



**NATIONAL AGRICULTURAL COOPERATIVE MARKETING
FEDERATION OF INDIA LTD.**

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Ring Road, Ashram Chowk, New Delhi-110 014

Website: www.nafed-india.com

Email: estatedivision@nafed-india.com

REQUEST FOR PROPOSAL ("RFP")

**FOR APPOINTMENT OF CONSTRUCTION AGENCY FOR DESIGN, SUPPLY, ERECTION,
TESTING & COMMISSIONING OF COLDSTORAGE AND OTHER PARAPHERNALIA ON
TURNKEY BASIS AT PLOT NO46/2, SECTOR - 18, MAFCO YARD, VASHI, NAVI
MUMBAII IN MAHARASHTRA**

**RFP No.Nafed/HO/Estate/VASHI-CONSTRUCTION/RKVY/03/ 2025-26
Dated:- 11-12-2025**

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A. NOTICE OF DISCLAIMER

1. The information contained in this Request For Proposal ("RFP") or subsequently provided to Bidder(s) whether verbally or in documentary form by or on behalf of National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) or any of its employees or officers (referred to as "NAFED Representatives"), is provided on the terms and conditions set out in this RFP document and all other terms and conditions subject to which such information is provided.
2. No part of this RFP and no part of any subsequent correspondence by NAFED, or NAFED Representatives shall be taken as providing legal, financial or other advice as establishing a contract or contractual obligation. Contractual obligations would arise only if and when definitive agreements have been approved and executed by the appropriate parties having the authority to enter into and approve such agreements.
3. This RFP document has been prepared solely to assist prospective Bidders in making their decision of whether or not to submit a bid. NAFED does not purport this information to be all-inclusive or to contain all the information that a prospective Bidder may need to consider in order to submit a bid. The data and any other information wherever provided in this RFP is only indicative and neither NAFED, nor NAFED Representatives, will make or will be deemed to have made any current or future representation, promise or warranty, express or implied as to the accuracy, reliability or completeness of the information contained herein or in any document or information, whether written or oral, made available to a Bidder, whether or not the aforesaid parties know or should have known of any errors or omissions or were responsible for its inclusion in or omission from this RFP.
4. Neither NAFED nor NAFED Representatives make any claim or give any assurance as to the accuracy or completeness of the information provided in this RFP Document. Interested parties are advised to carry out their own investigations and analysis of any information contained or referred to herein or made available at any stage in the bidding process in relation to the Project. Bidders have to undertake their own studies and provide their bids.
5. This RFP Document is provided for information purposes only and upon the express understanding that such parties will use it only for the purpose set forth above. It does not purport to be all-inclusive or contain all the information about the Project in relation to which it is being issued.
6. The information and statements made in this RFP document have been made in good faith. Interested parties should rely on their own judgments in participating in the said Project. Any liability is accordingly expressly disclaimed even if any loss or damage is caused by any act or omission on part of the aforesaid, whether negligent or otherwise.
7. This RFP Document has not been filed, registered or approved in any jurisdiction. Recipients of this document should inform themselves of and observe any applicable legal requirements.
8. NAFED makes no representation or warranty and shall incur no liability under any law,

statute, rules or regulations as to the accuracy, reliability or completeness of the RFP Document.

9. NAFED reserves the right to reject all or any of the Bids submitted in response to this RFP at any stage without assigning any reasons whatsoever.
10. All Bidders are responsible for all costs incurred by them when evaluating and responding to this document and any negotiation costs incurred by the recipient thereafter. NAFED may in its sole discretion proceed in the matter it deems appropriate which may include deviation from its expected evaluation process, the waiver of any documents and the request for additional information. Unsuccessful bidders will have no claim whatsoever against NAFED or its employees, officers.
11. NAFED reserves the right to modify, suspend, change or supplement this RFP at any stage. Any change to the RFP will be notified to all the Bidders to whom the RFP is issued.
12. Mere submission of a Bid does not ensure selection of the Bidder as Successful Bidder or Operator.
13. Bidders may attend the Pre-bid meeting as mentioned in this RFP hereinafter for clarification on the RFPs' technical specifications and commercial conditions, on the time, date and place mentioned therein. Participation in such a Pre-bid meeting is not mandatory. If a bidder does not participate or submit any query, then no subsequent representations from them regarding the Technical/ commercial specifications/ conditions shall be entertained.

B. Notice Inviting Quotations/Proposals

Proposals/quotations through electronic mode are invited by the Estate Division, NAFED, Siddhartha Enclave, Ring Road, Ashram Chowk, New Delhi – 110014, from registered and reputed contracted/firms having adequate experience, resources and expertise in dealing with the execution and construction of cold storage and other paraphernalia at Vashi, Navi Mumbai in Maharashtra on turnkey basis. **The tentative estimated cost of the project is around 13.98 crore.**

C. Bid Overveiw

RFP No.	Nafed/HO/Estate/VASHI-CONSTRUCTION/RKVY/03/2025-26, dated 11.12.2025
Name of work	FOR APPOINTMENT OF CONSTRUCTION AGENCY FOR DESIGN, SUPPLY, ERECTION, TESTING & COMMISSIONING OF COLD STORAGE AND OTHER PARAPHERNALIA ON TURNKEY BASIS AT PLOT NO46/2, SECTOR – 18, MAFCO YARD, VASHI, NAVI MUMBAI IN MAHARASHTRA
Pre-Bid Meeting	16.12.2025 at 3:00 PM Applicants who are interested in participating in the Pre-Bid Meeting should confirm the same by sending their queries on email: estatedivision@nafed-india.com
Last date for receiving queries/ clarifications.	15.12.2025 till 3:00 PM Applicants who are interested in participating in the Pre-Bid Meeting should confirm the same by sending their queries on email: estatedivision@nafed-india.com
Bid submission end date & time	22.12.2025 till 5:30 PM
Date and time of Technical Bid opening	23.12.2025 at 3:00 PM
Date and time of Financial Bids opening	Will be intimated upon opening, evaluation and finalization of technical bids.
Bid document fee	Rs.5,900/- (Rupees Five Thousand Nine Hundred Only), inclusive of GST
EMD	Rs.5,00,000/- (Rupees Five Lakh Only)
Technical Eligibility	As per the details provide din the RFP
Financial Eligibility	As per the details provided in the RFP
Opening & Evaluation of the Technical Bids (Cover 1)	Bidders are advised that only those who meet the criteria specified in this RFP will be considered qualified. Financial Bids will be opened solely for Bidders who have been declared as “Technically Qualified”.
Method of Selection Bidder (Bid Parameter)	Lowest Quotation Mode (L-1 Bidder)

Notes:

- a) The rates to be quoted by the agency must be inclusive of travel, lodging boarding and

of all taxes i.e. Goods and Service Tax (GST) etc. No extra payment on this account will be made to the contractor.

- b) The Bidder is required to pay a Non-refundable Bid Document Fee of Rs.5,900/- (*Rupees Five Thousand Nine Hundred Only*) inclusive of 18% GST via NEFT/ RTGS to NAFED using the following bank details. Proof of payment must be submitted along with the Bid.

BANK ACCOUNT DETAILS FOR PAYMENT OF BID DOCUMENT FEE:	
Beneficiary Name	NAFED
Current Account No.	10060002037
Center (Location)	NEW DELHI
Bank	IDFC FIRST BANK
Branch	New Friends Colony Branch South Delhi
IFSC Code	IDFB0020102

Note: The Bank account details provided for the Bid Document Fee and the Earnest Money Deposit (EMD) are different. Please double-check before submitting each amount.

- c) **Earnest Money Deposit (EMD):** The Bidder is required to pay an interest free Earnest Money Deposit (EMD) of Rs.5,00,000/- (*Rupees Five Lakhs Only*) via NEFT/RTGS to NAFED using the following bank details. Proof of payment must be submitted along with the Bid.

BANK ACCOUNT DETAILS FOR PAYING EMD:	
Beneficiary Name	NAFED
Current Account No.	10060654277
Center (Location)	NEW DELHI
Bank	IDFC FIRST BANK
Branch	New Friends Colony Branch South Delhi
IFSC Code	IDFB0020102

Note: The Bank account details provided for the Bid Document Fee and the Earnest Money Deposit (EMD) are different. Please double-check before submitting each amount.

- d) The Unique Transaction Reference No (UTR) must be mentioned along with the slip for payments made online, obtained at the time of deposition of the EMD & RFP fee.
- e) The EMD of L-2 will be returned within 15 (fifteen) days of signing the Agreement with the Selected (L-1) Bidder. The EMD of the Selected Bidder (L-1) will be returned/adjusted against the Security Deposit only after receiving the Security in the form of Bank Guarantee as per the Concession Agreement. Bank Guarantee (BG) should be submitted with Structured Finance Managing System (SFMS) issued by the beneficiary bank along with submission of the RTGS Code
- f) The EMD submitted by a Bidder shall become liable for forfeiture in the event of the following:

- i. If the Bidder withdraws his Bid during the period of Bid Validity.
 - ii. If the Selected Bidder, upon being issued the LoI, fails to accept the LoA and on or after acceptance of the LoI, fails to execute the Concession Agreement with NAFED within the period of 30 (thirty) days from the date of issuance of LoI.
- g) Other terms and conditions are displayed in the RFP form. The right to reject any or all bids of works without assigning any reason thereof is reserved with the Branch Manager.
- h) The detailed RFP Notice is available on www.nafed-india.com (Any changes in the RFP will be published on the above website).

D. INSTRUCTIONS FOR BID SUBMISSION

- a) The complete Bid Document can be viewed from website www.nafed-india.com. The RFP can be viewed and downloaded only from the website www.nafed-india.com. The intending Bidders should submit their proposal with requisite document in Electronic mode at the time of submission of their proposal.
- b) **Mode of Bid Submission of Bids:**
- a) Bidders are required to submit their proposals in strict accordance with the instructions outlined in this Request for Proposal (RFP). Proposals must be submitted electronically. No physical bids will be entertained. All submissions must be complete, duly signed by an authorized representative of the bidder, and formatted as per the guidelines provided in this RFP.
 - b) **Electronic Submission of Bids:** The proposals/bids shall be submitted via email to estatedivision@nafed-india.com. The subject line of the email must clearly state: "RFP Submission – [Nafed/HO/Estate/VASHI-CONSTRUCTION/RKVY/03/ 2025-26, ***dated 07.11.2025 FOR APPOINTMENT OF CONSTRUCTION AGENCY FOR DESIGN, SUPPLY, ERECTION, TESTING & COMMISSIONING OF COLDSTORAGE AND OTHER PARAPHERNALIA ON TURNKEY BASIS AT PLOT NO46/2, SECTOR – 18, MAFCO YARD, VASHI, NAVI MUMBAI IN MAHARASHTRA [Name of Bidder]***".
 - c) All proposal/bid documents shall be attached in searchable PDF format and organized according to the structure outlined in the RFP. The total file size of the email submission must not exceed [e.g., 20MB]. If the proposal is split across multiple emails due to file size constraints, each email should be clearly labeled (e.g., "Part 1 of 3") and submitted in trail mails. Bidders are responsible for ensuring successful transmission and receipt of their submissions.
 - d) **Submission of Password-Protected Bids:** The bid shall be submitted in a password-protected pdf file. The password shall be obtained from the bidder at the time of bid opening, either telephonically on the contact number provided in the bid application or directly from the bidder if the bidder is physically present during the bid opening. It is hereby clarified that both the Technical Bid and the Price Bid must be submitted in password-protected files. Any bid submitted without password protection shall be summarily rejected and not considered for evaluation. Further, NAFED shall not be responsible for any delay or inability to open the bid at the scheduled date and time due to non-receipt, incorrect, or delayed communication of the password

by the bidder.

- e) Proposals must be received at the specified e-mail address no later than last date of submissions of date as stipulated in this RFP. Late submissions will be automatically disqualified, regardless of the cause of delay, including courier or delivery issues
 - f) All proposals must be submitted in English and formatted according to the requirements set forth in this RFP.
 - g) Proposals submitted by any other method not specified herein will not be accepted.
 - h) Bidders are solely responsible for ensuring that their submissions are received on or before the deadline.
 - i) No exceptions will be made for late or incomplete submissions.
 - j) The rates to be quoted by the agency must be inclusive of travel, lodging boarding and of all taxes i.e. Goods and Service Tax (GST) etc. No extra payment on this account will be made to the contractor.
 - k) The Unique Transaction Reference No (UTR) must be mentioned along with the slip for payments made online, obtained at the time of deposition of the EMD & RFP fee.
 - l) Other terms and conditions are displayed in the RFP form. The right to reject any or all bids of works without assigning any reason thereof is reserved with the Branch Manager.
 - m) The detailed RFP Notice is available on www.nafed-india.com (Any changes in the RFP will be published on the above website).
- c) **Cyber security Disclaimer:**
- i. NAFED shall not be responsible or liable for any delay, loss, non-receipt, corruption, or unauthorized access of bid documents during transmission through electronic means.
 - ii. The bidder shall ensure that their systems, networks, and procedures are secure and that passwords are transmitted safely in accordance with the instructions.
 - iii. Any failure to comply with secure electronic submission practices, including premature sharing of passwords, shall be at the sole risk and responsibility of the bidder.
- d) The Bidder is required to submit a signed copy of the Request for Proposal (RFP) as part of their Bid submission. Failure to include the signed RFP may result in the Bid being deemed incomplete or disqualified. It is essential that the Bidder carefully reviews, signs, and attaches the Bid Document to ensure full compliance with the submission requirements. This step demonstrates the Bidder's acknowledgment and acceptance of the terms and conditions outlined in the RFP.
- e) All communications, including requests for clarification and submission of application documents, should be addressed to:
- General Manager (Estate)**
Email id: estatedivision@nafed-india.com
- f) **Clarifications:** Any queries regarding the RFP can be addressed to GM (Estate Division), NAFED via e-mail to estatedivision@nafed-india.com, with the following

subject line and the format given below:

“QUERIES CONCERNING RFP FOR APPOINTMENT OF CONSTRUCTION AGENCY FOR DESIGN, SUPPLY, ERECTION, TESTING & COMMISSIONING OF COLDSTORAGE AND OTHER PARAPHERNALIA ON TURNKEY BASIS AT PLOT NO46/2, SECTOR - 18, MAFCO YARD, VASHI, NAVI MUMBAI IN”

S. No.	Clause/Page No.	Content of the RFP requiring Clarifications	Change/Clarification requested
1.			
2.			
3.			

(e-Mail with any other subject line will not be entertained).

- g) NAFED shall endeavour to respond to the questions raised or clarifications sought by the Bidders. However, the NAFED reserves the right not to respond to any question or provide any clarification, in its sole discretion, and nothing in this clause shall be taken or read as compelling or requiring the NAFED to respond to any question or to provide any clarification.
- h) NAFED may, on its own, if deemed necessary, issue interpretations and clarifications to all bidders. All clarifications and interpretations issued by the NAFED shall be deemed to be part of the RFP. Verbal clarifications and information given by the NAFED or its employees or representatives shall not in any way or manner be binding on the NAFED.
- i) To participate in the Bidding process, it is mandatory for the Bidder to submit all desired documents within stipulated time period.
- j) Complete Bid Documents, duly accompanied with NECESSARY DOCUMENTS shall be submitted as per the date & time mentioned in this document. This shall be opened ON STIPULATED DATE as mentioned in the RFP in presence of Bidders or their Authorised representative who may wish to be present.
- k) Corrigendum/Addendum to this document, if any, will be published on website www.nafed-india.com.
- l) NAFED reserves the right to reject any or all the Bids without assigning any reason thereof.
- m) NAFED reserves the right to scrap the complete RFP process any time without assigning any reason thereof.
- n) Communication regarding clarification/missing documents will be issued to concerned Bidders. In response, the Bidder needs to submit the clarification/missing documents (if any) through the mail ID/address of Authorised Signatory. Response received after the stipulated date & time mentioned in the clarification letter may not be accepted.
- o) Bids received by NAFED after the specified time in the RFP shall not be eligible for consideration and shall be summarily rejected.
- p) The Bids shall be filled only in English language. The Authorized Signatory of the Bidder must, through their initials, attest all erasures and alterations made while filling the Bids. Over-writing of figures in Bids is not permitted. Failure to comply with any of these conditions may render the Bid invalid.

- q) NAFED is not responsible for any costs or expenses incurred by the Bidders in connection with the preparation and delivery of Bids including costs and expenses related to visits to the site.
- r) Only those Bids which have been submitted in compliance of this RFP are eligible for consideration.
- s) **Rejection of Bids:** Notwithstanding anything contained in this RFP, the NAFED reserves the right to reject any Bid and to annul the Bidding Process and reject all Bids at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof.
- t) The NAFED reserves the right not to proceed with the Bidding Process at any time, without notice or liability, and to reject any Bid without assigning any reasons.
- u) **Validity of Bids:**
 - i. The Bid submitted by the Bidder shall remain valid and open for acceptance by NAFED for a period of ninety (90) days from the date of opening of the Technical Bid ("Bid Validity Period") extendable by another sixty (60) days at the sole discretion of the NAFED. A Bid having a shorter validity period shall be treated as non-responsive and shall be rejected.
 - ii. In exceptional circumstances without prejudice, prior to the expiry of the Bid Validity Period of ninety (90) days, NAFED may request the Bidders to extend the period of validity for a specified additional period. A Bidder may refuse such request without incurring the risk of forfeiture of EMD.
 - iii. A Bidder agreeing to the request will not be allowed to modify its proposal but would be required to extend the validity of its EMD for the period of extension and comply with the terms of this document in all respects.
 - iv. **Withdrawal during Validity Period:** Any Bidder who withdraws or modifies its Bid during the Bid Validity Period (or any extension thereof) shall be liable to forfeiture of its Bid Security/EMD and may be debarred from participating in future tenders of NAFED for a period as may be determined by NAFED.
 - v. **Acceptance within Validity Period:** NAFED reserves the right to accept a Bid and issue the Letter of Award (LoA) at any time within the Bid Validity Period or the extended validity period, as the case may be. The Bidder shall remain bound by the terms and conditions of its Bid until the issuance of the LoA or the expiry of the validity period, whichever is earlier.
- v) **Disqualification Conditions:**
 - i. Bidders who have been blacklisted or otherwise debarred by NAFED, FCI or any department of Central or State Government or any other Public Sector Undertaking as on last date of submission of Bid be in eligible from participation of Bidding process.
 - ii. Bidders whose contracts have been terminated by NAFED during the last five years from the last date of submission of Bid due to Bidders' default shall be considered disqualified. In addition, the Bidder shall also not be eligible to participate in any future Bidding process in case of any pending/ongoing legal dispute with NAFED whether before any Court of law and/or arbitration with regard to any contract up to last date of submission of Bid and/or in case any recoveries/dues are outstanding on part of the Bidder payable to NAFED.
 - iii. If the CEO or any of the Directors/ key managerial personnel or Promoters of the Bidder/ Consortium/ Member or their Affiliates of the Bidder's company have been, at any time, convicted by a court for an offence and sentenced to

- imprisonment for a period of three years or more, such Bidder will be ineligible. However, if on acquittal by the appellate court the Bidder will be eligible.
- iv. In the event of any document found fabricated/ forged/ tampered/ altered/ manipulated during verification, then the Bidder would be disqualified for future participation of Bids of NAFED for the next 05 (Five) years and the EMD of the Bidder shall be liable to be forfeited.
 - v. In the event of a conflict of interest (the “Conflict of Interest”) among the Bidders, then the Bidder shall be disqualified and the EMD of the Bidder shall be liable to be forfeited.

