	5,166.00
1.09	Carriage of rock with mechanical Transport (a) up to 2 km Including Loading, Unloading and stacking	11.13	cum	393.32	4,378.00
1.10	Carriage of rock with mechanical Transport (a) above 2 to 5 km Including Loading, Unloading and stacking	1,765.00	cum	458.78	8,09,747.00
1.11	Supplying and Filling With the approved good earth/murrom other than available from excavation but brought from outside premises in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, compacting each deposited layer by ramming and watering, all lead and lift.	180.00	cum	775.50	1,39,590.00
1.12	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	410.00	cum	2,123.75	8,70,738.00
1.13	Providing & Laying HDPE made empty cement bags and filling with clod free available excavated earth and stitching the bags manually and placing these filled up bags in form of toe wall to protect the stacked earth as per direction of Engineer-in-charge.(Volume of filled up bags shall be measured for payment purposes)	30.00	Cum	339.50	10,185.00
1.14	Providing and erecting 6.00 metre high temporary barricading at site as per drawing/ direction of Engineer-in-Charge which includes writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed by the Engineer-in-Charge. The barricading provided shall be retained in position at site continuously i/c shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge. (Note :- One time payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the work).	150.00	Meter	3,439.50	5,15,925.00
2.00	**CONCRETE WORK**				

	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing,carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the followinggrades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
	Concrete of M10 grade with minimum cement content of 220 kg /cum	125.00	cum	8,835.15	11,04,394.00
2.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
A	1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	63.00	cum	6,812.00	4,29,156.00
3.00	**REINFORCED CEMENT CONCRETE**				
3.01	Centering and shuttering including strutting, propping etc. and removal of form for :				
A	(a) Foundations, footings, bases of columns, etc. for mass concrete.	69.00	sqm	392.15	27,058.00
B	(b) Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	622.00	sqm	842.50	5,24,035.00
C	(c) Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12 mm thick	1,424.00	sqm	1,028.40	14,64,442.00
D	(d) Lintels, beams, plinth beams, girders, bressumers and cantilevers. with water proof ply 12 mm thick	1,453.00	sqm	841.95	12,23,353.00
E	(e) Columns, Pillars, Piers, Abutments, Posts, Struts.	529.00	sqm	961.30	5,08,528.00
F	(f) Stairs, (excluding landings) except spiral-staircases.	234.00	sqm	764.95	1,78,998.00
3.02	Extra for additional height in centering, shuttering wherever required with adequate bracing, propping etc. including cost of de shuttering and de centering at all levels, over a height of 3.5 m, for every additional height of 1 meter or part thereof (Plan area to be measured)				
A	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	460.00	sqm	384.30	1,76,778.00
3.03	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth and above plinth level.				
A	Thermo-Mechanically Treated bars of grade Fe-500D or more.	59,040.00	Kg	107.85	63,67,464.00

3.04	Providing and laying in position machine batched, machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum excess/ less cement used as per design mix is payable/ recoverable separately,				
A	All works up to plinth level.	185.00	cum	9,504.75	17,58,379.00
B	All works above plinth level and up to floor V level.	553.00	cum	9,860.40	54,52,801.00
3.05	Add for using extra cement in the items of design mix over and above the specified cement content therein.	364.00	quintal	733.50	2,66,994.00
4.00	**Sub-Head : Brick Work**				
4.01	Brick work with non modular fly ash bricks conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :				
A	Cement mortar 1:6 (1 cement : 6 Coarse sand)	40.00	Cum	8,752.55	3,50,102.00
4.02	Half brick masonry with non modular fly ash bricks of class designation 10, conforming to IS :12894, in super structure above plinth and upto floor V level.				
A	Cement mortar 1:4 (1 cement :4 coarse sand)	106.00	Sqm	1,105.80	1,17,215.00
4.03	Providing and laying autoclaved aerated cement blocks masonry with 100mm/150mm/200mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineerin- Charge. (The payment of RCC band and reinforcement shall be made for seperately).	181.00	Cum	8,333.65	15,08,391.00
5.00	**Sub-Head : Stone Work**				
5.01	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand) **(As per Existing Colour and pattern)**	750.00	Cum	7,311.25	54,83,438.00
5.02	Random rubble masonry with hard stone in superstructure above plinth level and upto floor five level, including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at window sills, ceiling level and the like. Cement mortar 1:6 (1 cement : 6 coarse sand) **(As per Existing Colour and pattern)**	225.00	Cum	9,275.45	20,86,976.00
5.03	Coursed rubble masonry with hard stone (first or second sort) in superstructure above plinth level and upto floor five level.				
	Masonry work (second sort), in cement mortar 1:6 (1 cement: 6 coarse sand)	1,527.00	Cum	10,128.10	1,54,65,609.00
5.04	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	100.00	Sqm	883.15	88,315.00

6.00	**Sub-Head : Marble & Granite Work**				
6.01	Providing and fixing 18 / 20mm thick gang saw cut mirror polished premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias, Parapat top, door frames , jambs, lintels, steps tread, risers 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, grooves and polishing to edges to give high gloss finish etc. complete at all levels.				
A	Granite of any colour and shade				
I	Area of slab upto 0.50 sqm	400.00	Sqm	5,413.50	21,65,400.00
II	Area of slab over 0.50 sqm.	560.00	Sqm	5,136.30	28,76,328.00
6.02	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.	64.00	Each	978.70	62,637.00
6.03	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.	94.00	metre	568.55	53,444.00
6.04	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. (a) Polished Granite stone slab jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	40.00	Sqm	2,937.70	1,17,508.00
7.00	**Sub-Head : Wood and P.V.C. Work**				
7.01	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).				
A	Second class teak wood	3.13	Cum	1,42,949.70	4,47,433.00
7.02	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows, including Stainless steel (316 Grade) butt hinges with Four ball bearings, of required size with necessary screws, excluding paneling which will be paid for separately, all complete as per direction of Engineer-in-charge.				
	Second class teak wood				
A	35 mm thick shutters	85.00	Sqm	4,111.95	3,49,516.00
7.03	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick:				

A	Float glass panes				
	5.5 mm to 6 mm thick glass panes	5.00	Sqm	2,600.45	13,002.00
B	Fly proof stainless steel grade 304 wire gauge with 0.5 mm dia. wire and 1.4 mm wide aperture with matching wood beading	94.00	Sqm	1,800.45	1,69,242.00
	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick :				
7.04	Second class teak wood	17.00	Sqm	3,323.20	56,494.00
7.05	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-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, lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters: 35 mm thick excluding ISI marked Stainless Steel butt hinges with necessary screws.	184.00	Sqm	3,108.30	5,71,927.00
7.06	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).	184.00	Sqm	462.35	85,072.00
7.07	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 10 mm	912.00	Each	22.65	20,657.00
7.08	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.				
A	Fixed to openings /wooden frames with rawl plugs screws etc.	300.00	Kg	238.35	71,505.00
7.09	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S, including cost of adhesive of approved quality.				
B	1.0 mm thick.	368.00	Sqm	897.30	3,30,206.00
7.10	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.	700.00	Sqm	2,593.15	18,15,205.00
7.11	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)	150.00	Sqm	2,829.25	4,24,388.00