PART-II

1. Introduction & Background

- a. The National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) is an apex organization of marketing cooperatives for agricultural produce in India. Established on October 2, 1958, NAFED is registered under the Multi State Co-operative Societies Act.
- b. NAFED is the rightful owner of the Project Site and intends to develop a **state-of-the-art cold storage facility at Plot No. 46/2, Sector 18, MAFCO Yard, Vashi, Navi Mumbai**, with a **minimum capacity of 3,000 MT**, along with **export-assisting infrastructure**. Accordingly, NAFED invites participation from eligible entities—**Companies, Societies, Partnership Firms, or Limited Liability Partnerships**—for the **design, construction, and commissioning** of the proposed cold storage facility at the site.
- c. The details and other required information on the Project Site are elaborated in further sections of this RFP.

2. Scope of Work

- a. The scope of work will cover all works relating civil, electrical, refrigeration including supply and erection of plant and machineries, thermal insulation, mechanized ancillary as desired capacity for cold storage as specified capacity of transformer and specified capacity of DG set etc. BOQ based on ammonia as refrigerant has been prepared and enclosed for arriving at the cost of project. The Intending Bidders are instructed to further design and calculate the exact BOQ Quantity before quoting the rate as variation in quantity with respect to BOQ. All design and drawings needs to be vetted/ certified by a Professor of govt. Engineering College. Walls and floor insulation may be carried out as per the BOQ given in the RFP document.
- b. The existing construction made on the site be demolished before start of the fresh construction, as such, it shall be incumbent upon the successful bidder to carry out fresh construction after dismantling existing infrastructure at the site.
- c. If required, preparation of comprehensive study and Detailed Project Report (DPR) of the existing site and its location. The details of work completed are as under:
 - i. Proposed Project of Multi-commodities Ground + Four stories, Cold Storage of Capacity 3574 MT to be set-up.

- ii. The total designated plot area for construction of entire Cold Storage facility is approx. 3000 sq. mtr.
- iii. Civil work carried out for contractor in dimension is 28 mtr * 17 mtr = Approx 476 sq. mtr. (Carpet area at ground floor level).
- iv. The height of cold storage chambers must be compliant to the ISO standard and norms.
- v. The height of plinth is 2 feet from the ground level.
- d. Providing various alternate conceptual designs in consultation with NAFED showing different plans with perspective views.
- e. Preparation and finalization of design as per the requirements of NAFED.
- f. Designing of cold storage facility for the storage of relevant agriculture & horticulture produce along with material handling equipment.
- g. Preparation of cold storage design and the detailed drawings, pertaining to Civil & Structural, Mechanical, Electrical, and Firefighting to be provided in the format as required for uploading while calling the main RFP for execution.
- h. Preparation of Scheme/ working/ execution drawing Civil, Electrical including HT installations and DG Sets, Plumbing, Refrigeration, Firefighting, Structural, Plant & Machinery etc.
- i. Preparation of Bill of Quantities in consultation with NAFED for inviting RFPs for all works for setting up of cold storage.
- j. Periodic site visits during the execution and completion of all the services satisfactory and successful.
- k. Bill checking and certification as and when required.
- l. To ensure that detailed specifications and quality of materials and alternate process and sources are invariably spelt out.

Note:- If, the items of works are not given /defined in the RFP, put the items under Non-schedule items of work and quote the price with latest specification of CPWD.

3. Experience and Eligibility Criteria.

- a) The Construction Agency must have at least about five (05) years of professional experience in the relevant field and are to enclose the documentary evidence for the same.
- b) The Agency must have experience of Construction of Cold Storage of at least three projects (ongoing or completed) in the Food Processing/ Cold Chain/ Export Logistics/ Agricultural Infrastructure sector during the last five years. The cost of each project should be not less than Rs. 5 Crores and involve at least one of the facilities out of multi-purpose cold storage, warehousing, PEB structural cold storage/warehousing, packhouse etc. Documentary evidence is necessary to be submitted.
- c) The bidder must submit a notarized declaration confirming such experience, along with supporting documents such as work orders, supply proofs (e.g., invoices, dispatch records), and relevant financial credentials.
- d) Minimum Average Annual Turnover of Rs. 10.00 Crores during the last three financial years, viz. 2021-22, 2022-23, 2023-24, duly certified by a Chartered Accountant.
- e) Copies of Audited Financial Statements from a Chartered Accountant shall be attached for the last three years.

- f) To submit a positive net worth statement duly certified from the Chartered Accountant.
- g) It is recommended that the copies of work completion certificates from the clients giving the completion status of each project with project cost along with client recommendations and testimonials be attached.
- h) TECHNICAL BID/FINANCIAL BID: As per Annexure-1A and 1B respectively.
- i) The prospective Construction Agency shall be consisting of qualified civil engineer/architect/qualified electrical engineer, a financial expert/advisor/chartered accountant and the principal Construction Agency who will manage the project execution from all points of view and also have a minimum of 15 permanent employees designated to and having work experience in the relevant field.

4. General Terms and Conditions.

- a) The prospective Construction Agency shall be consisting of qualified civil engineer/architect/qualified electrical engineer, a financial expert/advisor/chartered accountant and the principal Construction Agency who will manage the project execution from all points of view and also have a minimum of 15 permanent employees designated to and having work experience in the relevant field. The Agency shall be prepared to visit the site and other approving agencies as and when required.
- b) Construction Agency will prescribe inspection/testing by an independent inspection if needed.
- c) The technology suggested by the Agency should be from a certified background, energy efficient, and environment friendly and economical.
- d) The technology should be correlated and adaptable to the local conditions and locally available inputs.
- e) Construction Agency should draw execution monitoring chart (like CPM/PERT) in respect of Sequence of delivery of equipment, plant & machinery and other construction works indicated in the RFP. This should synchronize the time fixed for erection and commissioning of the plant and is required to be submitted during actual execution of the project.
- f) The Agency should have a constant review after every important event of the project. Delays due to any reason whatsoever may be examined and intimated to the client (NAFED) well in time.
- g) The offer should be accompanied by an EMD of Rs.5,00,000/- (Rupees five lacs Only) paid through online payment gateway or pay order/demand draft in the name of National Agricultural Cooperative Marketing Federation of India Limited payable at Mumbai at par. The EMD of the successful bidder will be adjusted against security deposit. The EMD/Security Deposit so retained by NAFED will not carry any interest. The earnest money will be returned to the unsuccessful Intending Bidders after 30 days of the award of the work to the successful bidder.
- h) The successful and qualified bidders in the technical bid only are eligible for consideration for opening of their financial bids. False or misleading submissions will invite blacklisting.
- i) The bidders should sign on all the pages of RFP documents, terms & conditions given by NAFED and submit the same along with their bids.
- j) The agency has to submit following documents/information in their Technical

- Bids: a) Registration Certificate b) Permanent Account No (PAN) c) Address proof & Name, address, mobile number & e-mail address of contact person. d) GST Registration Certificate
- k) Any partnership firm or company is eligible to bid, provided they produce any valid proof of firm registration such as Certificate of Incorporation/Partnership Deed etc.
 - l) Documents if not in original must be self attested.
 - m) All taxes will be applicable as per prevailing rules and to be included in the fee quoted.
 - n) Bidders shall comply with all the provisions of Income Tax act / GST Act, etc and in no case NAFED shall be liable for any compliance or future liability in regard to any provisions of Income Tax and GST Act or any other act applicable from time to time.
 - o) All the correspondence shall be done in the name of GM (Estate), NAFED, Siddhartha Enclave, Ring Road, Ashram Chowk, New Delhi - 110014. Email Id: estatedivision@nafed-india.com
 - p) The Construction Agency is bound to carry out the work as per contract for a period of completion of project, the terms and conditions of the contract to be prepared by mutual consent.
 - q) NAFED reserves the right to terminate the contract, agreement/arrangement at any time, if the performance of the Construction Agency is found unsatisfactory by giving 15 days' notice in writing to the Construction Agency. However, in the event of any breach of any of the conditions of the agreement, NAFED reserves the right to terminate the agreement with immediate effect without giving any notice. The security deposit (SD) shall be forfeited in case of non-performance of the construction agency. **The Construction Agency shall not be entitled to any compensation, claim, or relief of any nature whatsoever by reason of termination of the Contract by NAFED. Further, the Construction Agency shall be solely responsible and liable to indemnify, defend, and hold NAFED harmless against any losses, damages, costs, or expenses incurred or suffered by NAFED as a consequence of any breach of the terms and conditions of the Contract or due to such termination.**
 - r) NAFED reserves the right to terminate the Contract, Agreement/arrangements at any time for any reason by giving 15 days notice to the Construction Agency. However, in the event of any breach or non-performance of the any of the conditions of the agreement, NAFED reserves the right to terminate the agreement with immediate effect without giving any notice.
 - s) The security money shall be liable to forfeiture if the Intending Bidders after submitting their Bids resign from their offer, modifies the rates OR the terms and conditions thereof. The earnest money is also liable to be forfeited in the Event of the Intending Bidders's failure, after acceptance of their Tender to furnish the security deposit by due date without prejudice to any other right or remedy of NAFED under the contract and law. In such cases NAFED may blacklist the Intending Bidders for the period which it may deem fit.
 - t) Upon selection of successful bidder, a detailed agreement between NAFED and successful bidder shall be executed and all legal relations between the parties shall be governed as per the proposed agreement irrespective of any clause/riders in this RFP document. The contents of said proposed agreement

shall prevail over the terms and conditions mentioned in this RFP document. For any legal dispute, suit, application, claims or proceeding of any kind whatever in respect of, arising out of directly/indirectly or incidental to anything in respect of this RFP **shall be subject to Delhi jurisdiction** only.

- u) The liability of Construction agency for all and any aspects of the project including at the time of execution and after completion, will only expire after one year from the date of completion of project.
- v) Construction Agency shall assist for getting approval for building permission, NOC from pollution control board, Fire NOC, Electrical load sanction & allied permissions/NOC.
- w) **Any Construction Agency, firm, consortium member, or individual who has previously been engaged with NAFED, either directly or indirectly, and whose past performance has been found unsatisfactory, or who has been blacklisted, debarred, or has otherwise earned an adverse or disreputable record with NAFED, shall be deemed ineligible and disqualified from participating in this RFP. NAFED reserves the absolute right to reject any such application or bid at any stage of the bidding process without assigning any reason whatsoever, and such decision shall be final and binding on the bidder. In this regard following to be adhered by the intending bidders:**
 - i. Each bidder shall submit, as part of its Technical Bid, a duly signed and notarized Declaration of Non-Blacklisting / Non-Debarment in the prescribed format **(Annexure-1E)**.
 - ii. Submission of this declaration shall be mandatory for consideration of the bid. Bids submitted without the same or found containing false or misleading information shall be summarily rejected.
 - iii. NAFED reserves the absolute right to verify the information furnished by the bidder from its own records or from any competent authority, and the decision of NAFED in this regard shall be final, conclusive, and binding on the bidder.
 - iv. Any misrepresentation, suppression of material facts, or falsification detected at any stage shall render the bidder disqualified and may lead to forfeiture of the Earnest Money Deposit (EMD) and/or termination of the Contract, if awarded, without any liability on the part of NAFED.
- x) The Construction Agency should have an existing and operational working office in Mumbai.

5. Time Schedule

S.No.	Description of works	Timeline
1.	Submission of Detailed Project Report (DPR): Within 15 days from the date of issuance of Work Order.	Within 15 days from the date of issuance of Work Order.

2.	Preparation of final basic drawings, specifications and RFP documents and finalization of contracts for Execution.	All documents/ drawings & other information etc. as required for execution of project to be made available in required time, till completion of project. Scheduled Period for Completion of Project is 6(six) Months form date of award of work.
3.	Submission of working drawing for civil, Electrical & Electromechanical, Insulation works	
4.	Commissioning of plant.	
5.	Full and final completion of the Project and submission of the Completion Certificate by the Construction Agency.	

6. Drawings and Literature

- a) The selected bidder may obtain the original copy of design & drawing of cold storage part, from the office of State Head, NAFED Mumbai,
- b) Within 15 days of the acceptance of the RFP, contractor shall furnish three prints of Civil layout drawing showing roads, boundary wall, gate, Cold storage, plant room and DG set, foundation details etc. complete including assembly and erection drawings duly vetted/certified and attested by Professor of Govt. Engineering College for approval. The selected bidder may please visit the Project site for inspection of Project partially completed by the contractor.
- c) Approval by the NAFED of the drawings shall not relieve the Contractor of any part of his obligation to meet all the requirements of the Contract or of the correctness of his drawings. The Contractor shall be responsible for and pay for all alterations of the works due to discrepancies or omissions in the drawings or other particulars supplied by him whether such drawings have been approved by the NAFED or not in line with the scope of services.

7. Programme of Work and Progress Schedule: The contractor shall submit, after acceptance of the RFP, detailed schedules showing the program and the sequence in which the Contractor proposes to carry out the work with dates and estimated completion times for various parts of the work. Such schedules shall be approved by the Nafed before starting of the work and shall be binding on the Contractor. If so required, the contractor shall also furnish fortnightly or other periodically progress reports.

8. VARIATION OF WORK: The Employer/NAFED shall have absolute authority to direct the Contractor, at any time during the execution of the Works, to make alterations, omissions, additions, or substitutions to the original specifications, drawings, designs, or instructions, as deemed necessary or advisable by the Employer. The Contractor shall promptly comply with all such instructions, whether issued in writing, recorded in the site order book, or communicated by special letter, without any delay or objection. Such alterations, omissions, additions, or substitutions shall not, under any

circumstances, invalidate, vitiate, or affect the Contract. All work executed in accordance with such instructions shall be deemed part of the Contract. Any adjustment in contract price due to such variations, whether as an addition or deduction, shall be calculated based on rates agreed in writing by the Employer and the Contractor prior to execution of the variation. In case of disagreement, the Employer's determination of cost shall be final and binding on the Contractor. The Contractor shall have no claim for extension of time or additional compensation arising solely from compliance with such instructions, except where expressly agreed in writing by the Employer.

9. **Negligence** If the Contractor shall neglect to execute the work with due diligence or shall contravene the provisions of the contract, the NAFED may give notice in writing to the Contractor calling upon him to make good the neglect or contravention complained of.

10. **Safety Measures**

- a) **General Requirement:** The Bidder/Construction Agency shall be fully responsible for ensuring the safety of personnel, equipment, and property at all stages of execution of the work. All works shall be carried out in strict conformity with applicable laws, rules, and regulations relating to safety, health, and environment, including but not limited to the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, the Factories Act, 1948, and relevant provisions of the National Building Code (NBC).
- b) **Protective Equipment and Precautions:** The Construction Agency shall provide and maintain all necessary protective and safety equipment such as helmets, gloves, boots, masks, safety harnesses, and fire extinguishers, and ensure their proper use by all workmen and personnel on site. All machinery, tools, and temporary structures shall be maintained in a safe working condition.
- c) **Fire and Hazard Control:** Special care shall be taken in the storage, handling, and usage of flammable materials, electrical installations, refrigerant gases, and insulation chemicals in conformity with prescribed safety standards. Adequate fire-fighting arrangements shall be provided and maintained at site at all times.
- d) **Accident Reporting and Remedial Action:** Any accident or incident resulting in injury, loss of life, or property damage shall be immediately reported to NAFED or its representative, followed by a detailed written report within 24 hours, indicating the cause and corrective actions taken. The Construction Agency shall bear full responsibility for all such incidents and any resultant claims, damages, or liabilities.
- e) **Inspection and Compliance:** NAFED or its authorized representative shall have the right to inspect the worksite at any time to verify compliance with safety requirements. In the event of any unsafe condition or act being observed, NAFED may direct the Construction Agency to suspend the work until the defect or deficiency is rectified to the satisfaction of NAFED. No claim for extension of time or additional cost shall be entertained on this account.
- f) **Liability and Indemnity:** The Construction Agency shall be solely liable and responsible for the safety of its personnel, equipment, and work execution. NAFED shall not be responsible for any injury, loss, or damage arising out of negligence or non-compliance of safety provisions by the Construction Agency. The Agency shall indemnify and keep NAFED harmless from all such claims, losses, or liabilities.

- g) **Non-Compliance:** In case of persistent or serious violations of safety norms, NAFED reserves the right to impose penalties, suspend the work, or terminate the contract at the risk and cost of the Construction Agency.

11. QUALITY ASSURANCE AND CERTIFICATION REQUIREMENTS

- a) **General Requirements:** The Bidder/Construction Agency shall ensure that the design, construction, and commissioning of the Cold Storage Facility conform to the highest standards of quality, workmanship, and performance. All works and materials shall comply with the latest editions of the relevant codes, standards, and specifications of the Bureau of Indian Standards (BIS), National Building Code (NBC), and other statutory authorities concerned.
- b) **Quality Management System:** The Bidder shall have in place a documented and verifiable Quality Management System (QMS) conforming to ISO 9001:2015 or an equivalent international standard. Documentary proof of such certification shall be enclosed with the Technical Bid. In case the Bidder does not hold such certification directly, the Bidder shall demonstrate that all major subcontractors and material suppliers are certified to ISO 9001:2015 or equivalent.
- c) **Material and Equipment Certification:** All materials, equipment, machinery, and components to be used in the construction and commissioning of the Cold Storage Facility shall be sourced from manufacturers having valid certifications such as ISO 9001:2015 (Quality Management), ISO 14001:2015 (Environmental Management), and/or relevant BIS or CE marking. The Bidder shall submit manufacturer's test certificates, quality assurance certificates, and inspection reports for all critical items including, but not limited to:
- i. Refrigeration systems and compressors;
 - ii. Insulated panels (PUF/rock wool/other approved type);
 - iii. Structural steel and civil construction materials;
 - iv. Electrical switchgear and fittings;
 - v. Fire detection and safety systems.
- d) **Cold Storage Specific Standards:** The Cold Storage Facility shall be designed and constructed in accordance with applicable national or international standards ensuring food-grade safety and temperature integrity.
- e) **Third-Party Quality Assurance (TPQA):** NAFED reserves the right to engage an independent Third-Party Quality Assurance (TPQA) Agency for monitoring, inspection, and testing of works and materials at various stages of execution. The Bidder shall extend full cooperation to the TPQA Agency, including access to sites, laboratories, documents, and equipment. The cost of such inspection, if not otherwise specified, shall be borne by NAFED; however, any deficiencies or non-conformities pointed out by the TPQA Agency shall be rectified by the Bidder at its own cost and within the stipulated time.
- f) **Final Quality Certification:** Upon completion of the works, the Bidder shall submit a comprehensive dossier containing:
- i. Final Quality Certification issued by the TPQA/Engineer-in-Charge;

- ii. Test certificates and conformance reports for all major systems (civil, electrical, refrigeration, insulation, and fire safety); and
 - iii. Compliance documentation as required for obtaining statutory and operational clearances.
- g) **Penalty for Non-Compliance:** Failure to comply with the prescribed quality standards, certification requirements, or to rectify any deficiencies within the specified time shall constitute a material breach of contract. In such cases, NAFED reserves the right to withhold payments, levy penalties, or terminate the contract, without prejudice to any other remedies available under law or the contract.

12. Inspection & Testing: The Employer or its authorized representative shall have full authority to inspect the work, examine materials, and review the workmanship of the plant at the Contractor's premises or at any location from which the materials or equipment are sourced. The Contractor shall carry out any modifications, rectifications, or adjustments deemed necessary by the Employer to ensure the proper functioning of the equipment or system. All materials, including cement, steel, timber, and any tests such as CC cube tests, pressure tests, or running tests of equipment, shall be arranged and conducted by the Contractor at their own cost. The acceptance of any material or equipment by the Employer shall in no way relieve the Contractor of their responsibility to fully comply with the requirements of the Specifications.

13. Taking over The complete Property, after the erection at site, will be taken over by the Employer, only after the Employer issues certificates in writing that the plant has fulfilled the contract conditions/obligations.

14. Contractor's Representatives: The contractor shall employ at least one qualified and experienced representative whose name shall have previously been communicated in writing to the Employer to supervise the complete work. Any written order or instructions given to the representative shall be deemed to have been given to the Contractor. The Employer shall be at liberty to object to any particular representative employed by the Contractor on the work and the Contractor shall remove the persons objected to on receipt from Employer in writing a request requiring him to do so and shall provide in his place another competent and experienced representative acceptable to the Employer.

15. Extension of Time If the contractor shall desire an extension of time for completion of the work, due to any act of neglect of the Employer or due to some extra work, additions and alterations in original specifications, designs and drawings ordered during the execution of work, or by strikes, lockouts, fire, war act or public enemy or by any other reasonable cause (which the Employer decides the same reasonable and justify the delay), then he shall apply in writing to the Employer within 7 days from the date of occurrence of the delay.

PART-III

16. Compliance with local laws and regulation. The Contractor shall strictly comply with all applicable laws, bylaws, rules, and regulations of local, municipal, and other

statutory authorities having jurisdiction over the Works. The Contractor shall be solely responsible for obtaining all necessary permissions, licenses, and approvals, for making all requisite payments, and for issuing and receiving all statutory notices in connection therewith. The Contractor shall keep the Employer fully informed, from time to time, regarding such compliances, payments made, and notices issued or received.

- 17. Indemnification.** The Contractor shall fully indemnify and hold harmless Nafed from and against all claims, demands, proceedings, damages, costs, charges, and expenses of any kind arising out of or in connection with any infringement or alleged infringement of patent rights, designs, trademarks, trade names, or other intellectual property rights in respect of any plans, machinery, works, materials, or temporary works used in the execution of the Works. The Contractor shall, at its own cost, defend all actions or proceedings arising from such claims and shall be solely responsible for and shall promptly pay all royalties, license fees, damages, costs, and charges of every kind that may be legally incurred in relation thereto.

18. Liquidated Damages / Compensation For Delay/Force Majeure

- a) **Completion Schedule and Delay:** The Contractor shall complete the work strictly within the stipulated time specified in the RFP, or within any mutually agreed extension thereof. Time shall be the essence of this contract. If the Contractor fails to commence or complete the work within the prescribed period, the Contractor shall be liable to pay a penalty of 0.5% (half percent) of the total contract value of completed work per week or part thereof during which the work remains uncommenced or incomplete. The total penalty under this clause shall not exceed 10% (ten percent) of the total contract value. The payment of penalty under this clause shall be without prejudice to any other rights, remedies, claims, or damages available to the Employer under this contract or applicable law, including the right to terminate the contract for default. The Contractor expressly acknowledges that such penalty is a genuine pre-estimate of the Employer's losses arising from delay and not a limitation of the Employer's other legal remedies.
- b) **Force Majeure:** Neither party shall be held liable for delay or failure in performance of their contractual obligations solely to the extent that such delay or failure is caused by a Force Majeure event, including but not limited to: war, hostilities, revolution, civil commotion, strike, epidemic, accident, fire, flood, earthquake, or other act of God; or due to any law, order, proclamation, regulation, or ordinance of any Government authority; or any other circumstance beyond the reasonable control of the affected party. The affected party shall notify the other party in writing within seven (7) days of the occurrence, providing sufficient details about the event and its expected duration. If the Force Majeure event persists uninterrupted for six (6) months, both parties shall consult in good faith to determine the appropriate course of action regarding continuation, suspension, or termination of the contract.
- c) **Effect of Force Majeure on Penalty:** Delays caused solely by Force Majeure events shall not be counted for the purpose of penalty calculation under Clause 18.1. However, the Contractor shall remain fully liable for all delays or non-performance not expressly excused under this Clause. The Contractor

bears the full risk of failure to perform due to causes within its control, including but not limited to inadequate resources, mismanagement, or failure to plan.

19. Guarantee & Defects Liability Period

- a) The Contractor shall guarantee that the complete cold storage Work including installation of all equipments shall be free from any defect due to defective materials and bad workmanship and that the equipment/system shall operate satisfactorily and the performance and efficiencies of the equipment/system shall not be less than the guaranteed values. The guarantee shall be valid for a minimum period of 24 months after taking over (i.e., after approval of testing and commissioning) and any parts found defective shall be replaced free of all costs by the Contractor. The services of the Contractor's personnel if requisitioned during this period for such work shall be made available free of any cost to the NAFED. If it is necessary to send the defective equipment or parts for repair/replacement, cost from the site to works and back shall be borne by the contractor. The maintenance of this plant shall be arranged by the Contractor within the guarantee period without any extra cost.
- b) If the defects are not remedied within a reasonable time, NAFED may proceed to do so at the Contractor's risk and expense without prejudice to any other rights.

20. Insurance: The Contractor shall arrange insurance of all materials & equipments during the transport and execution of work until the work is 'Taken over' under clause 16 by the NAFED. The Contractor shall keep insured such works as may be upon the site against all risks viz., fire, flood, lightning, earthquake, tempest, theft, strikes, riot, Terrorist activities or civil commotion for the value thereof and shall produce documentary evidence in support of the same whenever required by the Employer. All moneys received against such insurance policies shall be applied towards the rectification and/or replacements of the works so damaged. The provision of this clause shall be applicable without prejudice to the liability of the Contractor under other provisions of the Contract.

21. Mode of Payment

- a) As the above work is scheduled to be awarded on a turnkey basis, the overall cost of the Project will be fixed irrespective of variation in the estimated quantities. However, if any additional work arises due to variation in the scope of service, the same should be got approved from NAFED prior to its execution and it will be paid extra.
- b) The mode of payment, after due certification of bill/work and recommendation for payment by the representative/Engineer-in-charge of NAFED, will be as under:

S.N.	Milestone	Percentage Payment
1.	Advance: Before starting of work, against a Bank Guarantee of equivalent amount (valid up to 30 days beyond project completion) and after	25% of the total cost of the Project

	submission of approved drawings (complete plan, structural design, heat load calculation, etc.).	
2.	Civil Work: On pro-rata basis.	25% of the total project cost
3.	Supply of Materials: On pro-rata basis against supply of plant and machinery, thermal insulation, transformer , etc.	25% of the total project cost
4.	Erection: On erection of plant & machinery, thermal insulation, transformer, DG set , etc.	10% of the total project cost
5.	Final Handover: On handing over of the complete Cold Storage after successful commissioning, along with the Completion Certificate and submission of a Bank Guarantee (valid up to the end of the Free Maintenance Period).	15% of the total project cost

- c) NAFED will deduct all payment, if paid on behalf of the contractor on account of PF, ESI, other Govt. dues or any other dues for any account paid or recovered on behalf of the Contractor whatsoever from the bills of the Contractor for this Project.
- d) **Time Schedule** - The time is the essence of the contract and the whole of the works is to be completed within 6 months from the date of issue of work order or date of handing over of site, whichever is later. The employer reserves their right to fix up the further priorities and phasing of work in which order the works are to be executed for this purpose. NAFED will be entitled to indicate the date of commencement and completion of various sections and/or part of the work within the overall time mentioned in this clause, and the contractor will be bound to abide by said dates.

22. Deduction of Taxes

- a) All payments to Supplier/Contractor shall be subject to the deduction of income – tax, work tax or any other tax levied or imposed by the Central or State Government or any other local authority from time to time as per Income Tax Act/GST.
- b) A declaration u/s 206AB (format enclosed) may also be submitted by the bidder, as it is mandatory now as per Income Tax Act 1961.
- c) Copies of ITR V may also be submitted for the preceding 3 (three) Financial years along with GST and PAN.
- d) Further, Bidder shall be liable for any labour laws like PF, ESI applicable on the said agency and in no case NAFED shall be liable for any such provisions at any time.

23. Security Deposit

- a) Within 15 days of receipt of the Work Order, an amount equal to 10% of the total value of the contract shall be deposited by the successful Intending Bidders towards the Security Deposit for the due fulfillment of the contract and satisfactory performance of the Cold Storage for a period of 24 months from the date the site is taken over by Successful Intending Bidder.

- b) Alternatively, the contractor should agree for deductions to be made from the “On account” bills @5% of the bill amount. (Earnest Money Deposited (EMD) with the RFP shall be adjusted against the Security Deposit.)

24. FORMAT FOR THE DETAILS OF THE CONSTRUCTION AGENCY STAFF AND THEIR TECHNICAL OFFICIALS (To be submitted alongwith the Technical Bid Form only)

Name of the Firm / Group of Individuals / Company / Other Entity (as applicable)	
Registration No(enclose copy)	
PAN details(enclose copy)	
GST Registration (enclose copy)	
Full address in capital letters	
Authorized person Contact No, Mobile, Email	
Qualifications of the Architect-cum-coldstorage specialist.(Copies for proof of qualification to be attached)	
Professional Experience in the field of construction of cold storage upto 5000 MT capacity along with documentary evidence(extra sheet may be attached if necessary copies for proof to be attached)	
Value of the works executed during last five years as per NIT	
Any other relevant information the construction agency team would like to furnish for their qualification and experience(extra sheet may be attached in necessary, copies for proof to be attached)	

25. PROCESS OF EVALUATION.

- a) A two-stage procedure will be adopted in evaluating the proposal.
- b) In the first stage, eligibility of the firm will be ascertained on the basis of experience certificates, firm's turnover and other information required to be submitted as per the RFP Notice. The firms failing to meet the minimum requirement will be rejected.
- c) In the second stage, financial bid opening will be carried out for those who qualify in the first stage. Direct preference will be given to Public sector/State or Central Govt. undertakings/Reputed Private Construction Agency.
- d) The Financial Bids of only the technically qualified bidders will be opened for evaluation. The Construction Agency has to quote the price. The bidder with the lowest Financial Quote (L-1) will be the successful bidder and will be called upon for further discussion, negotiation, and finalization of the RFP award.

26. Integrity Pact: All interested Bidders will be required to sign and submit an Integrity Pact along with their Bid. It will be assumed that the Bidder(s) has gone through the Integrity Pact (as per the format given in this Bid Document at Annexure 1C) and has no objections whatsoever in signing the contract.

27. Declarations and Undertakings: It shall be incumbent upon all Applicants/intending Bidders to submit the following declarations on the letter head of their entity(ies) while submitting their applications:

- a) The intending Bidder(s)/Applicant(s) is/are/was/were neither in litigation with NAFED at any point of time regarding any business and trade activity of NAFED nor was/were it/they ever blacklisted by NAFED on account of such litigation(s) or otherwise.
- b) Any of the present and past Directors / Partners / Promoters etc. of intending Bidder(s)/Applicant(s) was/were or is/are not part of such other and separate entity (ies) which was/were/is/are in litigation with NAFED in present or past or/and such other entity (les) has/have/had ever been blacklisted by NAFED in the past for any reason.
- c) If intending Bidder(s)/Applicant(s) is/are/was/were in litigation (s) with NAFED in present/past, it shall be incumbent upon such Bidder(s)/Applicant(s) to furnish the details of such litigation(s) and consequent blacklisting, if any, on the letter head of the entity (les). In such a scenario, the declaration as mandated above at (a&b) shall not be required.
- d) If any of the Applicant(s) /intending Bidder(s) or their promoters are found involved in litigation(s) with NAFED whether in past and present or they have/had been blacklisted by NAFED or/and any of the promoters of intending Applicant(s)/Bidder(s) was/were part of the management of such other and separate entity(ies) which was/were/ is/are in litigation(s) with NAFED in present or past or/and such other entity (les) has/have/had ever been blacklisted by NAFED in the past for any reason, NAFED shall have sole discretion to decide on the selection of such Applicant(s)/Bidder(s) even if such Applicant(s)/Bidder(s) fulfilling eligibility criteria and NAFED's decision either to select or reject such Applicants/Bidders shall be final and binding and no further communication/grievance against such decision shall be entertained in this regard.

28. Force-Majeure

- a) Due to any Act or policy of the Government /local authorities or on account of any act of Govt. it becomes impossible to perform or continue with the agreement, the agreement shall automatically come to an end and in that event, the Selected Bidder shall not seek any specific performance of the agreement or claim any damages.
- b) Force Majeure means any event or combination of events or circumstances beyond the control of the parties here to which cannot(a) by the exercise of reasonable diligence, or(b)despite the adoption of reasonable precaution and/ or alternative measures, be prevented, or caused to be prevented, and which adversely affects the abilities of the parties to perform obligations under this Agreement, which shall include but not be limited to:(a)Acts of God i.e. fire, drought, flood, earthquake, epidemics, natural disasters; (b) Explosions or accidents, air crashes and shipwrecks, act of terrorism; (c)Strikes or lock outs, industrial dispute; (e) War and hostilities of war, riots, bandh, act of terrorism or civil commotion; (f) The promulgation of or amendment in any law, rule or regulation or the issue of any injunction, court order or direction from any Governmental Authority that prevents or restricts a party from complying with any or all the terms and conditions as agreed in this Agreement; (h) Any event or circumstances analogous to the foregoing.
- c) It is agreed between the parties that the performance of obligations under this contract is subject to Force Majeure conditions which shall mean any event or combination of events or circumstances beyond the control of the parties hereto.
- d) Neither party will be liable for performance delays or non-performance due to causes beyond its reasonable control, except for payment obligations.
- e) During the continuance of the Force Majeure, NAFED reserves the right to alter or vary the terms and conditions of this agreement, or if the circumstances so warrant, the NAFED may also suspend the agreement for such period as is considered expedient, Bidder agrees and consent that they shall have no right to raise any claim, compensation of any nature whatsoever or with regard to such suspension.
- f) The Bidder agrees and understands that if the Force Majeure condition continues for a long period, then the NAFED in its judgment and discretion may terminate Agreement and in such case, Bidder agree that they shall have no right or claim of any nature whatsoever and NAFED shall be released and discharged of all its obligations and liabilities under this Agreement.

29. Applicable Laws Jurisdiction and Dispute Resolution

- a) This RFP shall be constitute and the legal relation between the parties hereto shall be determined and governed according to the law of Republic of India and only court at New Delhi or High Court of Delhi shall have the Jurisdiction in all the matter arising out of /touching and or concerning this RFP and parties to this RFP agree to irrevocable submit to the exclusive jurisdiction of those courts for purpose of any such proceeding. The aforementioned exclusive and irrevocable jurisdiction of aforesaid courts is irrespective of place of occurrence of any causes of action pertaining to any dispute between the parties.

- b) All or any dispute arising out or touching upon or in relation to the terms of this RFP including the interpretation and validity of the terms thereof and the respective right and obligation of the parties shall be settled amicably failing which the same shall be settled through arbitration, the arbitration proceeding shall be governed by the Arbitration and Conciliation Act 1996 (as amended from time to time) or any statutory amendment /modification ,thereof for the time being in force .The seat and venue of the arbitration shall be at New Delhi, India and Language of Arbitration shall be English.
- c) Nothing contained in this clause shall prevent the NAFED from seeking interim injunctive relief against the Bidder in the courts having jurisdiction over the parties.
- d) **Continuity of Work:** During the pendency of any dispute or arbitration, the Bidder/Contractor shall continue to perform its obligations under the contract, unless otherwise directed in writing by NAFED.

30. Holiday Listing: NAFED's policy for Holiday-Listing, which is available on the website of NAFED, must be acceptable to the Bidders. Notwithstanding anything contained in this RFP documents, NAFED's Policy of Holiday Listing is mutatis mutandis applies to this and in the event, the agency(s) while discharging its obligations under this RFP/Agreement or otherwise, come(s) within the ambit of the said policy, NAFED at its sole discretion reserves the right to suspend/discontinue dealings or take any curative measures with agency (s) in accordance with the policy in force.

31. Prevention of Fraud and Corruption:

- a) The Bidder shall be bound to take all measures necessary to prevent Fraud and Corruption while dealing with NAFED. Bidder agrees and undertakes to observe the principles/provisions as laid down in "Fraud Prevention Policy of NAFED during their participation in the RFP process, during the execution of contract and in any other transaction with NAFED.
- b) The Bidder shall not, directly or through any other person or firm, offer, promise or give or otherwise allow any NAFED's employees 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 RFP process or during the execution of the contract or thereafter.
- c) The Bidder shall not enter with other Bidder 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 introduce cartelization in the process.
- d) The Bidder shall not commit or allow any employees of NAFED to commit any offence under the relevant provisions of IPC/Prevention of Corruption Act; further the Bidder will not use improperly or allow any employee(s) of NAFED, for purposes of competition or personal gain, or pass onto others, any information or document provided by NAFED as per of the business relationship, including information contained or transmitted electronically.
- e) The Bidder shall not instigate third person to commit offences/activities outlined in Fraud Prevention Policy or be an accessory to such offences.

- f) The Bidder if in possession of any information regarding fraud/suspected fraud, hereby agree and undertake to inform NAFED of same without any delay.

PART-IV

ANNEXURE, FORMS & APPENDIX

ANNEXURE-1A: TECHNICAL BID FORM

(To be submitted on firm's letterhead)

RFP No: _____

Dated: _____

**To,
General Manager, Estate,
National Agricultural Cooperative Marketing Federation of India Ltd,
New Delhi**

Sub:-RFP document for Appointment of Construction Agency for the Design, Execution and Construction of Cold Storage and other paraphernalia at Vashi, Navi Mumbai in Maharashtra on turnkey basis.

Sir,

With reference to the above subject, I/we, having examined the RFP Documents and understood their contents, hereby submit my/our Bid for the aforesaid allotment of contract.

1. I/We acknowledge that NAFED shall be relying on the information provided in the Bid and the documents accompanying the Bid for selection of the successful bidder for the aforesaid subject, and we certify that all information provided therein is true and correct; nothing has been omitted which renders such information misleading and all documents accompanying the Bid are true copies of their respective originals.
2. I/We shall make available to NAFED any additional information it may find necessary or require to supplement or authenticate the Bid.
3. I/We acknowledge the right of NAFED to reject our Bid without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
4. I/We declare that:
 - a) I/We have examined and have no reservations to the RFP Documents, including Addendum/Corrigendum, if any, issued by NAFED; and
 - b) I/We do not have any conflict of interest in accordance with provisions of the document; and
 - c) I/We have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as stipulated in the document, in respect of any Bid or request for proposal issued by or any agreement entered into with NAFED; and
 - d) I/We hereby certify that we have taken steps to ensure that in conformity with the provisions of the RFP, no person acting for us or on our behalf has engaged or shall engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice; and

e) The undertakings given by me/us along with the Application in response to the for the above subject were true and correct as on the date of making the Application and are also true and correct as on the Bid Due Date and I/we shall continue to abide by them.

5. I/We understand that you may cancel the Bidding process at any time and that you are neither bound to accept any Bid that you may receive nor to invite the Bidders to Bid for the above subject, without incurring any liability to the Bidders, in accordance with provisions of the RFP document.
6. I/We further undertake that after the expiry of the contract period or pre mature termination of the contract as per clause of General Terms & Conditions of Contract. We shall have no lien or any rights whatsoever on the said pillar allotted by the NAFED.
7. The financial offer has been quoted by me/us after taking into consideration all the terms and conditions stated in the RFP document, addenda/corrigenda, our own estimates of costs and after a careful assessment of the site and all the conditions that may affect the PMC cost and implementation of the project. I/We are satisfied with the location of the said plot and fully understand & comprehend the technical requirements.
8. I/We agree and undertake to be jointly and severally liable for all the obligations of the contract for the contract period in accordance with our Agreement.
9. We shall keep this offer valid for 120 (one hundred twenty days) from the Bid Due Date specified in the RFP document.
10. I/We hereby submit RFP documents duly signed on each page as token of unconditional acceptance of all terms and conditions set out herewith. In witness thereof, I/we submit this Bid under and in accordance with the terms of the RFP document.

Yours faithfully,

(Signature,

Name and Designation of the Authorised Signatory)

Name and seal of Bidder/Lead Member

Date: _____ Place: _____

ANNEXURE-1B: FINANCIAL BID FORM

(To be submitted on firm's letterhead)

Tender No: _____ Dated: _____

To,
GM (Estate) NAFED,
Siddhartha Enclave, Ring Road, Ashram Chowk,
New Delhi - 110014

Sir,

With reference to the RFP No. _____ dated _____ inviting quotation for Appointment of Construction Agency for the Design, Execution and Construction of Cold Storage and other paraphernalia at Vashi, Navi Mumbai in Maharashtra on turnkey basis. We have carefully studied the scope and objectives of the RFP and based on these, I/We hereby submit our Financial Bid. If the contract is awarded to me/us, I/we agree to accept the Scope of Works, all Terms and Conditions included in but not limited to the RFP Document and agree to the payment schedule of NAFED as per terms and conditions set forth in the RFP Document.