7.12	Providing and fixing PVC/ABS edge beading 2 mm thick as per approved drawings and as per direction of engineer in charge for various thickness of plywood for wardrobes, cabinets, partitions etc..	1,300.00	Meter	43.80	56,940.00
7.13	Providing and fixing aluminum Grip profile handle with necessary screws etc. complete as approved drawing and as per direction of Engineer in charge.	103.00	Each	534.95	55,100.00
7.14	Providing & Fixing Satin Finish soft closing Clip on Hinge (Box type Hinges) of M.S materials with High quality Nickle plating of preferred makes,opening angle of the hinge 110' , with necessary concealed SS Screws complete, as spcified in drawing and as approved by Engineer in charge.	624.00	Each	272.00	1,69,728.00
7.15	Providing and fixing Corrosion Resistance Premium Quality Zinc coated Drawer Channel pair 500mm long,heavy duty Metal Body & Precision Ball Bearings for higher Durability with necessary screws etc. complete as per directions of Engineer-in-charge.	96.00	Pair	885.10	84,970.00
7.16	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete. : Double strip (horizontal type)	192.00	Each	885.10	1,69,939.00
7.17	Providing and fixing Wardrobe Hanger Rods/ curtain rods of 1.25 mm thick chromium plated brass plate, with two chromium plated brass brackets fixed with C.P. brass screws and wooden plugs, etc., wherever necessary complete				
A	20 mm	224.00	Meter	393.25	88,088.00
7.18	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete.				
	Size 50 mm	80.00	Each	333.95	26,716.00
7.19	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-incharge. (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)	8.00	Kg	533.25	4,266.00
	Providing & Fixing tendom box of approve make for kitchen cupboard with screw etc, complete as per direction of engineer in charge.				
7.20	Tendom 500MM with rod	40.00	One set	6,249.80	2,49,992.00
7.21	Tendom 500MM	24.00	One set	5,580.85	1,33,940.00
7.22	Providing & Fixing Bottle Holder of approve make for kitchen cupboard with screw etc, complete as per direction of engineer in charge.	8.00	One set	8,024.65	64,197.00

7.23	Providing and fixing factory made uPVC fixed/ Openable/Sliding glazed windows/ ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles having wall thickness of 2.0 ± 0.2 mm duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. The rate shall be inclusive of Single / double glass panes and silicon sealant as required and as per the drawings. Work is to be carried out as per approved shop drawing conforming to tender drawing. Contractor has to submit shop drawings based on the site measurement and submit the same for approval before proceeding with the making of the window. (For any variation in dimension of the window, the payment shall be made on the basis of area to be measured in sqm correct to two decimal places). All window dimensions mentioned are in millimeters (Width x Height). All glass to be used in the window shall be 6 mm LOW E Glass equivalent to SG- ET-125. The windows with flymesh shutter shall have SS 304 Flymesh. Note:-Rate is inclusive of all fitting and fixtures, glass and SS 304 flymesh. Sizes are approximate and there may be minor variation as per actual site requirement, finished area shall be considered for payement.				
A	**FACULTY HOUSING**				
A1	W1 (1800X1200)	49.00	Sqm	10,492.65	5,14,140.00
A2	W1A (1800 X 1350)	26.00	Sqm	10,186.50	2,64,849.00
A3	W2 (2250 X 1350)	31.00	Sqm	8,652.20	2,68,218.00
A4	W3 (650 X 1200)	5.50	Sqm	11,435.10	62,893.00
A5	W4 (1200 X 1200)	11.50	Sqm	10,937.70	1,25,784.00
A6	W4A (1200 X 1350)	12.00	Sqm	10,508.65	1,26,104.00
A7	W4b (1200 X 1350)	12.00	Sqm	10,508.65	1,26,104.00
A8	W5 (650 X1350)	6.00	Sqm	11,000.30	66,002.00

A9	W6 (660 X 900)	11.50	Sqm	12,976.55	1,49,230.00
A10	W6A (660 X 1050)	4.50	Sqm	11,688.25	52,597.00
A11	W7 (1760 X 675)	6.50	Sqm	4,305.00	27,983.00
A12	W8 (3650 X 2100)	89.00	Sqm	6,077.15	5,40,866.00
A13	W9 (1800 X 1350)	19.50	Sqm	9,304.40	1,81,436.00
A14	W10 (1970 X1350)	20.50	Sqm	8,829.30	1,81,001.00
A15	W14 (650 X 4030)	16.50	Sqm	6,603.90	1,08,964.00
A16	W14a (650 X 2330)	5.00	Sqm	9,198.30	45,992.00
7.24	Providing and fixing factory made uPVC sliding folding glazed Door of dimension as per drawing comprising of uPVC multi-chambered frame with in built roller track and sash extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), appropriate dimension of uPVC extruded glazing beads and uPVC extruded interlocks, EPDM gasket, wool pile, zinc alloy touch locks with hook , zinc alloy body with Suitable nylon rollers (weight bearing capacity to be 60 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. The rate shall be inclusive of Single / double glass panes and silicon sealant as required and as per the drawings. Work is to be carried out as per approved shop drawing conforming to tender drawing. Contractor has to submit shop drawings based on the site measurement and submit the same for approval before proceeding with the making of the window. (For any variation in dimension of the window, the payment shall be made on the basis of area to be measured in sqm correct to two decimal places). All window dimensions mentioned are in millimeters (Width x Height). All glass to be used in the window shall be 6 mm LOW E Glass equivalent to SG- ET-125. The windows with flymesh shutter shall have SS 304 Flymesh. Note:-Rate is inclusive of all fitting and fixtures, glass and SS 304 flymesh. Sizes are approximate and there may be minor variation as per actual site requirement, finished area shall be considered for payement.				
A	D7 (2700 X 2100)	43.50	Sqm	2,875.05	1,25,065.00
B	DW2 (3650 X 2100)	59.00	Sqm	17,398.65	10,26,520.00

7.25	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISi, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	32.00	Each	983.15	31,461.00
7.26	Providing & Fixing Zinc Material Combination Finish Door Safety Chain/Security latch/Door guard , minimum weight 190 g. with necessary nickel Plated screws for doors as per drawing and as directed by Engineer-in-charge.	8.00	Each	357.40	2,859.00
7.27	Providing and fixing bright /matt finished Stainless Steel handles of approved quality & make with necessary screws etc all complete.				
7.28	125 mm	160.00	Each	119.20	19,072.00
7.29	SS ball bearing of size 100 x89x3mm	480.00	Each	517.00	2,48,160.00
7.30	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :				
7.31	250x10 mm	120.00	Each	441.60	52,992.00
7.32	150x10 mm	120.00	Each	287.25	34,470.00
7.33	Providing and fixing bright finished brass casement stays (straight peg type) with necessary screws etc. complete :				
7.34	250 mm weighing not less than 280 gms	8.00	Each	175.80	1,406.00
7.35	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	72.00	Pair	998.35	71,881.00
7.36	Providing and fixing chromium plated brass night latch of approved quality including necessary screws etc. complete.	32.00	Pair	952.80	30,490.00
7.37	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	72.00	Each	121.65	8,759.00
7.38	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles of approved quality with necessary screws etc. complete.	96.00	Each	726.60	69,754.00
7.39	Providing & Fixing Zinc Material Door Eye Viewer of Dia. 36mm preferred make with wide angle vision and fixing accessories as specified and as per drawing and as directed by engineer-in-charge.	8.00	Each	104.05	832.00
8.00	**Sub-Head : Steel Work**				
8.01	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar, bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	16.00	Each	226.00	3,616.00
8.02	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp, of internal dia 140mm, 73mm height, top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	40.00	Each	220.65	8,826.00

8.03	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.				
A	M.S. tube.	1,000.00	Kg	196.80	1,96,800.00
8.04	Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm²), counter sunk head, comprising of 10 m dia polyamide PA 6 grade sleeve, including drilling of hole in frame, concrete/ masonry, etc. as per direction of Engineer-in-charge.				
A	10 x 160 mm	256.00	Each	224.50	57,472.00
B	10 x 120 mm	192.00	Each	170.95	32,822.00
8.05	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-in-charge.(for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	2,000.00	Kg	772.40	15,44,800.00
8.06	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.				
A	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	4,000.00	Kg	172.60	6,90,400.00
9.00	**Sub-Head : Flooring**				
9.01	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)				
A	25 mm thick.	612.00	Sqm	1,948.25	11,92,329.00
9.02	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.	43.00	Sqm	2,354.70	1,01,252.00
9.03	Providing and fixing stone slab of required shape and size, fixed in partitions, shelves by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth. : 20 to 25mm thick kota stone (Both side machine cut & semi polished)	80.00	Sqm	998.75	79,900.00
9.04	Deduct for not rubbing and polishing factory made pre- polished kota stone	655.00	Sqm	-314.05	-2,05,703.00

9.05	Providing and fixing Ist quality ceramic digital wall tiles (Matt finish) conforming to IS0: 13006 / EN14411 (thickness to be specified by the manufacturer), of preferred make, in all colours, shades of minimum 300x600mm size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	670.00	Sqm	1,267.95	8,49,527.00
9.06	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.				
	Size of Tile 600 x 600 mm	116.00	Sqm	1,464.85	1,69,923.00
9.07	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including pointing the joints with white cement and matching pigments etc., complete.	160.00	Sqm	1,439.40	2,30,304.00
9.08	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of preferred make, in all colours and shades,laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete. (FULL BODY)				
A	Size of Tile 600x600 mm	1,050.00	Sqm	1,553.45	16,31,123.00
B	Size of Tile 600x1200 mm	600.00	Sqm	1,577.15	9,46,290.00
9.09	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of preferred make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joint with white cement & matching pigments etc. complete. (FULL BODY)				
A	Size of Tile 600x600 mm	170.00	Sqm	1,623.05	2,75,919.00
B	Size of Tile 600x1200 mm	20.00	Sqm	1,451.25	29,025.00
9.10	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, provision of spacer and finishing complete as per direction of Engineer-in-charge.				
A	Size of Tile 600x600 mm	1,050.00	Sqm	309.05	3,24,503.00

B	Size of Tile 600x1200 mm	600.00	Sqm	127.85	76,710.00
9.11	Deduct for not grouting the joints with white cement and matching pigment in the items of fixing of vitrified tiles.	1,650.00	Sqm	-13.30	-21,945.00
9.12	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.	1,000.00	Sqm	954.15	9,54,150.00
10.00	**ROOFING**				
10.01	Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size between cavity wall, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/m³ as per ASTM D 1622, water absorptions ? 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardent property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the direction of Engineer-in-Charge.	1,600.00	Sqm	1,004.55	16,07,280.00
10.02	Providing and fixing tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.				
A	GI Metal Ceiling Lay in plain Tegular edge Global white color tiles of size 595x595 mm, and 0.5 mm thick with 8 mm drop; made of G I sheet having galvanizing of 100 gms/sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending	145.00	Sqm	1,902.95	2,75,928.00

11.00	**Sub-Head : Finishing**				
11.01	6 mm cement plaster of mix :				
A	1:3 (1 cement: 3 fine sand)	1,517.00	Sqm	300.45	4,55,783.00
11.02	12 mm cement plaster of mix :				
A	1:4 (1 cement: 4 coarse sand)	4,517.00	Sqm	357.35	16,14,150.00
11.03	20 MM Cement Plaster of Mix:				
A	1:4 (1 cement : 4 coarse sand)	1,800.00	Sqm	487.40	8,77,320.00
11.04	Extra for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	542.00	m	78.40	42,493.00
11.05	Finishing walls with Acrylic Smooth exterior paint of required shade : New work (Two or more coat applied @ 1.67 litre/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	655.00	Sqm	160.60	1,05,193.00
11.06	Providing and Fixing of (Chicken Mesh) Galvanised wire mesh of average width of aperture 3.4-4.0 mm and nominal dia of wire 1.4 mm before the plaster including holding it on to the joint between two different surfaces like RCC/Brick/AAC in wall with suitable nails driven on to the wall and with cement mortar 1:4 (1 cement: 4 fine sand) so as to hold the mesh in position as directed by engineer in charge.	565.00	Sqm	118.10	66,727.00
11.07	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.				
	On steel work	600.00	Sqm	241.75	1,45,050.00
11.08	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.				
A	Two coats.	150.00	Sqm	100.01	15,002.00
11.09	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
A	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre.	6,500.00	Sqm	73.95	4,80,675.00
11.10	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.	6,500.00	Sqm	156.05	10,14,325.00
11.11	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.				
A	Two coats.	6,500.00	Sqm	137.45	8,93,425.00

11.12	French spirit polishing : Two or more coats on new works including a coat of wood filler	92.00	Sqm	446.25	41,055.00
11.13	Providing and applying breathable, non-reactive, antifungal, and water repellent Silane/ Siloxane chemical as approved by Engineer-in-charge, of preferred make, diluted with solvent mineral Turpentine oil in the ratio of 1:12 (One part of approved chemical :12 Part of Turpentine oil), on the existing stone masonry surface or Stone cladding or RCC surfaces with two or more coats to give uniform application of chemical on the surface, including scaffolding, curing, cleaning the surfaces and other incidental work to be done etc. complete at all levels as directed by engineer in charge.	2,200.00	Sqm	109.90	2,41,780.00
11.14	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) : Flush/ Ruled pointing	2,200.00	Sqm	385.40	8,47,880.00
12.00	**Sub-Head : Water Proofing**				
12.01	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 waterproofing 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.	180.00	Sqm	617.05	1,11,069.00
12.02	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: (a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer- in-charge. (d) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :				
	With average thickness of 95 mm and minimum thickness at khurra as 40 mm./ With average thickness of 120 mm and minimum thickness at khurra as 65 mm	967.00	Sqm	1,684.60	16,29,008.00

12.03	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservior, sewage & water treatment plant, tunnels/ subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry :1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out and completed as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.(a) For vertical surface two coats @0.70 kg per sqm per coat	919.00	Sqm	472.90	4,34,595.00
A	(b) For horizontal surface two coats @1.10 kg per sqm per coat	150.00	Sqm	362.80	54,420.00
12.04	Providing and applying of swellable type water stop tape, 19mm x 25mm thick in linear meter (expansive nature) for construction joints treatment of RCC structure, such as raft slab, retaining walls, water storage tank and at the junctions of raft slab with the retaining walls etc.. After cleaning the surface, one coat of required primer for swellable water stop tape shall be applied throughout the length of the joint @3.78 litre per 240 running meter. Over the primed surface swellable type water stop tape shall be placed. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guaranteed for 10 years against any leakage.	210.00	metre	573.45	1,20,425.00
13.00	**Dismantling and Demolishing**				
13.01	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.	5.00	Cum	3,551.25	17,756.00
14.00	**SANITARY INSTALLATION**				
	General Notes: 1) No additional fixing cost shall be paid for change in type of sanitary fixture or fitting. 2) Provision of extension piece for final connection of CP fitting shall be supplied and installed by the contractor accordingly (as required). 3) For make of any item refer list of preferred makes as given in technical specifications. 4) The rate shall include cost of materials, labor, loading and unloading, transportation, scaffolding and all other incidental charges etc., with all leads and lifts, complete as per specifications, drawings and as directed by the Engineer-in-charge. 5) The rate quoted shall be for all floors, all heights and all places. Sample shall be approved prior to procurement 6) All gaps between wall / floor and sanitary vessels shall be filled with sanitary grade sealant. 7) CP Brass or SS screws shall be used for fixing sanitary fixtures and accessories in toilet, bath, pantry and kitchen area.				