Affirmation:

a) I/we affirm that the total percentage quoted represents the Net Price to be paid to us on account of our rights and duties for carrying out activities of the Construction agency, as per terms and conditions of the RFP and in accordance with the scope of work and is inclusive of all expenses and incidentals etc. In particular, the quote is also inclusive of all and any taxes i.e. Goods and Service Tax (GST). b) I/We undertake to accept the payments from NAFED as per terms and conditions of the RFP document and shall bear all the cost of running operations including travel, lodging boarding and all conveyance expenses. No extra payment on this account will be made to the contractor. c) This offer is being made by me/us after taking into consideration all the terms and conditions stated in the RFP document, and after careful assessment of the Scope of services required, all risks and contingencies and all other conditions that may affect the financial Bid.

FINANCIAL BID

Sr. No.	Particulars	Quoted price and BOQ rate with individual items.
1.	Design, Execution and Construction of Cold Storage of capacity 3574 MT and other paraphernalia at Vashi, Navi Mumbai in Maharashtra on turnkey basis.	-----

Note:

1. The total price quote given above represents the Net Quote to be paid to us on account of rights for carrying out activities of the Construction agency, as per terms and conditions of the RFP document and in accordance with the scope of works desired and is inclusive of all

expenses and incidentals etc. In particular, the quote is also inclusive of all and any taxes i.e. Goods and Service Tax (GST).

2. Successful bidders shall be decided on the basis of the lowest percentage quoted by bidder(s).
3. In case two bidders quote the same, then the bidder having the highest turnover in the last financial year will be awarded the contract.
4. All the columns of the bid format should be filled. Incomplete financial bids will be considered Non-responsive and shall be rejected.

(Signature, name and designation of the Authorised signatory)

Name and seal of Bidder/Lead Member

Date:

Place:

INTEGRITY PACT

(On thenon-judicial stamp paper of Rs.100 and should be submitted along with Technical Bid)

Between

National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) an apex level Cooperative Marketing Organization, registered under the Multi-State Cooperative Societies Act, 2002, having its Head Office at NAFED House, Siddhartha Enclave, Ashram Chowk, New Delhi-110014, hereinafter referred to as "NAFED",

And

_____, a Company registered under Indian Companies Act, 1956/2013 / a Society registered under the Cooperative Societies Act, / a Partnership firm registered under the Indian Partnership Act, 1932 / a Limited Liability Partnership registered under the Limited Liability Partnership Act, 2008, having its Regd. Office at _____ through its _____ (Name), _____ (Designation), resident of _____ duly authorized (herein after referred to as "Bidder") which expression shall unless otherwise repugnant to the context or meaning thereof include and always be deemed to include its successors and assignees) of the second part.

Preamble

NAFED is an apex organization of marketing cooperatives in India. NAFED is also one of the central nodal agencies for procurement of notified agricultural commodities under Price Support Scheme (PSS). NAFED is also procuring Pulses for Buffer Stocking under Price Stabilization Fund (PSF) Scheme of Government of India. NAFED has been designated as State Trading Enterprise (STE) vide Foreign Trade Policy (FTP) 2015-20.

NAFED invited Bids for **"Selection of Bidder for Development of Warehousing Facility through Design, Build, Finance, Operate, Maintain and Transfer (DBFOT) Model at Dronagiri, Maharashtra"** on **"AS IS WHERE IS BASIS"** and intends to award contract of the same under laid down organizational procedures, NAFED values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Bidders.

In order to achieve these goals, NAFED has appointed Independent External Monitors (IEMs), who will monitor the RFP process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of NAFED

NAFED commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

- a. No employee of NAFED, personally or through family members, will in connection with the RFP for or the execution of the contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which he/she is not legally entitled to.
- b. NAFED will, during the RFP process treat all Bidder(s) with equity and reason. NAFED will in particular, before and during the RFP process, provide to all Bidders 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 RFP process or the contract execution.
- c. NAFED will exclude from the process all known prejudiced persons.

If NAFED obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC) or Prevention of Corruption (PC) Act, or if there is a substantive suspicion in this regard, NAFED will inform its Chief Vigilance Officer and initiate disciplinary actions as per laid down procedures.

Section2 – Commitments of the Bidder

The Bidder commits to take all measures necessary to prevent corruption and to observe the following principles during participation in the RFP process and during the contract execution.

- a. The Bidder will not, directly or through any other person or firm, offer, promise or give to any of NAFED's employees involved in the RFP process or in the 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 RFP process or during the execution of the contract.
- b. The Bidder 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 introduce cartelization in the Bidding process.
- c. The Bidder will not commit any offence under the relevant IPC/PC Act. Further the Bidder will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by NAFED as part of the business relationship, regarding plans, Technical Bids and business details, including information contained or transmitted electronically.
- d. The Bidder of foreign origin shall disclose the name and address of its Agents/representatives in India, if any. Similarly, the Bidder of Indian nationality shall furnish the name and address of its foreign principals, if any. All the payments made to the Indian agent/representative will be in Indian Rupees only.
- e. The Bidder will, when presenting the Bid, disclose any and all payments made or committed or intended to be made to agents, brokers or any other intermediaries in connection with the award of the contract.

The Bidder will not instigate third persons/firms to commit offences outlined above or be an accessory to such offences.

Section3- Disqualification from RFP process and exclusion from future tenders/contracts

If the Bidder, before award of the contract or during execution thereof commits a transgression through a violation of Section 2 above or in any other form such as to put its reliability or credibility in question, NAFED shall be entitled to disqualify the Bidder from the RFP process or to terminate the contract, if already signed, on that ground.

If the Bidder commits a serious violation of Section 2 above or in any other form such as to put its reliability or credibility as Bidder into question, NAFED shall also be entitled to exclude the Bidder from participating in the future RFP processes for a duration as may be considered appropriate by it.

Section4 - Compensation for Damages and Forfeiture of EMD

If NAFED disqualifies the Bidder from the RFP process prior to the award of the contract

according to Section 3, NAFED shall be entitled to demand and recover the damages equivalent to Earnest Money Deposit, by forfeiting the same as stipulated in the RFP.

If NAFED terminates the contract according to Section 3, or if NAFED is entitled to terminate the contract according to Section 3, NAFED shall be entitled to demand and recover from the Bidder liquidated damages as per contract or the amount equivalent to Performance Bank Guarantee stipulated in the RFP.

Section 5 – Previous transgression

The Bidder declares that it did not commit any transgressions in the last 3 years with any Company in any country with regard to any anti-corruption law or practice or with any other Public Sector Enterprise in India that could justify its exclusion from the RFP process.

If the Bidder makes incorrect statement on this subject, it may lead to disqualification from the RFP process or termination of the contract if already awarded.

Section 6 – Equal treatment of all Bidders

NAFED will enter into agreements with identical conditions as this one with all Bidders. NAFED will disqualify from the RFP process any Bidder who does not sign this Pact with NAFED or violates its provisions.

Section 7 – Criminal charges against Bidder(s)

If NAFED obtains knowledge of conduct of a Bidder or of an employee or a representative of the Bidder which constitutes corruption, or if NAFED has substantive suspicion in this regard, NAFED will inform the same to its Chief Vigilance Officer.

Section 8 – Independent External Monitor/Monitors

NAFED has appointed competent and credible Independent External Monitor(s) (IEMs) for this Pact. 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.

The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the MD, NAFED.

Bidders accept that the Monitor has the right to access, without restriction, all Project documentation of NAFED including that provided by the Bidder. The Bidder will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to its Project documentation. The Monitor shall treat the information and documents of NAFED and the Bidder with confidentiality.

NAFED will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between NAFED and the Bidder. The parties offer to the Monitor the option to participate in such meetings.

As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of NAFED and request the Management to discontinue or take correction action or to take other relevant action. The Monitor may in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in specific manner, refrain from action or tolerate action.

The Monitor will submit a written report to the MD, NAFED within 8 to 10 weeks from the date of reference or intimation to him by NAFED and should the occasion arise, submit proposals for correcting problematic situations.

If the Monitor has reported to the MD NAFED a substantiated suspicion of an offence under relevant IPC/PC Act, and the MD NAFED has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commission.

The word Monitor would include both singular and plural.

Section 9 – Pact Duration

This pact begins when both parties have legally signed it. It expires for the Bidder twelve months after the last payment under the contract, and for all other Bidders six months after the contract has been awarded.

If any claim is made/lodged during this time by either party, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by MD, NAFED.

Section 10 – Other provisions

This Integrity Pact is an independent agreement between the parties and is subject to Indian Law. The arbitration clause if any in the RFP / contract shall not apply to this agreement. Place of performance and jurisdiction is the Registered Office of NAFED. i.e. New Delhi.

Changes and supplements to this Pact as well as termination notices to be issued, if any, shall be made in writing. Side agreements have not been made.

Should one or several provisions of this agreement turn out to be void, the remainder of this agreement shall remain valid. In such a case, the parties will strive to come to an agreement to their original intentions.

(For & On behalf of NAFED)

(For & On behalf of the Bidder)

(Office Seal)

(Office Seal)

Date: _____

Place: _____

Witness1: _____

(Name & Address)

Witness 2: _____

(Name & Address)_____

ON THE LETTER HEAD OF THE COMPANY/ENTITY

To,
General Manager (Estate),
National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED),
New Delhi.

Subject: Declaration regarding non-blacklisting / non-debarment

Sir,

1. We, the undersigned, hereby declare and confirm that:
 - a) We have not been blacklisted, debarred, suspended, or declared ineligible by NAFED, or by any Central/State Government Department, Public Sector Undertaking, Cooperative Institution, or any other Government Agency/Organization, in India or abroad.
 - b) We further declare that no contract or engagement entered into with NAFED has been terminated, rescinded, or foreclosed on account of unsatisfactory performance, breach of contract, or misconduct by us or by any of our associates, consortium members, or affiliates.
 - c) We understand and acknowledge that any misrepresentation or concealment of facts in this declaration shall render our bid liable for immediate rejection and may also lead to termination of the Contract if awarded, without any liability on part of NAFED.
 - d) We undertake to immediately inform NAFED in writing of any changes in the above status during the course of the bidding process or execution of the Contract.
2. We hereby confirm that the information furnished above is true and correct to the best of our knowledge and belief.

Yours faithfully,

(Signature and Seal of the Authorized Signatory)

Name: _____

Designation: _____

Firm/Company Name: _____

Address: _____

Contact No.: _____

Email ID: _____

(ON YOUR COMPANY'S LETTER HEAD)**Declaration cum Undertaking pursuant to Section 206AB of the Income Tax Act, 1961**

To,
General Manager (Estate),
National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED),
New Delhi.

Sir,

Subject: Declaration confirming filing of Income Tax Return for immediate 3 preceding years

I, Ms/Mr/M/s. _____ in capacity of Self/Proprietor/Partner/Director of _____ (Name of entity) having TMID _____, PAN _____ (PAN of Entity) registered office/permanent address at _____ do hereby confirm that our income tax return filing status for last 3 Financial Years is as given under:

Financial Year for which Income Tax Return was due as per Section 139(1)	Filed / Not filed	Date of Filing	ITR Acknowledgement No.	TDS/TCS is Rs. 50000/- or more (Yes/No)
2021-22				
2022-23				
2023-24				

I/We hereby undertake to indemnify M/s NAFED for any claim/loss/liability/cause of action fully including any Tax, interest, penalty, etc. that may arise due to inaccurate/false/incorrect reporting of any of the above information.

For _____ (Name of Entity)

Signature: _____

Name of person: _____

Designation: _____

Place: _____

Date: _____

APPENDIX

SCHEDULE OF QUANTITIES/ BOQ; Estimate of Civil & Structural Work, Measurement sheet of Civil Work for proposed Cold Storage at Vashi; Quotation for Plant & Machinery

PREAMBLE TO BILL OF QUANTITIES	
SRNO	ITEM
	Note : Rates quoted must have full compliance with the following :
A	<u>General Notes</u>
1	All Royalty paid challan shall be submitted for material used for Project works Including natural material used at RMC plant, GSB, WMM, Rubble stone etc as applicable & as instructed by Engineer Incharge
2	Site clearance such as clearing of shrubs, plants, weeds, roots, small trees, bush wood etc.,
3	Setting out the boundaries and extent for carrying out the work and as per the directions of Engineer In Charge
4	Removing of all debris, construction materials which will not be used for the filling will be disposed to inside the site within 300m lead, if approved by Engineer Incharge
5	Royalty (Amount - for bought outside material & disposal of Soil etc)
6	All clauses / conditions of RFP document
7	Technical specifications of RFP document
8	General Notes & Notes covering Bill of Quantities
9	The rate shall be inclusive of HARD barricading which will be required as per the site conditions, specially for pits more than 1 meter of depth
10	All works shall be carried out as per the applicable Indian Standards and as per the MORTH Standards wherever applicable
11	The compaction control for the fill shall be as per the following.
12	Control shall be exercised on each layer by taking at least one measurement of density for each 1000 square meters of compacted area and 300 sqm for the backfilling of the foundations trenches areas or closer as required to yield the minimum number of test results for evaluating a day's work on statistical basis. The determination of density shall be in accordance with IS: 2720 (Part 28). The number of tests in one set of measurements shall be 6 as long as it is felt that sufficient control over fill material and method of compaction is being exercised. And tests shall be conducted whenever there is a change of gradation or placement conditions. The acceptance criteria shall be subject to the condition that the mean density is not less than the specified density plus: $1.65 - 1.65/(\text{No. of samples})^{0.50}$ times the standard deviation.
13	The testing frequency for the soil fill materials shall be as per the following.
14	Sand content: IS: 2720 (Part – 4): 2 tests per 3000 cubic meters of soil
15	Plasticity Test: IS: 2720 (Part – 5): Each type to be tested, 2 tests per 3000 Cum of soil
16	Density Test: IS: 2720 (Part – 8): Each soil type to be tested, 2 tests per 3000 Cum of soil
17	Deleterious Content Test: IS: 2720 (Part – 27): as and when required by the Architect/Construction Manager
18	Moisture Content Test: IS: 2720 (Part – 2): one test for every 250 Cum of soil

19	The quality control and testing for all the activities shall be in line with the applicable Indian Standards
20	Structural steel works
21	All structural steel shall be slag blasted (shot blasted) followed by primer & paint
22	All structural steel shall include all the site related works at all height, location etc as per direction of Engineer in Charge
B	The Contractor shall deemed to have included in his RFP for the Provision of all items of work of whatsoever nature required for the proper construction, completion and maintenance of the Works and for the execution of all other requirement of the Contract including but not limited to the following:-
1	Work Permits
2	Requirement for dust proofing
3	Covering of existing areas
4	Quality Testing Requirements
5	Site Barricading
6	Further Drawings/information, Shop Drawing and record drawings
7	Site security requirements
8	Samples and sample panels
9	Testing of Materials and goods, etc.
10	Protection
11	Temporary plant, tools, vehicles and equipment, etc.
12	Supervisory staff
13	Watching and Lighting
14	Safety, health and Welfare of work people
15	Test notice, permits and certificates
16	Measuring and recording equipment
17	Site survey
18	Temporary roads
19	Maintenance of roads
20	Temporary fencing/hoarding
21	Contractor's temporary labour camp and facilities shall be out side of plot
22	Contractor to arrange temporary water supply at its own cost
23	Contractor to arrange temporary electricity at its own cost
24	Temporary telephone, telex services and internet connection.
25	Removal of rubbish
26	Fire precautions.
27	Programme Provisions and updating
28	Progress report and site meetings
29	Site diary
30	Guarantees
31	Training of personnel
32	Spare parts for Temporary Works
33	Sign board
34	Cleaning of works
35	Operating and Maintenance manuals and Instruction
36	Clearance and transportation of building refuse.

C	It is a Lump Sum Contract, Hence the Quantities shown in the BOQ are for reference only and no any claim will be entertained on the basis of accuracy of Quantity. Contractor to assess the Contract Requirements and accordingly price. Contractor to Submit Detailed Breakdown BOQ of their Lump Sum price during the Construction Phase

<div> <div>PROJECT NAME :- COLD STORAGE (G+4) PROJECT</div> <div>ADDRESS :- VASHI, MUMBAI, Maharashtra</div> <div>DATE :- 17.10.2025</div> </div>			
SR NO	GRAND SUMMARY		
	ELEMENT	AMOUNT	REMARK
1	CIVIL & ALLIED WORKS (LUMP SUM BASIS)	-	
	TOTAL AMOUNT (EXCLUDING GST AND LABOUR CESS)		
	-		

<div> <div>PROJECTNAME:- COLDSTORAGE (G+4)PROJECT</div> <div>ADDRESS:-VASHI,MUMBAI,Maharashtra</div> <div>DATE:-17.10.2025</div> </div>					
(ThisBOQtemplatemustnotbemodified/replacedbythebidderandthesameshouldbeuploadedafterfillingtherelevantcolumns,elsethebidderis liable to berejectedforthis RFP. Biddersareallowedto entertheQuantities andValues only)					
GENERAL SUMMARY- CIVILWORK (LUMPSUM BASIS)					
SRNO	ELEMENT	TOTALAMOUNT			
1	SECTION-1 : DISMANTLING,REMOVALANDMODIFICATIONWORKS	-			
2	SECTION-2:MASSEXCAVATIONANDMASSFILLING	-			
3	SECTION-3:EXCAVATIONANDBACKFILLING	-			
4	SECTION-4:CONCRETEANDR.C.C.ITEMS	-			
5	SECTION-5:STRUCTURAL STEEL WORK ITEMS	-			
6	SECTION-6:MASONARYITEMS	-			
7	SECTION-7:PLASTERINGANDWATERPROOFING	-			
8	SECTION-8:PAINTINGANDFINISHING	-			
9	SECTION-9:FLOORINGITEMS	-			
10	SECTION-10:DOORSANDWINDOWS	-			
11	SECTION-11:MISCELLANEOUSITEMS	-			
12	SECTION-12:SANITATIONANDPLUMBING	-			
13	SECTION-13:ROADWORK	-			
14	SECTION-14:STORMANDWASTEWATERNETWORK	-			
		-			
		-			
<div> <div>PROJECTNAME :- COLD STORAGE(G+4)PROJECT</div> <div>ADDRESS:-VASHI,MUMBAI,Maharashtra</div> <div>DATE :- 17.10.2025</div> </div>					
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Notes:-				
	1)ThebelowitemsareonLUMPSUMbasisandnotonItemRate basis.				
	2)NoanykindofVariationisallowedforthisitem,unlessotherwise VariationInstructedbyEngineer/Client				
	3) Contractor to verify the contract documents				
	4)ContractortoprovidebreakdownofhisLUMPSUMpriceduring RFPStage.				
	5)DuringconstructionphasecontractortoresubmittheLUMPSUM pricebreakdown,duelyverifiedbyEngineer/Client,formonthlypaymentpu rpose.				
1.00	SECTION-1:DISMANTLING,REMOVALANDMODIFICATIONWORKS				