14.01	Providing and fixing white vitreous wall hung type water closet (European type) with seat, lid & C.P. flush bend with fittings & C.I.brackets overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required. Conforming to Manufacturers Standards and to the specified by engineering in-charge.: a) EWC-Jaquar:FLS-WHT-5951+SEAT COVER COMPLETE SET/ ROCA:RS346303460+RE80P396001/ KOHLER:11945IN-S-0 c) CAST IRON CHAIR BRACKET FOR WALL HUNG TYPE WITH C.P BOLT & NUT	32.00	Each	12,394.00	3,96,608.00
14.02	Providing & fixing of concealed type cistern with dual flush facility & actuator comprising of actuator button facia assembly, lid, valve, PVC siphon, fittings in built including brass / SS screws & washer complete, providing protection cover over cistern, CP brass flush pipe, flush bend connecting cistern to WC, connection with angle cock etc. in place of normal; low level cistern as per item no. 13.1 above . The scope include following items: Flush Tank : CIB-WHT-31801011XWP + CIS-CHR-31181810X / ROCA:RA890031410+RA8900450C1 / KOHLER:75897IN-NA+4177IN-A-CP CONCEALED CISTERN WITH ACTUATOR PLATE (Green building certified 2/4 flush)	32.00	Each	11,395.00	3,64,640.00
14.03	Providing & fixing of first quality white vitreous china Wash basin as per product detail, including specially fabricated C.I. brackets with studs painted with two or three coats of enamel paint of approved shade over a coat of primer complete including filling gap between counter and wash basin with approved sanitary grade material, cutting & making good the walls where required the Scope includes the following items. Conforming to Manufacturers Standards and to the specified by engineering in-charge.: a) JAQUAR:CNS-WHT705/ROCA/KOHLER:2210IN-0	32.00	Each	3,537.00	1,13,184.00
14.04	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 250 mm. Conforming to Manufacturers Standards and to the specified by engineering in-charge. a) NIRALI/FUTURA/CARYSIL	8.00	Each	8,667.00	69,336.00
14.06	Providing and Fixing Lavatory Bottle Trap, without Drain, Polished Chrome plated Brass (CP Brass) of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. Bottle Trap: Jaquar ALD-769L/ROCA:RF9066A1/KOHLER:7314IN-CP	32.00	Each	1,516.00	48,512.00
14.07	Providing and fixing braided hose pipe with 15mm nominal bore and 600 mm lenght with heavy rating Polished Chrome plated Brass (CP Brass) inlet with unions at end for connection of angular valve to basin as per product detail complete and conforming to Manufacturers Standards and to the specified by engineering in-charge.. BRAIDED HOSE: Jaquar ALD-803B/ALD-805B/ROCA:RF5B2115C00	112.00	Each	309.00	34,608.00
14.08	Providing and fixing Polished Chrome plated Brass (CP Brass) angular stop cock with wall flange of preferred make : 15mm nominal dia. conforming to Manufacturers Standards and to the specified by engineering in-charge. Angular stop cock : Jaquar:ARI-CHR-39053/ROCA:RT5A8009CA-1/KOHLER:K-80154IN-4-CP	112.00	Each	1,179.00	1,32,048.00

14.09	Providing and Fixing Polished Chrome plated Brass (CP Brass) Bib Tap with wall flange in Polished Chrome of approved Quality and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar:ARI 39037/ROCA:RT5A7820CA1/KOHLER:16093IN-4-CP	16.00	Each	1,628.00	26,048.00
14.10	Providing and Fixing 2-Way Polished Chrome plated Brass (CP Brass) Tap with wall flange in Polished Chrome of approved Quality and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar:ARI 39041/ROCA:RT5A9309CA1/KOHLER:K-16094IN-4-CP	32.00	Each	1,965.00	62,880.00
14.11	Providing and Fixing wall Mounted Kitchen Sink cock with swinging spout , in Polished Chrome plated Brass (CP Brass) of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar:ari-CHR-39347/ROCA-RT5A7925CA-1/KOHLER:8617IN-1-CP	8.00	Each	1,853.00	14,824.00
14.12	Providing and Fixing Health Faucet with metal hose and Holder in Polished Chrome plated Brass (CP Brass) of approved quality and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar ALD-CHR-579/ROCA:RF9060A1/KOHLER:12925IN-CP	32.00	Each	1,516.00	48,512.00
14.13	Providing and fixing Chrome plated Brass (CP Brass) Single lever Divertor (Exposed and Concealed part} with Hot and cold inlets and outlets for spout and overhead shower with concealed part for the divertor unit of approved quality of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar :ARI 39079K+ALD-079 / ROCA:RT5A0697CA1+RT5D0697CA1 / KOHLER:(16316IN-4FP-CP)+8821N-CP	24.00	Each	5,950.00	1,42,800.00
14.14	Providing and fixing Polished Chrome plated Brass (CP Brass) over head shower with 15 or 20 mm inlet with long shower arm of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. Over head shower: Jaquar OHS-1757 140mm diameter with Shower arm: Jaquar SHA-477/ROCA:RT18700A1/ KOHLER:16356IN-A-CP	24.00	Each	4,323.00	1,03,752.00
14.15	Providing and Fixing Soap Dish in Polished Chrome plated Brass (CP Brass) with CP screws of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. a) JAQUAR : CAN-1131N/ROCA:RA816701001/KOHLER:5634IN-CP	32.00	Each	646.00	20,672.00
14.16	Providing & fixing towel ring with concealed type brackets, fixed to the wall with Polished Chrome plated Brass (CP Brass) screw etc complete with all fittings as per specification. Conforming to Manufacturers Standards and to the specified by engineering in-charge. a) JAQUAR : CAN-1121N/ROCA:816659001/KOHLER:5631IN-CP	32.00	Each	983.00	31,456.00
14.17	Providing & fixing towel rack with concealed type brackets, fixed to the wall with Polished Chrome plated Brass (CP Brass) screw etc complete with all fittings as per specification. conforming to Manufacturers Standards and to the specified by engineering in-charge.a) JAQUAR:akp-chr-35781P/ROCA:RA816660001/KOHLER:17529T-CP	24.00	Each	3,424.00	82,176.00