	Contractor to take necessary permissions for execution of works as per CLIENT's standard and as per their internal operating processess. The bidder need to visit the site and get acquainted with the location and nature of work taking and confirming measurements, understadning the complexity while performing the job etc. and undertsand fully and then quote the rate for this work. Nothing extra payable other than the quoted rates. The rate to include all materials, tools, tackles, cranes, scaffolding, shoring, PPE's, including boom lift/ cherry picker for supervision/workers at height.				
1	Lump Sum Amount for the below Scope of work	1	Lump Sum		-
	Contractor to submit Detailed Breakdown BOQ of Lump sum amount during Construction stage for Monthly Payments.				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
1.01	Breaking of PCC..		CUM		-
	Dismantling of PCC by electrical chipper including removing the debris and carting away within the site, stacking and / or spreading as directed including shoring, strutting, dewatering wherever required all cost inclusive of loading, unloading, transportation etc complete.				
1.02	Breaking of RCC..		CUM		-
	Breaking of RCC by electric chipper including cleaning debris, removing the stuff within the plot, stacking and / or spreading as directed, Rate to be inclusive of royalties as applicable if any. Including Collecting and stacking steel bars.				
1.03	Breaking of bituminous road		SQM		-
	Dismantling/breaking of Bituminous road, below met taling / soling by electrical chipper / mechanical excavators including removing the debris and carting of removed material within the plant premises, stacking and / or spreading as directed including shoring, strutting, dewatering wherever required all cost inclusive of loading, unloading, transportation etc complete.				
1.04	Demolition of all types of masonry work including Tiles/plaster/IPS waterproofing...		CUM		-
	Demolition of all types of masonry work including Tiles/plaster/IPS waterproofing of any size by cutting or any other appropriate tools as directed and disposing the same within the plot premises as directed by Engineer in charge.				
1.05	Removing of Existing paving blocks		SQM		-
	Dismantling of existing paving blocks including disposal of unserviceable material within plot and stacking of serviceable materials including necessary labour, tool & tackles, cleaning etc complete.				
1.06	Refixing of Existing paving blocks		SQM		-
	Refixing of usable paving blocks of dismantled serviceable material by providing 50 mm stone dust bed below with line and level, including necessary labour, tool & tackles, cleaning etc complete.				
1.07	Removing of Existing Road Curb stone		RMT		-
	Dismantling of existing road Curb including disposal of unserviceable material and stacking of serviceable materials				
1.08	Removing of Existing Gates		SQM		-

	Removing of Existing gates including stacking or carting of removed material as directed by engineer in charge. The work should be carried out strictly with safety and at most care so that no damage will occur while during the work. Item to include necessary labour, tool & tackles, cleaning etc complete. The dismantled material will be owner's property.				
1.09	Removing Existing Concertina wire fencing		RMT		-
	Removing of Existing Concertina wire fencing including stacking or carting of removed material as directed by engineer in charge. The work should be carried out strictly with safety and at most care so that no damage will occur while during the work. Item to include necessary labour, tool & tackles, cleaning etc complete. The dismantled material will be owner's property.				
1.10	Removing Soling/metalling		CUM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Removing of Existing soling/metaling including stacking or carting of removed material as directed by engineer in charge. The work should be carried out strictly with safety and at most care so that no damage will occur while during the work. Item to include necessary labour, tool & tackles, cleaning etc complete. The dismantled material will be owner's property.				
	SUB-TOTAL OF DISMANTLING, REMOVAL AND MODIFICATION WORKS				-
2.00 SECTION-2: MASS EXCAVATION AND MASS FILLING					
2.01	Clearing, Cleaning, Dressing of site...	QRO	SQM		-
	Clearing, Cleaning, Dressing of site including removing of rank vegetation, grass, shrubs, trees and saplings of girth up to 200 mm measured at a height of 1 m above ground level and removal of rubbish up to any lead outside factory premises including royalties as applicable if any.				
2.02	Mass Excavation..				
	Excavation over area for land development, general site grading, roadwork etc. in all types of soil & in all lifts, by manual or mechanical means, with necessary equipment, tools & tackles, consumables, cutting & removing wild vegetation, shrubs etc. & disposal of excavated material within the site, stacking or spreading as directed including incidental (rain water) de-watering, shoring & strutting, preparing leveled bed etc. complete as specified & directed. (Filling will be measured and paid under respective item)				
	A) In all types of soil including hard MURUM (The one which can be removed by bucket of 20MT hydraulic excavator) - Mass Excavation	QRO	CUM		-
	B) Hard rock - The one which can not be removed by bucket of 20MT hydraulic excavator or bouldery strata which required chiseling by 20MT hydraulic excavator or blasting - Mass Excavation	QRO	CUM		-
2.03	Mass Filling with available material...	QRO	CUM		-

	FILLING SELECTED AVAILABLE GOOD EARTH (excluding rock) in lowlying / excavated areas or in embankment, in plinth, in sides offoundation pits/trenches etc. in all lifts & lead and in layers not exceeding 300mm in depth, leveling to required levels, consolidating each layer by watering & ramming manually or by mechanical means for achieving compaction upto 95% of max. laboratory dry density and for passing the plate load tests etc. complete as specified & directed. (Plate load tests will be conducted by the Contractor 1 no per 2000SQM area and as directed by site incharge or as per RFP document)				
2.04	Mass Filling with Outside Murrum...	1111	CUM		-
	Filling in road and development work with approved locally available filling material with all leads and lifts brought from outside (material to be approved by engineer in charge) in low lying areas, in plinth, sides of foundations, trenches, etc. including all royalties, breaking of Bolder stone required size for filling, including filling in layers of 200-300mm, watering, compaction levelling etc. complete. The proctor density of such compacted fill shall be 95% of standard proctor. (Plate load tests will be conducted by the Contractor 1 no per 2000SQM area and as directed by site incharge or as per RFP document)				
2.05	Carting away surplus Mass excavated earth...	QRO	CUM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Carting away surplus excavated earth in the Government approved area with all royalties and the disposal by mechanical transport, including all lift and lead up to a distance of 1500m outside of Plot, in the govt approved area, stacking and spreading as directed etc. complete.				
	SUB-TOTAL OF MASSEXCAVATION AND MASS FILLING				-
3.00 SECTION-3: EXCAVATION AND BACK FILLING					
3.01	Excavation for Pits & Trenches...				
	Excavation for Pits & Trenches in all types of soils & in all lifts, by manual or mechanical means, with necessary equipment, tools & tackles, consumables, cutting & removing wild vegetation, shrub etc. & disposal of excavated material within the site, stacking or spreading as directed, including incidental watering with pump if required, shoring & strutting, preparing the bed for foundation & necessary back filling with available earth, watering, ramming, etc. complete as specified & directed. Note 1) Excavation will be paid for PCC size only, Quote accordingly 2) Backfilling with available material is included in this item 3) The excavation commencement level in LAND DEVELOPMENT FILLING AREA shall be Original Ground Level. Hence Excavation must be done before MASS FILLING activity. 4) The excavation commencement level in LAND DEVELOPMENT CUTTING AREA shall be Formation Level after the LAND DEVELOPMENT activity.				
3.01.1	1) Depth of excavation upto 1.5m below ground				
3.01.1.1	A) In all types of soil including hard murrum (The one which can be removed by bucket of 20MT hydraulic excavator). layer-1	1142	CUM		-
3.01.1.2	B) Hard rock - The one which can not be removed by bucket of 20MT hydraulic excavator or bouldery strata which required chiseling by 20MT hydraulic excavator or blasting. layer-1	QRO	CUM		-

3.01.2	2)Depthofexcavationfrom1.5mto3mbelowground				
3.01.2.1	A) In all types ofsoil includinghard murum(The one which can be removed bybucketof20MThydraulicexcavator).layer-2	QRO	CUM		-
3.01.2.2	B) Hard rock -Theone whichcan not be removedby bucketof20MThydraulic excavator or bouldery strata which required chiseling by 20MT hydraulicexcavatororblasting.layer-2	344	CUM		-
3.01.3	3)Depthofexcavationfrom3.0mto4.5mbelowground				
3.01.3.1	A) In all types ofsoil includinghard murum(The one which can be removed bybucketof20MThydraulicexcavator).layer-3	QRO	CUM		-
3.01.3.2	B) Hard rock -Theone whichcan not be removedby bucketof20MThydraulic excavator or bouldery strata which required chiseling by 20MT hydraulicexcavatororblasting.layer-3	QRO	CUM		-
3.01.4	4)Depthofexcavationfrom4.5mto6.0mbelowground				
3.01.4.1	A) In all types ofsoil includinghard murum(The one which can be removed bybucketof20MThydraulicexcavator).layer-4	QRO	CUM		-
3.01.4.2	B) Hard rock -Theone whichcan not be removedby bucketof20MThydraulic excavator or bouldery strata which required chiseling by 20MT hydraulicexcavatororblasting.layer-4	QRO	CUM		-
3.01.5	4)Depthofexcavationfrom6.0mto7.5mbelowground				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
3.01.5.1	A) In all types ofsoil includinghard murum(The one which can be removed bybucketof20MThydraulicexcavator).layer-5	QRO	CUM		-
3.01.5.2	B) Hard rock -Theone whichcan not be removedby bucketof20MThydraulic excavator or bouldery strata which required chiseling by 20MT hydraulicexcavatororblasting.layer-5	QRO	CUM		-
3.02	Fillingwithavailablematerial(Murum)...	431	CUM		-
	FILLINGSELECTEDAVAILABLEGOOD EARTH(excludingrock) inlowlying / excavated areas or in embankment, in plinth, in sides of foundation pits/trenches etc. in all lifts & lead and in layers not exceeding 30cm in depth,levelingto requiredlevels,consolidatingeachlayerbywatering&rammingmanually or by mechanical means for achieving compaction upto 95%of max.laboratory dry density and or for passing the plate load tests etc. complete as specified & directed. (Plate load tests will be conducted by the Contractor 1 no per 2000SQM area and as directed by site incharge or as per RFP document) (Note:- This is a special ITEM as Excavation Item includes backfillingactivity,hencebeforeexecuting thisitem onsitenecessaryapproval /confirmationshallbetakenfromEngineer)				
3.03	FillingwithOutsidemurum...	287	CUM		-

	Filling in road and development work with approved locally available filling material with all leads and lifts brought from outside (material to be approved by engineer in charge) in low lying areas, in plinth, sides of foundations, trenches, etc. including all royalties, breaking of Bolder to required size for filling, including filling in layers of 200-300 mm, watering, compaction levelling etc. complete. The proctor density of such compacted fill shall be 95% of standard proctor. (Plate load tests will be conducted by the Contractor 1 no per 2000 SQM area and as directed by site in charge or as per RFP document) (Note:- This is a special ITEM as Excavation Item includes backfilling activity, hence before executing this item on site necessary approval/ confirmation shall be taken from Engineer)				
3.04	Carting away surplus excavated earth...	344	CUM		-
	Carting away surplus excavated earth in the Government approved area with all royalties and the disposal by mechanical transport, including all lift and lead up to a distance of 1500 m outside of Plot, in the govt approved area, stacking and spreading as directed etc. complete.				
3.05	Sand Filling/laying in layer...	QRO	CUM		-
	Sand Filling/ laying in layer levelling each layer (Maximum 300mm layer) manually ramming etc. complete by using approved well graded crush sand brought from outside etc. complete as directed including royalty charges paid by the contractor and respective challans to be produced and submitted.				
3.06	Providing & Laying Dry stone Rubble Soling for following thickness, with hard stone set in regular lines, hand packed and interstices thoroughly filled with small chips including filling in with good quality murum brought from outside and compacted with 8 to 10 ton rollers and spreading 12mm layer of grit on top etc. complete as directed by Engineer In Charge.				
	a) Works as per Cum basis (Dry stone Rubble Soling)	QRO	CUM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
3.07	150mm thick (compacted thickness) metal soling...	248	CUM		-
	Providing and laying in position 150mm thick (compacted thickness) metal soling of size 100mm each & down in two layers with sand cushion as appropriate including the cost of sand cushion, compaction by power roller, base preparation by Mechanical compaction, using hand broken metal/ Rubble and smaller pebbles and sand for void filling, as directed by the project manager including watering, packing, compaction etc.				
3.08	Gravel or metal filling...				
	Providing and laying 10-60mm Gravel or metal layer as shown in drawing or as directed by Engineer-in-charge and levelling the surface etc. complete.	QRO	CUM		-
	Same as above with Client's available material within the plant premises up to 1.5 KM. Only laying charges of Gravel or metal layer as shown in drawing or as directed by Engineer-in-charge and levelling the surface etc. complete.	QRO	CUM		-
3.09	WMM (Wet Mix Macadam) ..	QRO	CUM		-

	Providing and laying Wet Mix Macadam in two layers of 125mm thickness and specified thickness of total 250mm compacting each layer with 8-10 ton vibratory power roller. The layer shall be rolled including premixing in well grade at crushed stone aggregated with watering and spreading by the required profile and compacting with vibratory roller including all material, labour, machinery with all leads and lifts etc.. complete. the mix shall be spread either by paver finisher or motor grader compacting each layer with 8- 10 ton vibratory power roller. obtain the 98% of modified product density including all labour charges, testing charges including hire charges all tools and plant employed and all their incident charges etc.. unless or otherwise specified rest of all complete as per MORTH specifications 406 and as directed. (Table 400-11).				
3.10	GSB (Granular subbase)..	QRO	CUM		-
	Providing & laying granular sub-base (structural layer) by providing close graded material, mixing in a mechanical mix plant at optimum moisture content, carriage of mix material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve desired density ASPER MORTH 2001, Specification No. 401. Mode of measurement will be the actual laid area only.				
3.11	Anti-termite treatment..	1389	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	<p>Providing preconstructional anti termite treatment as per I.S. 6313 (Part-II) by treating the bottom surface and sides of excavation and floor / plinth at the rate of 5 litres of emulsion concentrates of 0.5 percent of Aldrin per square meter of surface area covering 10 years guarantee. Pre-constructional anti-termite treatment covers the soil treatment with approved chemicals in water emulsion in foundation trenches for columns, plinth beams, pile caps, brick walls, service trenches, lift pits, steps, ramp etc. in top surfaces of plinth filling, at junction of walls and floor, in expansion joints etc. in stages as detailed in this specifications and drawings. Unless otherwise stipulated. In order to ensure uniform distribution of the chemical emulsion and to assist penetration, the site preparations shall be carried out as stated below</p> <p>a) Remove all trees, stumps, logs or roots from the building site.</p> <p>b) Remove all concrete form work if left anywhere, leveling pegs, timber off-cuts and other builders debris from the area to be treated.</p> <p>c) If the soil to be treated is sandy or porous, preliminary moistening will be required to fill capillary spaces in soil in order to prevent the loss of emulsion through piping or excessive percolations.</p> <p>d) In the event of water logging of foundation, the water shall be pumped out before application of chemical emulsion and it should be applied only when the soil is absorbent.</p> <p>e) On clays and other heavy soils where penetration is likely to be slow and on sloping sites, where run-off of the treating solution is likely to occur, the surface of the soil should be scarified to a depth of 75 mm. at least. Chemicals approved by Central Insecticides Board conforming to relevant Indian Standards (IS 8944-Chlorpyrifos E.C./</p>				
	<p>a) Treatment in Foundation Trenches:</p> <p>The treatment shall start at a depth of 500 mm. below ground level. From this depth the backfill around the columns, beams and R.C.C. basement walls shall be treated @ 7.5 ltrs./SqM of the vertical surface and @ 5 ltrs./SqM for the horizontal surface at the bottom in the trenches/pits.</p>				
	<p>b) Treatment on Top Surfaces of Plinth Filling : The top surface of the filled earth within plinth walls shall be treated with chemical emulsion at a rate of 5 litres/SqM of the surface area before sub-basement floor is laid. If filled earth has been well rammed and the surface does not allow the emulsion to seep through, holes upto 50 to 75 mm. deep at 150 mm. centers both ways shall be made with crow bars on the surface to facilitate saturation of the soil with the emulsion.</p>				
	<p>c) Treatment at Junction of Walls and Floors : Special care shall be taken to establish continuity of the vertical chemical barrier on the inner wall surfaces from the finished ground level (or from level where the treatment had stopped) upto the level of the filled earth surface. To achieve this a small channel 30 x 30 mm. shall be made at all the junctions of wall/column with floor (before laying sub-grade) and road Specification for Civil Works 2015 holes made in the channel upto the finished ground level at 150 mm apart and the iron rod moved backward and forward to break the earth and chemical emulsion poured along the channel @ 7.5 litres (or at recommended quantity) per SqM of the vertical wall/column surfaces so as to soak the soil right upto the bottom. The soil shall be tamped back into place after this operation.</p>				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	d) Treatment of soil along external perimeter of the Building: After the building is complete, the earth along the external perimeter of the building should be rodded at intervals of 150mm and to a depth of 300mm. In the event of filling more than 300mm, the external perimeter treatment shall extend to the full depth of filling up to the ground level so as to ensure continuity of the chemical barrier. The rods should be moved backward and forward parallel to the wall to break up the earth and chemical emulsion poured along the wall at the rate of 7.5l/m ² of vertical surface. After the treatment, the earth should be tamped back into place.				
	All the above items of antitermite treatment shall be included in the rate loaded on plinth area. (Plinth area of the building at ground floor is to be considered).				
	SUB-TOTAL OF EXCAVATION AND BACKFILLING				-
4.00	SECTION-4: CONCRETE AND R.C.C. ITEMS				
4.01	P.C.C. 1:3:6 (M10 Grade)	189	CUM		-
	Providing and laying in situ Plain Cement Concrete 1:3:6 (M10 Grade) of trap metal for foundation, floor bedding etc. including dewatering, formwork, compacting, curing & placing etc. complete at all depths. Rates shall include concrete brought from RMC plant or batching plant installed on site or outside site premises by contractor. (Note :- For measurements PCC AREA shall be taken from drawing and DEPTH of PCC shall be measured from drawing only, No actual measurements of DEPTH will be taken from site, Contractor to price accordingly)				
4.02	Cement concrete M25 grade...				
	Providing & laying cast-in-situ reinforced cement concrete of M25 grade using 20 mm and down size coarse graded machine crushed hard stone aggregate including designing the mix, weigh batching, mechanical mixing, transporting and placing at all lifts, vibrating, consolidating, curing and finishing smooth as required all exposed faces, complete for the following RC structural and other elements including centering, shuttering, play & steel plates, formwork either straight, curved, plain, tapered or sloped, formation of cut-outs, chases, pockets, dewatering wherever necessary, the cost of all complete materials, labour, all leads and lifts, tools, plant and machineries, hire and fuel charges and all other incidental charges etc., all as per specification, drawings and as directed, but excluding steel reinforcement, which will be paid for separately under relevant items. The rates quoted shall hold good for all foundations at any depth, flooring, all floors, heights, levels, elevation, below ground level, basement, trenches, pits, tunnel etc. (Rates shall be including Concrete Brought from RMC Plant or Batching plant installed on site or outside site premises by contractor) Including necessary expansion joints as per drawing and as per Engineer's instructions.				
	Note: The designing of concrete mix for different grades of controlled concrete should be done in accordance with latest IS-SP23. (Handbook on concrete mix design) in the field laboratory and the same should be got approved by the Engineer. Grade of concrete for all concrete works specified in BOQ as M-25 should be invariably followed.				
	A) Footings/rafts/Machine, Chimney foundations	373	CUM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	B)Columns/ Pedestals	115	CUM		-
	C)Plinth/Ground beam	62	CUM		-
	D) Beams& lintels.	2	CUM		-
	E) Slabofall types.	QRO	CUM		-
	F)Decksab(excludingdecksheet)	868	CUM		-
	G)Chajja/canopy/fins/brackets/portals.	2	CUM		-
	H)Waistslab,Landingsandsteps	16	CUM		-
	I)Copingat allHeights	15	CUM		-
	J) RCC walls upto100mm thickness.	QRO	CUM		-
	K)RCC walls100-200mmthickness.	QRO	CUM		-
	L)RCCwalls200-400mmthickness.	57	CUM		-
	M)RCC walls400-600mmthickness.	QRO	CUM		-
	N)ExtraoverforM30GradeconcreteinplaceofM25Grade	1423	CUM		-
	O)ExtraoverforM35GradeconcreteinplaceofM25Grade	QRO	CUM		-
	P)ConcreteEncasing...	QRO	CUM		-
4.03	Torsteelbarreinforcement...	115	M.T.		-
	ProvidingandfixingreinforcementforRCCworkwithThermomechanically treated(TMT) bar of various diameters and grade of steel as Fe 550 conforming to IS or equivalent BS specification including cutting, bending,hoisting, fabricating and placing in position according to drawings and bindingthereinforcement withgalvanisedannealed bindingwireof doublefold of18gaugeand providing PVC /Precast concrete cover blocks for placingthereinforcements in position and for maintaining the cover specified and/or accordingto relevantISorequivalentBScode.				
	Note : 1) Unless notedotherwise the measurements in accordance with IS1200 or equivalent BS. However reinforcement shall be measured only inlengths of bars as actually placed in position on standard weight basis, noallowance being made in the weight for rolling margin. 2) AuthorisedlapsandChairsofanyshape&profiles shallbemeasured. 3) Spacerbarofanyshape&profile,coverblock,wastageandbindingwirewill not be measured separately and shall be included in the quoted rates. 4) Quoted rate shall be deemed to have considered the above stipulation.Quoted rate to include lead, lift, placingat all levels and as directed. Detailingof thereinforcement shall beductiledetailingforseismiczoneaspercodal requirement.				
4.04	MSsheardowelbars...	1140	KG		-
	ProvidingandfixingMSsheardowelbarsinconcretefloorasperdetail drawingincludingcutting,bending,layinginpositionandapplyinggreasetotheexposed bar and covering it with PVC pipe & cap properly etc. complete at all heights & levels.				
4.05	ScreedConcretetoSlope...	QRO	CUM		-
	Fixing 3mmdia, 75mmsquareweld mesh over the geo textile surface followedby providing and laying screed concrete of M20 grade of average 75mmthicknesswithaminimumthicknessof50mmatdrainpointsandaslopeof1:150 or required as per the site condition at all levels by admixing necessaryadmixturesConplastWXLtra@200mlperbagofcementofFosrocChemicalsand mixing Graded fibrillated 100%virgin poly propylene fibres in concrete atthe rate of 0.90 kg/cum as per manufacturers specifications. Treatment tocontinue along the vertical surface for 300mm height in shape of round wata,curingetc. Theconcreteshall beprovidedwithgroovecuttingof 6mm x 10mmat every 5m x 5m area, the joints shall be treated with elastomeric sealantsNitoseal PU 40.				
4.06	Plumconcrete(M15Grade)...	68	CUM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and laying plum concrete of M15 Grade (1:2:4) with integral waterproofing compound (approved make) and trap rubble not more than 40% by volume & not more than 200 mm in size as per detailed designs including dewatering, centering formwork with shuttering ply & steel plates, Compacting with vibrators, placing and curing etc. complete. Including necessary expansion joints as per drawing and as per Engineer's instructions.				
4.07	Welded Wire Fabric (Double mat)	QRO	SQM		-
	Providing and fixing reinforcement for RCC work with Reinforcement welded mesh 200X200X6mm thick double mat (Max length 6m & width 2m), (TATA steel) including cutting, bending, hoisting, fabricating and placing in position according to drawings and providing PVC / Precast concrete cover blocks for placing the reinforcements in position and for maintaining the cover specified and / or according to relevant IS or equivalent BS code. Rates shall be inclusive of 100mm overlap in both the direction and binding the mat on overlap with galvanised annealed binding wire of double fold of 18 gauge.				
4.08	Precast Drain Cover...	QRO	SQM		-
	Providing and Fixing Heavy Duty Precast perforated or plain drain / trench cover having load carrying capacity of 20 MT, including Steel, Concrete, etc. complete				
4.09	RCC foundations supports for Above ground pipes with concrete grade M20...	8	CUM		-
	RCC foundations supports for Above ground pipes with concrete grade M20 incl cost of aggregate, cement, water, form work, steel reinforcement, galvanized M.S flats, Insert plates, ISMC 150-300mm long complete with pedestal size 600mm height 600mm wide and 300mm thick				
	SUB-TOTAL OF CONCRETE AND R.C.C. ITEMS				-
5.00	SECTION-5: STRUCTURAL STEEL WORK ITEMS				
5.01	Structural steel work in hot rolled M.S. sections.	2	MT		-
	Providing fabricating & erecting structural steelwork in hot rolled sections (ISMB, ISMC, ISA, Plates etc.) For columns, tie beams, trusses, purlins, gantry, monorail columns, cable trays, pipe racks, castellated beams, staircase & other structural members with all bracings, gusset plates etc. as per detailed drawing or as directed at all heights and levels including removing the scales & burrs, cleaning with Phosphoric acid, marking, cutting, fabrication, hoisting, erecting & fixing in position, making alignment of members making welded / bolted / riveted Connections and finishing with two coats of synthetic enamel paint of approved quality and colour over one coat of approved red-oxide paint etc. complete. Yield Stress $F_y = 250 \text{ MPa}$ as per IS 2062				
	(Shop drawing to be prepared by contractor for approval).				
5.02	Structural steel work in MS plate sections...	QRO	MT		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing fabricating & erecting structural steelwork in MS plate Sections fortrusses,purlinsetc.withallbracings,gussetplatesetc.asperdetailedrawingoras directed atall heights and levelsincludingremoving the scales & burrs,cleaingwithPhosphoricacid,marking,cutting,fabrication,hoisting,erecting& fixinginposition,makingalignmentofmembersmakingwelded/bolted/riveted Connections and finishing with two coats of synthetic enamel paint ofapproved quality and colour over one coat of approved red-oxide paint etc complete				
	(Shopdrawingtobepreparedbycontractorforapproval)...				
5.03	StructuralsteelworkinCRF(Coldrollformed)...	QRO	MT		-
	Providing fabricating and erecting structural steelwork in CRF sections like lipchannels / Z sections /C chanel/ angles etcfor purlins,claddingrunners andother structural framework,with all bracings, tie rods,gusset plates, batten plates,connectingplatesetc.asperdetailedrawingor asdirectedatall heightsand levelsincluding removing the scales & burrs,cleaingwith phosphoric acid, fixing in position, making alignmentmaking welded / boltedconnections, finishing withtwo coats of synthetic enamel paint ofapproved qualityandcolouroveronecoatofapprovedred-oxidepaint,alltypesof hardwareetccomplete. (Shopdrawingtobepreparedbycontractorforapproval).				
5.04	Structuralsteelworkinhollowm.stubesections....	QRO	MT		-
	Providingfabricating& erectingstructural steelworkin hollow m.s.tubesections, pipe section, fortrusses, columns, purlins, beams, rafters, staircase& other structural members with allbracings, gusset plates, batten plates,connecting plates etc. as perdetailed drawing or asdirected atall heightsandlevelsincludingremovingthescales&burrs,cleaingwithphosphoricacid, fixinginposition,makingalignmentmakingweldedboltedconnections, finishingwithtwocoatsofsyntheticenamel paintofapprovedqualityand colourover onecoat ofapprovedred-oxidepaint,all types ofhardware etc complete.				
5.05	MSfabricatedsupportframeforMascarapanel...	QRO	MT		-
	Providing, supplying, fabricating and installing in position to correct line and level, MS fabricated support frame for Mascara panels using TATA/equivalent RH Sections of appropriate size and 2mm thick coated with zinc chromate primer and 2 coats of aluminium paint etc complete.				
5.06	M.S.Grattings using M.S.flats/channel...	QRO	MT		-
	Fabricating and fixing M.S.Grattings, using M.S flats / channel /Angles /square bars / rods etc. as per the detailed drawings including cutting, bending, drilling holes, welding and placing in position, levelling and finishing with two coat of anticorrosive synthetic enamel paint of approved quality and colour over a coat of zinc chromate primer of approved quality etc. complete. Rates shall be applicable for all levels and heights, weight of holdfasts will be measured and paid.				
5.07	M.S.Inserts plates...	100	KG		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Supplying, fabricating and fixing in position inserts comprising edge angle, MS angles, plates, tees, flat holding down bolts, anchor bolts, anchor plates, pipesleeves, monkey ladder etc., in all cement concrete works at all levels and heights above finished floor level in foundation, trenches, pits, tunnels, lift pit etc., below finished floor level including cutting, bending to shape fabricating, drilling, threading, welding lug etc., with all tools, tackles and labour as per design or as directed including a coat of primer of approved quality and painting the exposed surface with two coats of synthetic enamel paint of approved quality and colour etc., all complete as per drawings and as directed.				
5.08	Foundation bolts...	QRO	KG		-
	Providing & fixing MS foundation bolts with nuts & washers in RCC columns or foundations at all depths & heights as per detailed drawings including fixing in position with holdfasts, setting it by total station, welding wherever necessary using approved templates etc. complete as per IS 4000. During erection, the Contractor shall provide necessary template, temporary bracings, support etc. (Which will be paid separately under relevant item). to ensure proper positioning of the assemblies and holding them firmly until they are cast/ grouted and the grouted has set. All materials shall be erected in plumb and in level (unless otherwise specified) and at true locations as shown on the drawings. Threads shall be protected by using PVC taps and grease application.				
5.09	Fixing of foundation bolts...	386	NO		-
	Fixing of foundation bolts with nuts & washers in RCC columns or foundations at all depths & heights as per detailed drawings including fixing in position with holdfasts, setting it by total station, welding wherever necessary using approved templates etc. complete as per IS 4000. During erection, the Contractor shall provide necessary template, temporary bracings, supports, etc. to ensure proper positioning of the assemblies and holding them firmly until they are cast / grouted and the grouted has set. All materials shall be erected in plumb and in level (unless otherwise specified) and at true locations as shown on the drawings. Threads shall be protected by using PVC taps and grease application.				
5.10	Anchor fastener for concrete...				
	Providing and fixing anchor fasteners for concrete (make-HILTI), of required diameter and length including drilling hole, filling the hole with HILTI HIT-HY200-R (HILTI chemical) and cleaning etc complete.				
	A) 8mm dia (upto 150mm long)-Anchor fastener for concrete	QRO	NO.		-
	B) 10mm dia (upto 150mm long)-Anchor fastener for concrete	QRO	NO.		-
	C) 12mm dia (upto 200mm long)-Anchor fastener for concrete	QRO	NO.		-
	D) 16mm dia (upto 200mm long)-Anchor fastener for concrete	QRO	NO.		-
	E) 20mm dia (upto 200mm long)-Anchor fastener for concrete	QRO	NO.		-
5.11	Anchor fastener for masonry...				
	Providing and fixing anchor fastener for masonry (make-HILTI) including drilling holes, filling the hole with Nitomortar PE (FOSROC chemical) and cleaning all as per manufacturers specification. With necessary scaffolding etc. complete.				
	A) 8mm dia (upto 150mm long)-Anchor fastener for masonry	QRO	NO.		-
	B) 10mm dia (upto 150mm long)-Anchor fastener for masonry	QRO	NO.		-
	C) 12mm dia (upto 200mm long)-Anchor fastener for masonry	QRO	NO.		-
	D) 16mm dia (upto 200mm long)-Anchor fastener for masonry	QRO	NO.		-
	E) 20mm dia (upto 200mm long)-Anchor fastener for masonry	QRO	NO.		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
5.11	MS Nosing angles (with anticorrosive paint)...	490	KG		-
	Providing and fixing MS Nosing angles of size as per detailed drawing including fabrication, fixing & placing in position, levelling and Finishing with two coat of anticorrosive paint etc. complete. (Rate including hold fast and fasteners).				
5.12	M.S. railing...	29	SQM		-
	Providing and fixing M.S. railing with pipe rail handrail of size 75mm for staircase, Passage, 1000mm high as per detail drawings consisting of MS flats, including cutting, bending, fabrication, fixing / Securing with anchor fastener and finishing the steel work with two coats of synthetic enamel of approved shade and make over a coat of zinc chromate primer etc. complete. (Consider 25Kg/SQM)				
5.13	SS railing...	QRO	SQM		-
	Providing, fabricating and fixing SS railing for staircase and passage of approved size and make of height as per detailed drawing including cutting, bending, fabricating, fixing, buffing, polishing the welds, and finishing the steel work complete. (Consider 20kg/SQM)				
5.14	SS railing on wall with bracket and top handrail only...	QRO	RMT		-
	Providing, fabricating and fixing SS railing for staircase and passage of approved size and make using wall brackets and top handrail 50mm dia as per detailed drawing including cutting, bending, fabricating, fixing with SS fixtures and fasteners and finishing the steel work with cover plates etc. complete. (Consider 15kg/Rmt)				
5.15	SS Railing with tempered laminated glass...	QRO	SQM		-
	Providing, fabricating & fixing SS 304 railing with Toughened, clear sandwiche float glass 13.52mm (6+1.52+6) for staircase, platforms, and passage of approved size and make of height upto 1000mm high as per detailed drawing including cutting, bending, fabricating and fixing with SS fixtures and fasteners and finishing the steel work with cover plates etc. complete. (Consider 25kg/SQM for SS work)				
5.16	Precoated sheets Roofing & cladding...	QRO	SQM		-
	Providing & fixing precoated "Galvalume/zincalume" MS sheets 0.50mm thk. for roofing with approved colour, including all approved quality fastenings, fixings like metal washers neoprene/EPDM washers, capsid stitching, riveting mast tapping etc. complete with all scaffolding and giving water tightness test & guarantee etc complete. (depth of corrugation shall be 35 mm and pitch of corrugations shall not be more than 250mm)..				
5.17	Flashing...				
	Providing and fixing precoated metal plain sheets 0.7mm thk. (TCT) for flashings of all components, made out of CR hot dip galvanized with epoxy primer, 275gsm zinc coating & organic polyester coating on the top and pure polyester coat on back coat including all quality fastenings, fixing with self tapping screws from Buildtex, internal butt strap inlaid gasket, metal washers and Neoprene / EPDM washers etc. complete. (Shop drawing to be submitted by Contractor for approval.)				
	a) Upto 300mm Girth	QRO	RMT		-
	b) Upto 450mm Girth	QRO	RMT		-
	c) Upto 600mm Girth	QRO	RMT		-
	d) Upto 900mm Girth				
5.18	Bird Mesh....	QRO	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and placing and fixing with nut bolts bird mesh made out of 3mm dia. 25mm opening size GI mesh. The mesh shall be stiffened on all 4 sides by welding a flat of size 50mm x 10mm. The mesh shall be made in 2 parts for ease of placing. (For example if the opening to be closed is of size 1000mm x 1500mm then 2 mesh shall be made of size 1000mm x 750mm and each of these shall be stiffened as described above) including necessary equipments, scaffolding, tools and tackles for all leads and levels.				
5.19	Bare galvalumeroofing...	QRO	SQM		-
	Providing and fixing of external sheet in double skin trapezoidal roofing system shall be having 0.50mm BMT (0.55mm TC excluding paint), G550 (min 550 yield strength), of 900 mm effective cover width, with four major corrugation, 38mm deep rib spaced at 300mm c/c with two stiffener in the pan. The end rib shall have anti-capillary groove and return leg of BR11 or approved equivalent. The base steel sheet shall be coated with hot-dipped Aluminium-zinc Alloy coating Zinalume (i.e., 55% Al, 43.4% Zinc, 1.6% Si-) AZ150 (i.e. minimum of 150 g/m ² Al-Zn alloy coating mass total on both sides) G550 grade conform to AS1397 / IS 15961 and it shall have solar reflectance index of 63. It shall be CII IGBC Green pro certified / GRIHA certified product. The sheet shall have brand marking of the manufacturer giving product details on the reverse side at regular interval. The roof steel sheet shall be fastened with 40µm zinc coated or 25µm zinc-tin alloy coated, Hex head, self-drilling screw as per AS3566-2002 Class 3 fasteners of approved make of Roofix or equivalent. Make - Tata Blue Scope or equivalent.				
5.20	Colour coated sheet for roofing and cladding...	QRO	SQM		-
	Providing and fixing colour coated sheet for roofing & cladding trapezoidal sheet having 0.45mm BMT (0.50mm TC excluding paint), G300 (min 300 yield strength), 900 mm effective cover width, with four major corrugation, 38mm deep ribs spaced at 300mm c/c with two stiffener in the pan. The base steel sheet shall be coated with hot-dipped Aluminium-zinc Alloy coating Zinalume (i.e. 55% Al, 43.4% Zinc, 1.6% Si-) AZ150 (i.e. minimum of 150g/m ² Al-Zn alloy coating mass total on both sides) G550 grade conform to AS1397 / IS 15961 and factory pre-painted and oven baked with 35 micron DFT total on both surface conform to AS/NZS 2728-type 4 / IS 15965-class 3 of COLORBOND XRW steel. Tata Blue Scope make or equivalent. and it shall have solar reflectance index more than 85, and have CII IGBC Green pro certified / GRIHA certification. The sheet shall have brand marking of the manufacturer giving product details on the reverse side at regular interval. The wall cladding steel sheet shall be fastened with 40µm zinc coated or 25µm zinc-tin alloy coated, Hex head, self-drilling screw as per AS3566-2002 Class 3 fasteners of approved make of Roofix or equivalent. The wall cladding and liner sheet supplier shall offer 10-year warranty against resistance to color fading (Delta E) for 10yrs (measured using ASTM D-2244 procedure- Light <4, Dark color < 12 unit) and shall life prior to corrosion to perforation by weathering in the natural elements for 15yrs.				
5.21	Gutter...				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and fixing approved thickness and material gutter up to 1500mm girth, including welded joint or strap joints as per detail drawings with externally welded butt straps, washers, same material stop ends, required dia in built patch spouts/outlets for RW pipes, KEMPER waterproofing from inside over each joint and including fabrication, nuts, bolts and sealing complete with water leakage test. (contractor to include cost of special expansion joint for the gutter, if required).				
	A) 3mm thick aluminium gutter	QRO	SQM		-
	B) 2mm thick GI gutter	QRO	SQM		-
5.22	North Light Glazing with Polycarbonate sheets	QRO	SQM		-
	Providing and fixing North light Glazing system with polycarbonate transparent multi wall sheets 10 mm thick GE make including all appropriate aluminium framing, fixing in place on-over the M.S. runners & including all accessories as per shop drawing (to be approved by architect) complete, including openable framed shutter for man entry over the roof for cleaning etc. (without cost of basic m.s. runners/ framing.) Note: The vendor shall submit visibility component of polycarbonate sheets.				
5.23	North Light Glazing with Wired glass...	QRO	SQM		-
	Providing and fixing North light partially openable and partially fixed windows as per schematic drawing, comprising of aluminium frame, tees 40x40 mm and bidding, with wired glass 5.5mm thick of approved make over aluminium astragals of Jindal make (No. 4877 @ 471 gm/m, shoe / bracket (No. 4878 @ 385 gm/m at 622mm c/c with 26 gauge aluminium glazing clip inclusive of treatment to expansion joint with aluminium flashing and silicon sealant as per the detailed shop drawing including fabrication, all necessary fittings such as clamps, stopper etc. including erection and fixing with self tapping screws, cleaning etc. complete, at all heights and levels. Rates shall be inclusive of side hung, openable frame for man entry for roof cleaning including all fastening and hardware. (Shop drawing to be submitted by Contractor for approval.)				
5.24	Polycarbonate sheet..(for cladding & Roofing)	QRO	SQM		-
	Providing and fixing 2 mm thick premium corrugated Polycarbonate sheet of 'LEXAN' / Ultralite or equivalent for roofing and vertical cladding as per design and drawings including fixing accessories with EPDM (SS304) including scaffolding, making joints water tight etc. complete. Corrugated pattern/profile to match adjoining cladding and as approved by the Architect. Item to include, overlapping of sheets, all accessories, lead and lift at all levels, finishing & cleaning etc. complete. (Shop drawing to be submitted by Contractor for approval.)				
5.25	Turbo Ventilators...				
	Providing, fixing, testing and commissioning of turbo ventilators of SVS or equivalent make having spherical vane design top and variable pitch in aluminium, shaft in stainless steel, rotating bearing twin ZZ ball bearings encased in single integrated bearing housing assembly and FRP/ Polycarbonate base. Location of Turbo vents as per drawing etc. complete. (Turbo vents should be Self-lubricating bearing.)				
	A) 600mm dia	QRO	SQM		-
	B) 900mm dia	QRO	SQM		-
	SUB-TOTAL OF STRUCTURAL STEEL WORK ITEMS				-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
6.00	SECTION- 6:MASONARYITEMS				
6.01	AACblockmasonry100mmthk...	QRO	SQM		-
	Providingand constructingAAC Light weight BlockMasonry with100mm thick at all levels in by using approved block layingjointing compound recommended by the block manufacturer, including 100mm thick Patli / Stiffeners of M-15 Grade concrete at approx every 1000mm-1200mm with 4nos8mmsteel bars&shutteringincluding scaffolding,rackingout joints,curingwith water etc. in line, level and plumb, All complete as per specification for allheightoffloororasdirectedetc.(Note1:RateincludesthecostofRCCpatli) . Note 2:No holesforscaffoldingwillbe permittedinto theblockwork.Note3 :				
6.02	AACblockmasonry150mmthk...	QRO	SQM		-
	Providingand constructingAAC Light weight BlockMasonry with150mm thick at all levels in by using approved block layingjointing compound recommended by the block manufacturer, including 100mm thick Patli / Stiffeners of M-15 Grade concrete at approx every 1000mm-1200mm with 4nos8mmsteel bars&shutteringincluding scaffolding,rackingout joints,curingwith water etc. in line, level and plumb, All complete as per specification for allheightoffloororasdirectedetc.(Note1:RateincludesthecostofRCCpatli) . Note 2:No holesforscaffoldingwillbe permittedinto theblockwork.Note3 :				
6.03	Flyashbricks masonry in foundation...	14	CUM		-
	Providing andconstructing230mmthick flyashbrick masonry at allelevationsandheightsincementmortar1:6usingstandard sizeofbricksofapprovedmake withminimumcrushingstrength 7.5N / mm2.including allscaffolding,staging, racking the joints, curing etc., at all heights, elevations above andbelowfinishedfloorleveletc.,allcompleteshallbeas perspecificationandlaidasdirected.Rateincludes withflyashbrickforwallsaswellas squareand rectangular pillars laid in proper line & plumb including hacking of RCC at junctions, raking of joints, curing and all leads & lifts complete to the satisfaction of the Engineer. The rate is inclusive of providing arched / curvedopenings atalllevels as per design/drawings,foralllevels and heightsasdirectedbythePMtohisentiresatisfaction.				
6.04	AACblockmasonry in superstructure...	QRO	CUM		-
	Providing and constructing masonry in Autoclaved Areaclaved (Cellular) Concrete Block of aproved manufacturer confirming to IS 2185 Part III 1984 of size (625x240x200)mm in extra fine jointing mortar of fixoblock or Equivalent of in foundaions and plinth of inner walls / in plinth external walls including bailing out water, striking joints on unexposed faces, racking out joints on exposed faces and watering etc. complete and including racking out joints, curing, doing independent double legged scaffolding, all complete as per specification etc. at all heights, depths and leads, dewatering areawhere				
6.05	B.B.M.with conventional bricks in foundation...	QRO	CUM		-
	Providing and constructing birck work using common burnt clay conventional building bricks in C.M.1:6 in foundation, steps & in plinth including constructing in line and level at all depths, racking out joints, scaffolding, Watering, curing, striking joints cleaning etc. complete. Burnt clay brick having compressive strengt h not less than 7 N/mm2 shall conform to IS:1077.				