14.18	Providing & fixing GRAB BAR with concealed type brackets, fixed to the wall with Polished Chrome plated Brass (CP Brass) screw etc complete with all fittings as per specification. conforming to Manufacturers Standards and to the specified by engineering in-charge. a) JAQUAR:AHS-1507/ROCA:RA816709001/KOHLER:5630IN-CP	24.00	Each	1,600.00	38,400.00
14.19	Providing and Fixing Paper Holder in Polished Chrome plated Brass (CP Brass) of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar : ACN-1151N/ROCA:T6505A1/KOHLER:K5632IN-CP	32.00	Each	702.00	22,464.00
14.20	Providing and Fixing Soap Dispenser in Polished Chrome plated Brass (CP Brass) of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar : ACN-CHR-1137N/ROCA:RA816070105/KOHLER:10712D-CP	32.00	Each	2,807.00	89,824.00
14.21	Providing and Fixing DUAL COAT HOOK in Polished Chrome plated Brass (CP Brass) of preferred make and conforming to Manufacturers Standards and to the specified by engineering in-charge. Jaquar : ACN-CHR-1161N/ROCA:RA815491001/KOHLER:15247IN-CP	24.00	Each	562.00	13,488.00
14.22	Providing & fixing 15mm Polished Chrome plated Brass (CP Brass) Pressmatic Pillar tap with all nuts, washer complete as per of approved Quality and conforming to Manufacturers Standards. Work to be completed to the satisfaction of the Engineer-In-Charge. Jaquar:PRS-CHR-031L65/ROCA:RT5A4277C00/KOHLER:16027IN-4ND-CP	32.00	Each	2,975.00	95,200.00
14.23	Providing & fixing Polished Chrome plated Brass (CP Brass)Bath Spout with all nuts, washer complete as per of approved Quality and conforming to Manufacturers Standards. Work to be completed to the satisfaction of the Engineer-In-Charge. Jaquar:SPJ-CHR-5463/ROCA:RT0403CA1/KOHLER:10386IN-CP	24.00	Each	2,751.00	66,024.00
15.00	**WATER SUPPLY**				
	B) WATER SUPPLY PIPING 1) All materials shall be new of the best quality confirming to specifications and subject to the preferred make list and as approved by Eingeer in charge. 2) Pipes and fittings shall be fixed truly vertical, horizontal or in slopes as required in the best workmanship manner. 3) Pipes shall be fixed in a manner as to provide easy accessibility for repair and maintenance and shall not cause obstruction in shafts, passages etc. 4) Pipes shall be securely fixed to walls by suitable hot dip GI clamps (as approved by Design Consultant / Engineer-in-Charge) at intervals as specified by manufacturer 5) Access doors for fittings and cleanouts shall be so located that they are easily accessible for repair and maintenance. 6) All works shall be executed as per drawings, sample approved and as directed by Engineer-in-Charge. 7) The guidelines indicated by the manufacturer regarding handling, transporting, storing, laying, jointing of the pipes shall be kept in view during execution. Testing of the pipes shall be done as per relevant IS codes.				

15.01	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes SDR 11, 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. Concealed work, including cutting chases and making good the walls etc.				
A	15 mm dia	144.00	Rmt	497.80	71,683.00
B	20 mm dia	480.00	Rmt	537.60	2,58,048.00
C	25 mm dia	192.00	Rmt	627.25	1,20,432.00
15.02	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes SDR 11, 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. External Duct work - Exposed on wall				
A	15 mm nominal outer dia pipes	50.00	Rmt	286.80	14,340.00
B	20 mm dia nominal outer dia pipes	100.00	Rmt	335.00	33,500.00
C	25 mm dia nominal outer dia pipes	192.00	Rmt	401.55	77,098.00
D	32 mm dia nominal outer dia pipes	150.00	Rmt	518.75	77,813.00
E	40 mm dia nominal outer dia pipes	128.00	Rmt	702.95	89,978.00
15.03	Providing & fixing Thermal Insulation over Hot water pipe line with Nitrile rubber as per manufacturers standards having density of material not less than 0.06 gm/cm3 and maximum thermal conductivity of 0.212 BTU-in/h-ft2-0F and having a temperature range of -400C to 1050C, using adhesive of approved quality for sealing joints including testing and finishing. Including Alluminium cladding on the insulation for external pipes use to the satisfaction of Engineer-In-Charge				
A	15 mm dia (9 mm thickness)	100.00	Rmt	82.00	8,200.00
B	20 mm dia (9 mm thickness)	240.00	Rmt	90.00	21,600.00
C	25 mm dia (9 mm thickness)	192.00	Rmt	104.00	19,968.00
15.04	Providing and fixing **Gun metal gate valve with C.I. wheel** of approved quality (screwed end). Conforming to Manufacturers Standards. The installation shall be to the satisfaction of the Engineer in Charge.				
A	25mm nominal bore	16.00	Each	622.40	9,958.00
B	32mm nominal bore	8.00	Each	689.60	5,517.00

15.05	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work				
A	40 mm nominal outer dia pipes	400.00	Meter	563.05	2,25,220.00
B	50 mm nominal outer dia pipes	300.00	Meter	794.25	2,38,275.00
16.00	**DRAINAGE**				
16.01	Providing and fixing UPVC Agriculture grade pipe confirming to IS: 4985 and fitting confirming to IS:7834 pipes ISI Marked brand, including all UPVC fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with UPVC 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.**(Internal work for toilet block)**				
A	40 mm dia	96.00	Meter	95.00	9,120.00
B					
16.02	Providing & Fixing **PVC Pipe ISI marked brand as per IS 4985** of design pressure 6kg/sqm, self fit type complete. The work including solvent jointing hydraulic testing the joints & pipes as mentioned in the specification etc. making holes including chasing in solid block masonry walls with groove cutting machine to required width and depth, making holes in brick or RCC wall as per requirement ,clearing the debris, grouting of concealed pipes, making good the chase as mentioned, making good the wall and floors, making connection with down take complete with proper care, protecting fittings & pipes till the final handing over etc as directed by E-I-C complete as per specifications & drawing provided for all places, all heights & all levels **(Concealed / Celling work for toilet block)** SWR type-B				
A	75 mm dia SWR type-B	160.00	Meter	264.00	42,240.00
B	110 mm dia SWR type-B	144.00	Meter	511.00	73,584.00
16.03	Providing and fixing on wall face Unplasticised Rigid PVC conforming to IS : 13592 of following Types including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.(Single Socketed pipe) (Duct work) Including all fittings complete as per direction of Engineer-in-charge upto all height (length for pipe is to be measured only excluding fittings: Fittings as per requirements shall not be paid separately)				
A	75 mm diameter (Type A for rain water pipes)	128.00	Meter	172.00	22,016.00
B	110 mm diameter (Type A for rain water pipes)	128.00	Meter	299.00	38,272.00
C	75 mm diameter (Type B for soil & waste pipes)	240.00	Meter	388.00	93,120.00
D	110 mm diameter (Type B for soil & waste pipes)	240.00	Meter	560.00	1,34,400.00
16.04	Providing & fixing **UPVC Floor Trap** of self cleansing design having water seal not less than 50mm with necessary distance piece complete, including cost of cutting & making the walls & floors as per	208.00	Each	398.00	82,784.00

	specifications & drawing provided at all places, all levels & all height a) 110 mm inlet and 75 mm outlet				
16.05	Constructing **brick masonry chamber for underground C.I. inspection chamber** and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 Kg (weight of cover 23 Kg and weight of frame 15 Kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design :				
A	Inside dimension 455 x 610 mm & 45cm deep for single pipe line with one or two inlets With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	16.00	Each	6,937.90	1,11,006.00
16.06	**Extra for depth beyond 45cm of brick masonary chamber:**				
A	for 455 x 610mm size With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	4.00	Meter	6,117.00	24,468.00
16.07	Providing **orange colour safety foot rest of minimum 6 mm thick plastic** encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or cheering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	60.00	Each	553.70	33,222.00
16.08	Providing, lowering, laying, aligning, fixing in position and jointing at all level/ depths full round HDPE pipes as per IS 14333 (PE 80-6 kg/cm²) amended upto date, in trenches, complete including all material, labour, testing and commissioning as per Technical Specifications, drawings and as per direction of Engineer-in-charge.				
A	160 mm ID	120.00	Meter	1,708.00	2,04,960.00
B	200 mm ID	200.00	Meter	2,661.00	5,32,200.00
C	315 mm ID	50.00	Meter	6,579.00	3,28,950.00
D	450 mm ID	50.00	Meter	13,234.00	6,61,700.00
16.09	**Constructing brick masonry manhole in cement mortar 1:4** (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm				

	nominal size) finished with a floating coat of neat cement complete as per standard design :				
A	Inside size **90x80 cm and 75 cm** deep including C.I. cover with frame (light duty) 455x 610 mm internal dimension total weight of cover & frame to be not less than 38Kg (weight of cover 23Kg & weight of frame 15Kg) with common burnt clay FPS (non modular) bricks of class designation 7.5	16.00	Each	12,770.55	2,04,329.00
B	Inside size **120x90 cm and 90 cm deep** including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 Kg (weight of cover 58 Kg and weight of frame 58 Kg) : with common burnt clay FPS (non modular) bricks of class designation 7.5	4.00	Each	26,405.50	1,05,622.00
16.10	Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : 2.30 m deep with SFRC Cover and frame (heavy duty HD- 20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	Each	52,969.10	1,05,938.00
16.11	**Extra for depth for manholes :**				
A	**Size 90x80 cm** With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	Meter	8,825.40	17,651.00
B	**Size 120x90 cm** With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	3.00	Meter	10,585.50	31,757.00
16.12	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	5.00	Mete	22,771.85	1,13,859.00
16.13	Constructing brick masonry **road gully chamber 50x45x60** cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design : with common burnt clay FPS (non modular) bricks of class designation 7.5	10.00	Each	5,957.90	59,579.00

16.14	Constructing brick masonry **road gully chamber 110x50x77.5 cm** with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame and vertical grating complete as per standard design : with common burnt clay FPS (non modular) bricks of class designation 7.5	8.00	Each	11,520.55	92,164.00
16.15	**Extra for depth for road gully chamber :**				
A	Size 50x45 cm With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	6.00	mete	3,564.00	21,384.00
B	Size 110x50 cm With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	3.00	meter	5,288.00	15,864.00
16.16	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:: 180x150 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	40.00	Each	2,802.15	1,12,086.00
16.17	Providing and fixing Clean out Point at regular intervals as per relevant code & good plumbing practices. Clean out plugs shall be so located that they can be easily accessible for maintenance. Conforming to Manufacturers Standards and as per directions of Engineering in-charge.	4.00	Each	214.00	856.00
17.00	**Other Works**				
17.00	Drilling suitable holes in reinforced or plain cement concrete with power driven drill machine to a minimum depth of 100mm upto 200mm in RCC beams, lintels, columns and slabs to introduce steel bars for sunshades/balconies including fixing the steel bars in position using epoxy resin anchor grout of approved make but excluding the cost of reinforcement, all complete as per direction of Engineer-In-Charge.				
17.01	Upto and including 12mm dia.	601.00	Each	141.20	84,861.00
17.02	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.				
17.03	Bars upto 12 mm diameter	1,050.00	meter	8.25	8,663.00
17.04	Bars above 12 mm diameter	700.00	meter	16.45	11,515.00
17.05	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.				

17.06	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	50.00	SQM	141.20	7,060.00
17.07	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources).	60.00	CUM	11,505.50	6,90,330.00
17.08	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.	32.00	Each	1,607.95	51,454.00
17.09	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :				
17.10	Rectangular shape 1500x450 mm	24.00	Each	2,093.00	50,232.00
17.11	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 with joints finished flush.	200.00	SQM	1,280.10	2,56,020.00
17.12	Stone work, plain in copings, cornices, string courses and plinth courses, upto 75 mm thick in Cement mortar 1:6 (1 cement : 6 coarse sand), including pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade.				
17.13	Red sand stone	8.00	CUM	93,741.10	7,49,929.00
17.14	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete.	180.00	CUM	9,823.80	17,68,284.00
17.15	Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer	1.00	CUM	11,098.45	11,098.00
17.16	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	5.00	CUM	10,117.60	50,588.00
17.17	Providing and laying 60mm thick faciory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	150.00	SQM	972.00	1,45,800.00
17.18	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :				

17.19	100/160 mm diameter S.W. pipe	120.00	Meter	964.75	1,15,770.00
17.20	150/200 mm diameter S.W. pipe	200.00	Meter	1,179.85	2,35,970.00
17.21	200/315 mm diameter S.W. pipe	50.00	Meter	1,375.45	68,773.00
17.22	250/450 mm diameter S.W. pipe	50.00	Meter	1,590.55	79,528.00
17.23	Grading roof for water proofing treatment with				
17.24	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	2.00	CUM	8,042.30	16,085.00
17.25	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.				
17.26	2 mm thick flat	30.00	SQM	1,245.65	37,370.00
17.27	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	250.00	SQM	218.90	54,725.00
17.28	Deduct /Reduction for issued & hard stone for R.R masonary (stone will be measured as stake are made by the contractor.)	300.00	CUM	-1,100.00	-3,30,000.00
17.29	8778 Toughened glass 12 mm thickness	36.00	SQM	1,925.00	69,300.00
17.30	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 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.	8,000.00	PER LITRE	11.00	88,000.00
	Total amount -Civil (in Rs.)				**9,60,42,228.00**

Schedule B: Electrical

S.No.	Item/Description of Works	Qty	Unit	Rate (Rs.)	Amount (Rs.)
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.**Group B**	**651**	Point	₹ 1,182.00	₹ 769,482.00
2	Wiring for twin control light point with **1.5 sq.mm FRLS PVC** insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point **with 1.5 sq.mm FRLS PVC** insulated copper conductor single core cable etc. as required.	**88**	Point	₹ 1,562.00	₹ 137,456.00
3	Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed PVC conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.**Group B**	**114**	Point	₹ 753.00	₹ 85,842.00
4	Wiring for light/ power plug with **2 x 4 sq. mm FRLS PVC** insulated copper conductor single core cable in surface/ recessed medium class PVC conduit **alongwith 1 No. 4 sq. mm FRLS PVC** insulated copper conductor single core cable for loop earthing as required.	**1540**	Meter	₹ 334.00	₹ 514,360.00
5	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required **2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire**	**550**	Metre	₹ 233.00	₹ 128,150.00
6	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required **2 X 2.5 sq. mm + 1 X 1.5 sq. mm earth wire**	**1650**	Metre	₹ 275.00	₹ 453,750.00
7	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required. **4 X 10 sq. mm + 2 X 6 sq. mm earth wire**	**132**	Metre	₹ 1,005.00	₹ 132,660.00
8	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required. **2 x 1.5 sq. mm**	**55**	Metre	₹ 70.00	₹ 3,850.00
9	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required. **2 x 2.5 sq. mm**	**55**	Metre	₹ 98.00	₹ 5,390.00