6.06	Flyashbrickmasonry115/150mmthk...				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and constructing 115/150 mm thick fly ash brick masonry at all elevations and heights in cement mortar 1:4 using standard size of bricks approved make with minimum crushing strength 10 N / mm ² . including all scaffolding, staging, striking off extra mortar, curing etc., at all heights, elevations and providing RCC band at every 1m height as per design etc., all complete shall be as per specification and laid as directed. Rate includes with fly ash brick for walls as well as square and rectangular pillars laid in proper line & plumb including hacking of RCC at junctions, raking of joints, curing and all leads & lifts complete to the satisfaction of the Engineer. The rate is inclusive of providing arched / curved openings at all levels as per design/ drawings, for all levels and heights as directed by the PM to his entire satisfaction.				
	A) 115mm thick	15	SQM		-
	B) 150mm thick	12	SQM		-
6.07	Flyashbrickmasonryinsuperstructure...	14	CUM		-
	Providing and constructing 230mm thick fly ash brick masonry at all elevations and heights in cement mortar 1:6 using standard size of bricks of approved make with minimum crushing strength 5 N / mm ² . including all scaffolding, staging, racking the joints, curing etc., at all heights, elevations above and below finished floor level etc., all complete shall be as per specification and laid as directed. Rate includes with fly ash brick for walls as well as square and rectangular pillars laid in proper line & plumb including hacking of RCC at junctions, raking of joints, curing and all leads & lifts complete to the satisfaction of the Engineer. The rate is inclusive of providing arched / curved openings at all levels as per design/ drawings, for all levels and heights as directed by the PM to his entire satisfaction.				
	SUB-TOTAL OF MASONARY ITEMS				-
7.00	SECTION-7: PLASTERING AND WATERPROOFING				
7.01	Internal cement plaster (with neerufinish)...	57	SQM		-
	Providing and applying Plastering of internal walls and ceiling with cement mortar 1:4, 12-15mm thick with neerufinish according to specifications. Rate includes providing & fixing in position expanded metal plaster mesh [Arpitha make] or equivalent minimum 150mm wide strips at the junctions of R.C. columns/ beams/slab with brick work or wherever necessary, properly fixed, abutting the wall surfaces so as to get the plaster in line and plumb, necessary staging, scaffolding and curing at all levels and elevations etc. complete as directed.				
7.02	Internal cement plaster (without neerufinish)...	QRO	SQM		-

	Providing and applying Plastering of internal walls and ceiling with cement mortar 1:4, 12- 15mm thick according to specifications. Rate includes providing & fixing in position expanded metal plaster mesh [Arpitha make] or equivalent minimum 150mm wide strips at the junctions of R.C.C columns/beams/slab with brick work or wherever necessary, properly fixed, abutting the wall surfaces so as to get the plaster in line and plumb, necessary staging, scaffolding and curing at all levels and elevations etc. complete as directed.				
7.03	Ready Mix Plaster	QRO	SQM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Providing and applying Ready Mix Plaster to internal walls and ceiling etc, 12 - 15mm thick of approved make, according to manufacturer's specifications. Rate includes providing & fixing in position expanded metal plaster mesh [Arpitha make] or equivalent minimum 150mm wide strips at the junctions of R.C.C columns/ beams/slab with brick work or wherever necessary, properly fixed, abutting the wall surfaces so as to get the plaster in line and plumb; necessary staging, scaffolding at all levels and elevations, surface preparation etc. complete as directed.				
7.04	Externals and faced plaster...	48	SQM		-
	Providing and applying Plastering with Two coat plaster for external surfaces with C.M 1:4, 20mm thick with base coat and a finishing coat in C.M 1:3 using waterproof compound with rough/sponge finish at all levels and heights including grooves, providing & fixing in position expanded metal plaster mesh [Arpitha make] or equivalent minimum 150mm wide strips at the junctions of R.C.C columns/ beams/slab with brick work or wherever necessary, properly fixed, abutting the wall surfaces so as to get the plaster in line and plumb etc., complete as per specification. Including cleaning, making of dhar, drip mould, groove, staging, scaffolding and curing etc. complete as per drawing at all heights, levels and floors.				
7.05	Waterproof cement plaster to Dado...	QRO	SQM		-
	Providing & applying waterproof plaster in cement mortar 1:3 (minimum thickness 12 mm) for dado with waterproofing compound of approved make to brick or concrete trench surfaces, including roughening concrete surface, etc. complete at all heights. Rate is applicable for all levels & height. Mode of measurement will be actual surface area only. Approved make-Sika, Fosroc, BASF/MBS, MYK				
7.06	Waterproof cement plaster to trench..	QRO	SQM		-
	Providing & applying smooth finish cement plaster in cement mortar 1:3 (minimum thickness 12 mm) with waterproofing compound of approved make to brick or concrete trench surfaces, including roughening concrete surface, etc. complete at all heights. Rate is applicable for all levels & height. Mode of measurement will be actual surface area only. Approved make-Sika, Fosroc, BASF/MBS, MYK				
7.07	Terrace waterproofing with brick bat coba...	QRO	SQM		-

	<p>Providing and laying I.P.S. waterproofing with brick bat coba of avg. Thickness of 150mm to terrace slab including-</p> <ol style="list-style-type: none"> 1. Washing the existing concrete surface. 2. Laying 1:3 cement mortar base & laying brick bat in layer in cement mortar 1:3 to required slopes as per drawing. Top coat of 1:3 cement mortar, finishing the top coat with cement slurry. 3. Mixing an integral waterproofing compound of approved make (Sika, Fosroc, BASF/MBS, MYK) at 1.0 kg per bag of cement at all stages. 4. Injection grouting with non shrink cementitious grout of approved manufacturer (Sika, Fosroc, BASF/MBS, MYK) at construction junctions. 5. Items shall include curing, cleaning, giving 7 days pond test and 10 years guarantee in approved/enclosed format. 6. Waterproofing shall be carried out upto 300mm above finished terrace level with terrace level with coving. (Measurement given, is clear plan dimensions). 				
7.08	Waterproofing treatment to toilet pits...	6	SQM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	<p>Waterproofing treatment to toilet pits with cleaning the slab surface with wire brush and washing the slab surface thoroughly, applying waterproof plaster in cement mortar 1:3 with integral waterproofing compound of approved make to sides and slab surface & laying brick bat in layer in cement mortar 1:3 to required slope as per drawing. Top coat of 1:3 cement mortar with integral waterproofing compound of approved make, finishing the top coat with cement slurry, finishing necessary lap on walls, water at junctions of wall etc. including cleaning, watering, curing, giving seven days pond test etc. complete. Approved make-Sika, Fosroc, BASF/MBS, MYK</p>				
7.09	Water bar for construction joint..	21	RMT		-
	<p>Providing & laying swellable hydrophilic water bar SUPERCASW20 (by Fosroc) or equivalent, pasting with SuperCast SWX swellable adhesive or equivalent for sealing horizontal and vertical construction joints in RCC walls of water tanks, basements, pits etc. as per manufacturer's specifications including all scaffolding, cleaning, etc. complete for all heights.</p>				
7.10	Screed waterproofing...	17	SQM		-
	<p>Providing and laying Screed waterproofing to the bottom of water tank, Machine foundation, Trench, Slab etc. wherever directed with 1:1.5:3 cement concrete base laid in proper slope & level, finishing the top coat with cement mortar 1:3 with finely screened sand, including mixing approved (Sika, Fosroc, BASF/MBS, MYK) integral waterproofing compound at all stages, all lifts, cleaning, curing, giving 7 days Pond test And 10 years guarantee in approved format etc. complete including 'coving in' edges upto 300mm above the finished tank bottom surface with coving. (Measurement given, is clear plan dimensions) (avg. Thickness of 150mm)</p>				
7.11	Weldable grade HDPE membrane (Raft bottom)...	24	SQM		-

	<p>Supplying and laying composite minimum 1.2mm thick (With Min thickness of HDPE layer as 0.9mm+ Adhesive layer of Min 0.3mm, and excluding thickness of the sand/granule layer), pre-applied, fully bonded pure HDPE membrane-Aqua Arm Powerprufe 800 over P.C.C., with the turnkey execution to be done by the manufacturer through its authorized subsidiary execution company and with 10 years composite warranty against leakages, having puncture resistance >800N (as per ASTM E154) and hydrostatic head resistance not less than 60m head of water (ASTM D 5385). The system should be fully bonded to the RCC and consist of highly resilient HDPE film, self-adhesive polymer layer and a trafficable granular layer. The membrane shall have minimum of 75mm side and end laps which shall be sealed with double-sided adhesive tape. The size of the membrane should not be less than 2 M x 20 M. to minimize the joints. This membrane shall be continued over the vertical surface up to minimum 300mm height above the Raft bottom and fixed as per recommendation. This membrane shall be continued over the vertical surface and fixed by PVC roundels/shotguns. This shall include cleaning & removal of all the dust, dirt, oil, grease, cement laitance, loose particle & prepare the P.C.C. Substrate for laying of waterproofing system. Waterproofing system should be finalized based on the manufacturer's recommendation and contractor to submit the system, methodology & details for the approval of Engineer. (Make-Myk/Tikidan/Pidilite)</p>				
7.12	SBS Membrane waterproofing (Walls outer)...	46	SQM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	<p>Providing & laying 1.5mm THK SBS modified self-adhesive, cross laminated HDPE lining waterproofing membrane-Aqua Arm SBS 3000X over the solvent based bituminous primer @ 4 sqm/liter. The lap with HDPE Pre-bond membranes shall be 100mm treated with double-sided tape HDPE tape. This shall include Surface Preparation by cleaning work, removal of loose concrete and filling cracks with polymer modified mortar & treatment of tiered holes, bracing angle etc. with plugging mortar which are anchored in shuttering for holding the same and other projections as per manufacturer's recommendation. This shall be followed by the installation of 8mm THK polyethylene protection board/Dimpled board over the waterproofing membrane to protect the membrane from damages from back-filling materials. Providing & installation of aluminum termination bar minimum 200 mm above Finished Ground Level & shall be fixed with non-corrosive fastener @ 4nos per m. Sealing of termination bar with PU Sealant as per manufacturer specification.</p> <p>Waterproofing system should be finalized based on the manufacturer's recommendation and contractor to submit the system, methodology & details for the approval of Engineer-in-charge. (Make-Myk/Tikidan/Pidilite)</p>				
7.13	Damp-proof course...	1	CUM		-
	<p>Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate) 12.5mm nominal size, including providing and mixing waterproofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.</p>				
7.14	Kemperol treatment. (for Roofs & metal interfaces)	2	SQM		-