10	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required. **2 x 4 sq. mm**	**55**	Metre	₹ 147.00	₹ 8,085.00
11	Supplying and drawing co-axial **TV cable RG-6 grade**, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	**528**	Metre	₹ 47.00	₹ 24,816.00
12	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required. **25 mm**	**660**	Metre	₹ 145.00	₹ 95,700.00
13	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required. **32 mm**	**33**	Metre	₹ 184.00	₹ 6,072.00
14	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required**.TV antenna socket outlet**	**44**	Each	₹ 148.00	₹ 6,512.00
15	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.**Bell push**	**8**	Each	₹ 140.00	₹ 1,120.00
16	Supplying and **fixing call bell/ buzzer** suitable for single phase, 230 V, complete as required.	**8**	Each	₹ 99.00	₹ 792.00
17	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.	**110**	Each	₹ 477.00	₹ 52,470.00
18	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 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.**	**110**	Each	₹ 586.00	₹ 64,460.00
19	Supplying and fixing **15/16 A switch** modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.	**88**	Each	₹ 156.00	₹ 13,728.00

20	Supplying and fixing **15/16 A socket** modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.	**88**	Each	₹ 197.00	₹ 17,336.00
21	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required	**65**	Each	₹ 40.00	₹ 2,600.00
22	Supplying and fixing **1 or 2 Module (75mmX75mm)** size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.	**167**	Each	₹ 298.00	₹ 49,766.00
23	Supplying and fixing **6 Module (200mmX75mm)** size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.	**70**	Each	₹ 333.00	₹ 23,310.00
24	Supplying and fixing **3 pin, 5 A ceiling rose** on the existing junction box/ wooden block including connections etc. as required.	**132**	Each	₹ 87.00	₹ 11,484.00
25	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.) **4 way (4 + 12), Double door**	**8**	Each	₹ 7,512.00	₹ 60,096.00
26	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 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) **8 way (4 + 24), Double door**	**16**	Each	₹ 5,967.00	₹ 95,472.00
27	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	**50**	Each	₹ 13.00	₹ 650.00
28	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.**Single pole**	**300**	Each	₹ 256.00	₹ 76,800.00

29	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.**Double pole**	**48**	Each	₹ 656.00	₹ 31,488.00
30	Providing and fixing M.V. danger notice plate of 200 mm X 150 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	**1**	Each	₹ 269.00	₹ 269.00
31	Supplying and fixing Cable End Box (Loose Wire Box) suitable for triple pole and neutral, sheet steel, Vertical MCB distribution board, 415 Volts, on surface/ recess, complete with testing and commissioning etc. as required.	**24**	Each	₹ 1,170.00	₹ 28,080.00
32	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	**4**	Set	₹ 7,472.00	₹ 29,888.00
33	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	**25**	Metre	₹ 144.00	₹ 3,600.00
34	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	**20**	Metre	₹ 706.00	₹ 14,120.00
35	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	**20**	Metre	₹ 244.00	₹ 4,880.00
36	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required	**440**	Metre	₹ 42.00	₹ 18,480.00
37	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.**Upto 35 sq. mm**	**495**	Metre	₹ 37.00	₹ 18,315.00
38	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.**Upto 35 sq. mm (clamped with 1mm thick saddle)**	**55**	Metre	₹ 55.00	₹ 3,025.00

39	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. in the existing trench, complete as required.**63 mm dia (OD-63 mm & ID-51 mm nominal)**	**165**	Metre	₹ 127.00	₹ 20,955.00
40	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc.direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.**63 mm dia (OD-63 mm & ID-51 mm nominal)**	**330**	Metre	₹ 247.00	₹ 81,510.00
41	PROVIDING AND FIXING CIRCULAR/ HEXAGONAL G.I. BOX FOR CEILING FAN CLAMP, OF INTERNAL DIA 140 MM, 73 MM HEIGHT, TOP LID OF 1.5 MM THICK G.I. SHEET WITH ITS TOP SURFACE HACKED FOR PROPER BONDING, TOP LID SHALL BE SCREWED INTO THE G.I. BOX BY MEANS OF 3.3 MM DIA ROUND HEADED SCREWS, ONE LOCK AT THE CORNERS. CLAMP SHALL BE MADE OF 12 MM DIA M.S. BAR BENT TO SHAPE AS PER STANDARD DRAWING including fan box cover sheet etc as required,	**80**	each	₹ 220.65	₹ 17,652.00
42	Cutting holes of required size in brick masonry wall for fixing of exhaust fan including providing and fixing 300 mm dia PVC pipe conforming BIS-12818 and making good the same etc. complete as per direction of Engineer-in-charge.	**40**	Each	₹ 288.10	₹ 11,524.00
43	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. **4 X 10 sq. mm (25mm)**	**16**	Each	₹ 269.00	₹ 4,304.00

44	Supply, Installation, Testing and Commissioning of **1200 mm sweep,** **BEE 5 star rated, ceiling fan with Brush Less Direct Current (BLDC)** **Motor**, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CM/M/W) minimum 6.00, Air delivery minimum 210 Cum/Min , 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required.	**80**	Each	₹ 2,730.00	₹ 218,400.00
45	Supplying and fixing extra conduit down rod of 20 cm length G.I. pipe 15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	**10**	Each	₹ 52.00	₹ 520.00
46	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	**80**	Each	₹ 369.00	₹ 29,520.00
47	Supplying of 4 c x 10 sq mm Copper XLPE armoured cable armoured FRLS cable of 1100 V grade.	**550**	Meter	₹ 999.00	₹ 549,450.00
48	Supply, Installation, testing and Commissioning of Electric storage type 15 Litre capacity geyser verticle/horizontal wall mounted type confirming to IS 2082 latest provided with removable tubular type heating element 1.5 kW capacity suitable for operating in a single phase, 230 v AC, 50 Hz supply complete with thermostat for temperature control adjustable between 30 degrees to 85 degrees including suitable length of electrical cable with required accessories like 15 mm CP angle valve on inlet and outlet line, heavy duty reinforced flexible PVC connector for cold water line and flexible CP brass connector with CP checkout for hot water line, water line connection, MS bracket with two coats of enamel paint, anchor fastner etc. to hang the units, providing and fixing of 16 A 3 pin plug etc complete as required.	**24**	Nos.	₹ 6,257.00	₹ 150,168.00

49	Supplying and fixing following rating, four pole, 415 V, MCB in the existing MCB DB complete with connections, testing and commissioning etc. as required.**40 A (Three phase & neutral)**	**16**	Each	₹ 1,937.00	₹ 30,992.00
50	Supplying and fixing following rating, four pole, 415 V, MCB in the existing MCB DB complete with connections, testing and commissioning etc. as required. **63A (Three phase & neutral)**	**8**	Each	₹ 2,908.00	₹ 23,264.00
51	**Energy Meter-Supply and Installation** Three Phase SCADA Compatible,up to 40A rated Energy Meter with communication port ewqui. To including required outdoor rated housing & fixing accessories as required to complete the job.	**8**	Each	₹ 6,796.00	₹ 54,368.00
52	Supply and Installation of light fixture recessed/concealed Mounted **15W LED Down light** with all accessories, equilant to Philips make DN194B Led15s-6500 PSU WH S1/Wipro Make LD80-131 XXX-60-XX/Crompton Make LCDN-15-CDL	**24**	Each	₹ 997.00	₹ 23,928.00
53	Supply and Installation of Wall/Surface Mounted **20W Led 4 feet Tube Light** Fixture with all acessories,equilant to Philips make BN108C LED 20S CDL PSU WH/ Wipro Make LL20-221-XXX-65-NE1/Crompton Make -LCTLP-20-CDL	**32**	Nos.	₹ 349.00	₹ 11,168.00
54	Supply and Installation of Wall/Surface Mounted **10 W Led 2feet Tube Light** Fixture with all acessories,equilant to Philips make BN 021 LED 10S 6500 PSU GR S1 / Wipro Make LL20-111-XXX-65-NE/Crompton Make -LCTL-9-CDL	**48**	Nos.	₹ 200.00	₹ 9,600.00
55	Supply and Installation of Wall/Surface mounted14/15 Watt LED Decorative Bracket Light fixture with all accessories	**104**	Nos.	₹ 728.00	₹ 75,712.00
56	Supply and Installation of Surface Mounted **18W LED Down light** with all accessories equilant to Philips make SM251C Led20s-6500 PSU WH/ Wipro Make LD80-171-XXX-60-SM/Crompton Make LCDSPLN-R-18-CDL	**328**	Nos.	₹ 1,197.00	₹ 392,616.00
57	Supply and Installation Wall/Surface Mounted **9/10 W Water tight Bracket Light** with all accessories, equilent to Philips make HDL 16245/Wipro make LW01-101-XXX-57-XX/Crompton Make LBHE-10-CDL	**96**	Nos.	₹ 2,027.00	₹ 194,592.00
	Total Amount (Rs.)-A				**₹ 4,894,597.00**

ELV work

S.no.	Item Description	Qty	Unit	Rate	Total Amount
1	Supply and laying of 25mm dia heavy gauge rigid PVC pipe with GI pulling wire in open/concealed manner with all accessories required	4800	Rmtr	28.00	134,400.00
2	Supply and laying of specified make F/UTP CAT 6A cable in PVC conduits or pipes or raceways or cable trays, but without the cost of conduit or pipes or raceways or cable trays. The cable is to be drawn from individual workstation area/device/IO to the nearest distribution rack or networking rack. It shall be within the requirement of relevant EIA/TIA standards as per CAT6A cabling requirements. The integrator converter shall submit a detail IO maps, labelling and documentation related to terminals etc as required	4800	Rmtr	49.00	235,200.00
3	SITC of 19" wide mounting frame Networking Enclosure (Rack) of various sizes and capacities complete with all accessories. 6U,600 mm(W), x 450mm (D), wall mounted 2 x 90 cfm fans	8	Nos.	5,554.00	44,432.00
4	TYPE 4 (ACCESS SWITCH) : SITC OF layer 2 manageble networking switch, 8 # 10/100/1000 Tx ports, all 8 ports capable of providing POE+ as per 802.3at, plus minimum 2 SFP ports. The networking access switches shall be integrated with existing networking system, consists of NMS, distribution and core switches. Cisco networking Switch shall be supplied with Cisco Warranty (Con-SNT) of five years and all required Cisco licenses like mandatory DNA Subscription included etc. Con-SNT shall be visible at IIM Udaipur Cisco Smartnet account. (Network will be made live with all type of configuration)	8	Nos.	125,000.00	10,00,000.00
5	SITC of single F/UTP CAT6A Gigabit patch panel pre-loaded with 24 ports in IU form factor, with universal AB labelling and 110 connector terminals on rear of panel allowing for quick and easy installation of 22 to 24 AWG cable inclusive of termination of UTP CAT6A cables at all 24 ports	8	Nos.	10,315.00	82,520.00
6	SITC of F/UTP CAT6A RJ-45/RJ-45 patch cords solid conductor of various lengths - 3ft / 1 mtr lengths	160	Nos.	251.00	40,160.00
7	SITC of single F/UTP CAT6A I/O of specified make including mounting inside singlex or duplex or quad faceplate and MS backbox assembly as required , inclusive of termination of F/UTP CAT6A cable each I/O at workstation area/device. Cost shall be included with SITC of I/O, shuttered faceplate and MS backbox.	120	Nos.	370.00	44,400.00
8	SITC of 1000 Base LX singlemode tranceivers for L2/L3 switch, duplex LC termination supporting distance upto 2000 mtrs (to be installed in access switches)	8	Nos.	28,398.00	227,184.00
9	SITC of 1000 Base LX singlemode tranceivers for L2/L3 switch, duplex LC termination supporting distance upto 2000 mtrs (to be installed in already existing /installed access/distrubution switches)	8	Nos.	28,398.00	227,184.00

10	Laying of OFC Cable as per Existing Network topology in PVC conduits or pipes or raceways or cable trays, but **with** the cost of conduit or pipes or raceways or cable trays. (OFC cable will be provided by the Institute) (All OFC splicings shall be done as per site requirement).	4800	Rmtr	37.00	177,600.00
11	SITC ON wall mounted LIU of various capacities for optical splicing/termination of fiber optic cable it shall be complete with adapter panels, adaptors and splice trays for using LC type termination and masking/blanking/dustcover for unused/unmounted adapter ports inclusive of all mechanical accessories. Adequate splice trays shall be provided for proper management of splices for required number of cores at every LIU no - for 48 cores, singlemode LC termination	8	Nos.	15,661.00	125,288.00
12	SITC for LC-LC duplex fiber optic patch cords of various lengths - 1 mtr/3 ft , singlemode	16	Nos.	1,566.00	25,056.00
13	SITC of LC type pre-terminated fiber optic cable pigtails of various lengths - 1 mtr/3 ft , singlemode	96	Nos.	426.00	40,896.00
14	SITC of wireless access point supporting dual band of with 802 11ac(5GHz) and 802.11 g/n (2.4 GHz) concurrent operation , 4 x 4.3 MIMO WAVE2 from day 1, One 10/100/1000 Base Tx auto sensing (RJ45) PoE port. The AP shall be wall mountable (provide both options) . Wireless access points shall be integrated with existing Wi-Fi setup consisting of Wi-Fi Controller and NMS. Access Point shall be supplied with Cisco Warranty (Con-SNT) of five years and all required Cisco licenses like mandatory DNA Subscription included etc. Con-SNT shall be visible at IIM Udaipur Cisco Smartnet account.	16	Nos.	100,000.00	16,00,000.00
Total amount -B in Rs.					**40,04,320.00**
Total Electrical amount (A+B) in Rs.					**88,98,917.00**

Proforma for Quoting the rates

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Percentage BoQ

Tender Inviting Authority: The Director IIM Udaipuur

Name of Work: Construction of 8 nos. Faculty Housing Including Internal water supply, Sanitary Installation, Drainage work, Electrical Installation & Extra Low Voltage Work at IIM Udaipur (Balance Work).

Contract No: IIMU/Project/Faculty/06

Name of the Bidder/ Bidding Firm / Company :	

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
1	2	3	4	5	54	7
1.01	Schedule of Quantity- **CIVIL (Part A)**	1	Job	96042228	96042228.00	INR Nine Crore Sixty Lakh Forty Two Thousand Two Hundred & Twenty Eight Only
1.02	Schedule of Quantity- **ELECTRICAL (Part B)**	1	Job	8898917	8898917.00	INR Eighty Eight Lakh Ninety Eight Thousand Nine Hundred & Seventeen Only
Total in Figures					104941145.00	INR Ten Crore Forty Nine Lakh Forty One Thousand One Hundred & Forty Five Only
Quoted Rate in Figures			Select		0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only				