	Providing and applying liquid applied polyesterresin base, flexible,UV resistantwaterproofingsystem" KemperolV210 "(usingKemperolfleece)with" KEMPE ROL EP "Primer as per the manufacturers specification andasapproved by the engineer-in-charge for treating the ductspheriphery /roofopenings / sheet overlaps / gutter / riidge setccomplete with 10 years guarantee.				
7.15	Kemperoltreatment..(forRCCsurfaces)	2	SQM		-
	Providing and applying liquid applied polyesterresin base, flexible,UV resistant waterproofing system " Kemperol 1 K " (using Kemperol fleece) with " Kemco Pox 2Ka " solvent free two component primer as per the manufacturersspecificationandasapprovedbytheengineer-in-chargefor treatingthe slopinglabs/Flatlabshavingbrickbatcoba/Tiles/ Screedtoslope etccompletewith10yearsguarantee.				
	SUB-TOTALOFPLASTERINGANDWATERPROOFING				-
8.00	SECTION-8:PAINTING ANDFINISHING				
8.01	Acrylicweatherproofemulsion...	48	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and applying anti algae,weather proof Apexultima 100% Acrylic exterior paint from 'Asian paints' or equivalent other approved make & shade to the plastered, exposed brick, stone and concrete surface in two coats. Including preparation of the surface like holes, dents and cracks to be filled only by using mixture of white cement and fine sand (in the ratio 1:3), applying a Asian paints exterior wall primer (X2) two coat, scaffolding, curing, cleaning etc. complete. The paint must have Low VOC content. The dry/wet cleaning of floors/pipes/glass etc. after painting is to be carried out, protection of surrounding surfaces before painting is included in the item.				
8.02	Oil bound distemper...	57	SQM		-
	Providing and applying oil bound distemper of approved make and shade on all surfaces & at all heights in two coats including scaffolding, preparing the surface by brushing and brooming down, applying primer and a coat of Birla white putty etc. complete. The paint must have Low VOC content. The dry/wet cleaning of floors/pipes/glass etc. after painting is to be carried out, protection of surfaces before painting is included in the item.				
8.03	Whitewash...	QRO	SQM		-
	Providing and applying white wash in two coats on plastered or masonry surface at all heights including scaffolding, preparing the surface by brushing and brooming down, cleaning and curing etc. complete.				
	SUB-TOTAL OF PAINTING AND FINISHING				-
9.00	SECTION- 9: FLOORING ITEMS				
9.01	Natural stone window sill, Threshold, treads & risers and...				
	Providing and laying high polished approved quality 20 mm thick natural stone for window sill, treads & risers in line & level on a bed of 1:4 cement plaster including cement float, filling joints with matching colour Cement slurry, curing, edge high polishing, chamfering or rounding of the nosing as directed, cleaning, etc. complete.				
	A) Marble (Basic Rate-80sqft)-window sill, Threshold, treads & risers	QRO	SQM		-
	B) Granite (Basic Rate-100sqft)-window sill, Threshold, treads & risers	17	SQM		-
	C) Kota (Basic Rate-40sqft)-window sill, Threshold, treads & risers	50	SQM		-
9.02	Granite flooring...	QRO	SQM		-
	Providing & laying approved quality Granite flooring with approved thickness in required position. Flooring must be in line and level on a bed of 1:4 cement mortar (35 mm thick) including cement float, filling joints with matching colour cement slurry, curing and cleaning etc. complete. . Item also including overlaying of fabric for protection of finished surface. (Basic Rate-100sqft)(Note:- 20mm thickness Granite)				
9.03	Vitrified tiles flooring...	26	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and fixing Vitrified tiles of 600 x 600 mm size of approved make, colour and finish for flooring in required position and in line and level as directed, set on a bed of 1:4 cement mortar (min 35mm thick) including Cement float, sealing / pointing the joints with approved make filler compound as per manufacturer's specification and as directed, curing, rubbing, protecting with bubble guard film and removing the same before handing over, cleaning and acid washing etc. Complete. (Basic Rate- Rs 70/ sqft) (Note:- 8 to 8.5mm thickness Tile)				
9.04	Antiskid Vitrified tiles flooring...	17	SQM		-
	Providing & laying Antiskid Vitrified tiles of approved make, size, colour and quality; for flooring in required position and in line and level on a bed of 1:4 CM (min. 35mm thick) including cement slurry, pointing the joints with approved make joint filler compound, as per Manufacturer's Specification and as directed, curing and protecting the floor with bubble guard film and removing the same before handing over, cleaning and acid washing etc. complete (Basic rate Rs 50/sqft) (Note:- 8 to 8.5mm thickness Tile)				
9.04	Kota stone flooring...	76	SQM		-
	Providing and laying in all position polished kota stone flooring 25 mm thick of 550 x 550 mm size in plain or diamond grid pattern on a bed of cement mortar 1:4 including laying in required position and in line and level, cement float, filling joints with neat cement Slurry, curing, polishing, cleaning etc. complete. (Tile to be hand dressed and to fit correctly and snugly against each other and shall form very fine joint.) Note:- colour of Kota should be uniform. (Basic Rate- 45/sqft)				
9.05	Granite door frame...	QRO	SQM		-
	Providing and laying high polished approved colour and quality 20mm thick granite for door frames in plumb, line and level as per detailed drawing or as directed on a bed of 1:3 cement plaster including cement float/tile adhesive, chamfering, edge high polishing, cleaning, acid wash, pointing the joints "Laticrete" filler compound as per manufacturer's specification, SS locking arrangement with fixtures and fasteners etc. complete. (Granite basic rate- 100/sqft)				
9.06	Dado and Skirting...				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	<p>Providing and laying colored tiles of approved finish size, make, Colour and quality for dado and skirting in required position and in line and level over a levelled 1:3 plaster bed base coat minimum 10mm thick, fixing the tiles with approved (SIKA/FOSROC) tile adhesive, pointing the joints with approved joint filler compound as per Manufacturer's Specification and as directed, cleaning and acid wash etc. complete.</p> <p>(Note:- 8 to 8.5mm thickness for Tile and for other 20mm thickness)(Note:- Waterproof cement plaster to Dado is considered in this item-</p> <p>Providing & applying waterproof plaster in cement mortar 1:3 (minimum thickness 10 mm) for dado with waterproofing compound of approved make to brick or concrete trench surfaces, including roughening concrete surface, etc. complete at all heights. Rate is applicable for all levels & height. Mode of measurement will be actual surface area only.</p> <p>Approved make-Sika, Fosroc, BASF/MBS, MYK)</p>				
	A) Marble (Basic Rate-80sqft)-Dado and Skirting	QRO	SQM		-
	B) Granite (Basic Rate-100sqft)-Dado and Skirting	QRO	SQM		-
	C) Kota (Basic Rate-40sqft)-Dado and Skirting	QRO	SQM		-
	D) Mandana (Basic Rate-60sqft)-Dado and Skirting	QRO	SQM		-
	E) Vitrified Tiles (Basic Rate 70sqft)- Dado and Skirting	42	SQM		-
	F) Ceramic Tiles (Basic Rate 50sqft)-Dado and Skirting	QRO	SQM		-
9.07	Granite platform for countertop basins...	QRO	SQM		-
	<p>Providing and erecting granite topped platform for basins, 600mm wide with kadappa below granite, as per the detail drawing etc., including vertical supports, brackets, fascias, patties and rounding or polishing the exposed edges as per drawing, cutting holes for basin (in case of under counter type) and tapping and filling the same with approved make grout, sealing all crevices with silicon sealant, laying Cement mortar 1:4 between granite and kadappa etc. complete. (Basic Rate of Granite-100 sqft). (Note:- 20mm thickness Granite)</p>				
9.08	Urinal partitions...				
	<p>Providing and fixing urinal partitions of size 1200 x 600 mm polished on both sides with round nosing on front edge, including fixing in position in line and level in cement mortar 1:4, cutting the granite to required shape as per drawing, and filling with approved make colour grout, curing, edge polishing, cleaning etc. complete. (Note:- 20mm thickness Granite & Marble)</p>				
	A) Marble partitions (Basic Rate-100sqft)-Urinal partitions	QRO	SQM		-
	B) Granite partitions (Basic Rate-120sqft)-Urinal partitions	QRO	SQM		-
	C) Glazed Ceramic partitions of 'Hindware' make Catalogue no-61005	QRO	SQM		-
	D) Glass partitions of 12mm thick with necessary fixing accessories	QRO	SQM		-
9.09	VDF flooring With RMC..				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Providing and laying design mix reinforced cement concrete of following Grades for floor in bays including PVC sheet of 300 micron below the floor, laps of 200 mm at the joints, leveling the concrete surface, providing VDF treatment to the cement concrete floor comprising of screed vibrating, bull floating, power floating and power trowelling, curing by ponding for 14 days, panel size 4m x 4m or as per drawing, groove cutting of 6x15mm, filling semi-rigid epoxy joint filler of approved make, cleaning, etc complete. The ready mix concrete design using appropriate fly ash be approved by prior to execution. Vendor to give batch wise certificate for every lot. The quoted rate is inclusive of barricading tarpaulin to arrest dust in nearby areas, nail gutter to side, if any. (Rate for Reinforcement, M S Bar bars & M S Angles at expansion joint to be paid separately in relevant item). (The VDF surface to be thoroughly cleaned with washing, manual scraping of all the adhered dust, after the curing is over And the concrete surface should be completely dry).				
	I) For M20 Grade (with broom finish & tikitar joint filling)	QRO	CUM		-
	II) For M25 Grade	QRO	CUM		-
	III) For M30 Grade	201	CUM		-
9.10	FM2 Flooring...	QRO	CUM		-
	Providing and laying M30 grade impact free FM2 floor with Laser Screed Machine & finishing concrete surface, smooth using Ride On trowels complete in large panels size to floor tolerances of FM2 as per TR 344 the edition, carry out flatness by using Ride On trowels, bump-cutter and check rod etc. including all tools & other equipment like, Beam screed, special form work, Timber Formwork with steel 'L' angles, imported tools for flooring, complete workable RMC with slump of 140-150mm at site, in panels of approved size. including providing and laying design mixed, reinforced concrete floor, with reinforcement as per drawing including 300 micron LDPE sheet underlay film with laps of not less than 200mm, screed vibrating, power trowelling, curing by ponding, making 4mx4m panels by groove cutting. Providing and filling grooves with PU (Shore A Hardness 30-45) based sealant of BASF Master Flex 474 or Equivalent in construction joints & controlled joints and other situation were shown in drawing. top 10mm of section filled by sealant and below followed by backer rod & sand. The rate includes the cost of all ancillary works as required, as per specifications and as recommended by manufacturer and as directed by Project Manager, including 6x50mm sectional control joint size & 6 X 15mm . surface to be thoroughly cleaned with washing, manual scraping of all the adhered dust, after the curing is over and after the concrete surface is completely dry. (The ready mix concrete design without using fly ash to be approved by structural engineer prior to execution. Vendor to give batch wise certificate for every lot. The quoted rate to be inclusive of barricading tarpaulin to arrest dust in nearby areas.) (Rate for Reinforcement, M S Bar bars & M S Angles/armour joint at expansion joint to be paid separately in relevant item). Note- Use of fly ash shall not be permitted in floor concrete quote rate accordingly.				
9.11	Armour Joint...	QRO	RMT		-
	Supplying and fixing Durashield Optima Armour joint for slab thickness upto 200mm having Dura sleeve Plate Dowels of Size (150x100x8)mm @ 600mm c/c spacing at designated joint. Make- Durafloor or equivalent.				
9.12	Expansion Joint in Concrete Floor	80	RMT		-
	Providing and fixing expansion joint system as per approved drawing by the consultant using MS angle and necessary accessories complete including Dura board and sealant.				
9.13	Duraboard for isolation joint....				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and fixing Supreme make Dura board at expansion & isolation joints for full length, at all levels and at all heights as per instructions of manufacturer, in fill for deep joints, making the joint watertight, cleaning etc. complete.				
	A) 12mm thick	43	SQM		-
	B) 25mm thick	QRO	SQM		-
9.14	Expansion & Isolation joint Filling..				
	Providing and filling semi-rigid epoxy joint filler of approved make in expansion & Isolation joints of RCC work, Concrete floor etc. including cleaning the joint with wire brush, masking the sides of joint with masking tape before filling, providing and packing in polyethylene baker rod, filling the joint with semi rigid epoxy joint filler, sanding the same properly to give proper level				
	A) Joint Filling size- 12mm wide X 25mm deep.	290	RMT		-
	B) Joint Filling size- 25mm wide X 25mm deep.	QRO	RMT		-
9.15	Floor densifying treatment...	QRO	SQM		-
	Providing & applying FLOOR DENSIFYING TREATMENT WITH approved product from consultant (hardening, Sealing And Dust Proofing compound for concrete.) to treat mix floor as per manufacturer's specifications including cleaning, curing etc complete. Rate including all types of joint fillers required by vendor and mixing/ measure of any chemical set complete.				
9.16	Floor Hardener:-	1341	SQM		-
	Providing and spreading powdered form floor hardener of approved make (Fosroc/ Sika/ Degussa/ BASF/MBS/MYK or equivalent) over the freshly laid concrete floor, in specified quantity i.e. 4 kg per sqmt, with spreading machine to attain uniformity of spraying, all as per manufacturer's specifications, cleaning, protecting the flooring until handover etc complete.				
9.17	3mm thick Epoxy Floor topping...	QRO	SQM		-
	Providing and Application of Self-levelling Epoxy Floor topping of approved make in 3mm thickness as per the manufacturer's specification. The Surface shall be prepared to have sound, clean and dry (free from moisture) surface to ensure proper bonding between the substrate and the flooring, a primer coat of epoxy bonding primer shall be applied over the prepared surface and allowed to cure for Six Hours, After the Primer is dry, self levelling Epoxy topping @ 3mm thick shall be spread out on the Primer. Top Coat shall be applied and spread evenly to maintain required thickness of 3mm using a Notch trowel followed by that spiker rollers shall be rolled over the levelled Top Coat to remove any entrapped air, and to spread the material to the required thickness as per manufacturer specifications, providing a smooth surface finish including all material, tools, plant, consumables, labour, equipment, lead & lift, etc., complete as per specifications and as directed by the Engineer-in charge, including Coving (Approved Make- BASF-MBS, MYK Arment, Fosroc, Sika)				
9.18	SFRC FLOORING WORKS (FOR WAREHOUSE FLOORING AND ROAD WORKS)				
9.17.1	Plate Load Test.....	QRO	Test		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	The strength of subgrade/ sub base is expressed in terms of modulus of subgrade reaction "k" which is defined as pressure per unit deflection of foundation. Modulus of subgrade reaction should be determined by a Plate Load Test as per IS 9214-1979 "Method of determination of modulus of subgrade reaction of soil in the field". Typically this test is conducted over a compacted sub-grade/sub-base/base layer of interest and gives an effective support reaction for a system of compacted ground layers (For measurement SFRC Floor area to be measured)				
9.17.2	LDPE slip membrane...	QRO	SQM		-
	Supply & Laying on a layer of 200 micron virgin LDPE slip membrane as per proceeds, minimum lap of 200mm, laid both direction one above other, as per Engineer-in-charge (EIC). Slip membrane should be free from wrinkles, cuts, nips & other defects. (For measurement SFRC Floor area to be measured)				
9.17.3	Steel Fiber	271	KG		-
	Type: Double Hooked End, Glued Non-balling 4D Dramix fibres Dimensions: Length 60mm, Dia 0.75 mm, Tensile strength $\geq 1800 \text{ N/mm}^2$ Dosage: Dosage considering 15kg/ cum or as specified in the SFRC design. Compliance: CE class 1 labeled fibre confirming to ISO 13270-class A, $f_{eq} 150 \text{ m} \geq 0.50 \text{ fctm}$ as per IS 17161, $f_{r3m} \geq 3 \text{ MPa}$ and $f_{r3m}/f_{r1m} \geq 1$ as per EN 14651 for the designed concrete grade that must be validated by testing at the manufacturers facility. Vendor to submit FIVE years warranty from the date of completion of project. (Make-Bekaert)				
9.17.4	F-MACRO FIBER	QRO	KG		-
	Providing F Macro, made of 100% virgin copolymer/polypropylene, consists of twisted bundles of monofilament fibers, are used for structural concrete reinforcement. Its high-performance structure yields maximum durability without corrosion, magnetic or acid/alkali risk. While preventing shrinkage cracks and providing temperature reinforcement, F Macro fibers provide ductility, high energy absorption and flexural toughness to concrete and eliminate the need for steel mesh and steel fibers. Dosage — Minimum 2.5kg/m ³				
9.19	Indian Patent Stone (IPS) flooring...	QRO	SQM		-
	Providing and laying Indian Patent Stone (IPS) flooring 75mm thick with 65mm thick cement concrete 1:2:4 (1 Cement: 2 Coarse Sand: Graded Stone aggregate 20 nominal size) and top layer of 10mm thick cement slurry in C.M. 1:3, finishing the surface with trowel to receive a smooth finish, including making thread impression at a grid of 600mm at all levels of the building with all leads and lift set complete.				
	SUB-TOTAL OFFLOORING ITEMS				-
10.00	SECTION-10: DOORS AND WINDOWS				
10.01	Glass Doors				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Supply & installation of 12mm clear toughened glass doors with patch fittings. The Top/bottom fittings shall be mounted on 12mm toughened glass door with all necessary required accessories, the door shall also consist of with all necessary glass mounting accessories for the safe closing features complete as per manufacture's specification. The door shall also consist of Pull/push Handle 450x25mm diameter. All required necessary fittings, handles, locks and keys should be of Dorma/ Hafele or equivalent make.				
	A) Single Leaf-Glass Doors	QRO	SQM		-
	B) Double Leaf-Glass Doors	QRO	SQM		-
10.02	Fire Rated door...				
	Providing fixing 2 hour fire rated double skin steel door of approved make, single/double leaf with 1.6mm thick galvanized steel sheet on both sides fitted on internal hollow tube framing, duly filled in with honeycomb paper core as infill material, door frame of size 143 x 57 mm (+/- 3 mm) as per manufacturer's specification, surface drop seal, bracing at bottom, glass view panel, including all approved type (Dorma/Hafele Make) heavy duty fastenings and fixtures comprising of S.S. hinges, Panic bar handle inside as per drawing, Dorma/Hafele cylindrical lock, TH126 type lever handles 2 Nos., air seal gaskets between shutter and frame and door closer etc complete. Door to be certified as per CBR norm. (Make - Shakti met /MPP etc or equivalent). Item including Powder Coating of 50 micron of approved shade				
	A) Single Leaf-Fire Rated door	11	SQM		-
	B) Double Leaf-Fire Rated door	QRO	SQM		-
10.03	Motorized Sliding Folding Door.....	QRO	SQM		-
	Providing and fixing-Motorized Sliding Folding Door of required size as per drawing, including all fixtures, fastenings etc complete from approved manufacturer (Avians / Gandhi automations or equivalent) and as per approved sample; including all installation, testing and cleaning complete along with submission of test certificate. CE Certified As Per European Standard BSEN13241-1:2003+A1:2011 Bi parting 1.00mm thick MS Plain Sheet Single Side Automation System : Top Drive Enamel Paint Leaf Length=1m				
10.04	Fire Rated sliding door	QRO	SQM		-
	Providing and fixing- fuse operated automatic, m.s. powder coated, sliding, 2 hrs fire rated door of required size as per drawing, including all fixtures, fastenings, head mounted track, counterweight, track cover, fuse etc complete from approved manufacturer (Avians / Gandhi automations or equivalent) and as per approved sample; including all installation, testing and cleaning complete along with submission of test certificate.				
10.05	Steel door-Single leaf (filled with Honeycomb insulation)	5	SQM		-
	Providing fixing m.s. steel door of approved make, single leaf with 1.5 mm thick ms sheet on both sides fitted on 70X50mm MS hollow tube surrounded at edges and around glass and louvered areas, duly filled in with Honeycomb insulation, door frame of pressed ms sheet 2mm thick, 10mm square bar bracing at bottom. including all approved type heavy duty fastenings and fixtures comprising of: S.S. hinges, cylindrical lock, handles 2 Nos., air seal gaskets between shutter and frame, rubber sweep strip at bottom, door closers (Accessories of Dorma/ Hafele or equivalent) etc. complete including Powder Coating 50 micron of approved shade. (Suppliers:-Sirma, Shakti or equivalent)				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	following item shall be added as per detail drawing. Ratetobegiven as specified...				
	1A) Vision Glass as per drawing	QRO	SQM		-
	1B) Panic Bar	QRO	NO		-
10.06	Steel door-Double leaf (filled with Honeycomb Insulation)	165	SQM		-
	Providing fixing m.s. steel door of approved make, double leaf with 1.5 mm thick m.s. sheet on both sides fitted on 70X50 mm M.S. hollow tubes surrounded at edges and around glass and louvered areas, duly filled in with Honeycomb insulation, door frame of pressed m.s. sheet 2 mm thick, 10 mm square bar bracing at bottom. including all approved type heavy duty fastenings and fixtures comprising of: S.S. hinges, cylindrical lock, handles 2 Nos., air seal gaskets between shutter and frame, rubber sweep strip at bottom, door closers (Accessories of Dorma/ Hafele or equivalent) etc. complete including Powder Coating 50 micron of approved shade. (Suppliers:- Sirma, Shakti or equivalent)				
	following item shall be added as per detail drawing. Ratetobegiven as specified.				
	2A) Vision Glass as per drawing	QRO	SQM		-
	2B) Panic Bar	QRO	NO		-
10.07	FRP door and shutter..	14	SQM		-
	Providing and fixing 30 mm thick fibreglass reinforced (FRP) flush door shutter in different plain and wood finish color made with fire retardant grade unsaturated polyester resin moulded to FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and High density Honeycomb Sheet to be used as filler material throughout the hollow panel and 2 mm thick and size 5"X2.5" frame including approved fittings etc. complete. Note: Refer separate annexure for approved fittings and accessories.				
	A) Additional for frosted Glass max 300 mm x 300 mm panel	QRO	SQM		-
	B) Additional for Louvred opening including aluminium louvers on both sides of opening	QRO	SQM		-
	C) additional for thresholds similar to frame	QRO	RMT		-
10.08	Flush Door..	QRO	SQM		-
	Providing & fixing approved quality factory made solid core flush door in single / double leaf 35 mm thick; BWR type ply wood surface on both sides, TW bidding on all edges, it should be provided with a 125 mm ss handle similar to that of glass door at a height of 1200 mm and to be provided with lock & key, door to be of exterior grade as per the detailed drawings including fixing the door and finishing with two coats of synthetic enamel paint of approved shade & make over a coat of primer with approved S.S. fittings like hinges, tower bolts, handles, necessary rebate for hinges, as per drawing etc complete. (Accessories of Dorma/ Hafele or equivalent). Appropriate / Desired thickness shall be mentioned in specs above. Similarly, instead of synthetic enamel, nonVOC water based enamel be specified after due checking with suppliers.)				
	A) Additional for decorative, veneer face of approved type, on both sides, total thickness with veneer to be mm. Door to be melamine polished instead of painted.	QRO	SQM		-
	B) Additional for hot pressed laminate on both sides of approved type. (no painting), Total thickness to be mm.	QRO	SQM		-
	C) Additional for 6 mm thick clear vision glass panel as per drawing.	QRO	SQM		-
	D) Additional for fixing aluminium louver panels as per drawing on both sides.	QRO	SQM		-
	E) Additional for finishing the door shutter with applying 1 mm thick PVC coating of approved shade instead of synthetic enamel paint.	QRO	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
10.09	MSSlidingDoors...manual	QRO	SQM		-
	Providing and fixing Manual Sliding door of approved make including necessary accessories and fittings as per manufacturer's specifications. Weight of door 35 Kg per Sqmt				
10.10	Fully glazed aluminium door...	QRO	SQM		-
	Providing and fixing in position approved make fully glazed aluminium door manufactured out of HE 9WP high grade aluminium alloy sections of approved make conforming to I.S. specifications with 40mm thick door shutter rebated on 3 sides, appropriate door frame, in various sizes as per detail drawing, including 6 mm clear toughened float glass with metered shutter joints, EPDM frame seal with nylon rollers, mortice lock, mastic sealing, sealing the crevices around the frame with sealant, powder coating 50 micron thick of approved shade from the approved agency, all fixtures such as floor pivots or hinges, handles, locking arrangement, door closer etc. shall be of approved make and type. (Accessories of Dorma/ Hafele or equivalent)				
10.11	GI Rolling shutter...				
	Providing and fixing pull and push type GI powder coated standard rolling shutter of approved quality and make, fabricated from 12 gauge i.e. 2.5mm thick GI guide, 14 gauge i.e. 2mm thick GI Bottom Plate with angle stiffener with rubber bottom seal, curtain/slat of 1mm thick GI sheet of Jindal/Tata make, roller shaft of Heavy duty Mild Steel strong suspension Tubular shaft without springs, side bracket of M.S. plate 3-10mm as per the opening dimension, rolling grill as per drawing, all material will be of Tata steel/Jindal make only. Rates shall include three or more Nos. of pulleys with ball bearings, necessary accessories such as guide channels, chain or handle set, locking arrangements, single or both side operating gear, top GI cover of 0.60mm thick and making of arrior holes in brickwork or RCC work and restoring the same, approved quality fixtures & fastenings, including 25mm dia rubber tube at bottom, fabrication and fixing etc. complete as directed and specified. Note: Rolling shutter shall be finished with powder coating only.				
	A) Mechanically (Gear) operated shutter				
	Daylight opening Size: (As per Drawing) - Mechanically (Gear) operated	QRO	SQM		-
	B) Electrically operated shutter				
	Daylight opening Size: (As per Drawing) - Electrically operated shutter	QRO	SQM		-
10.12	Rapid Rolling shutter...	QRO	SQM		-
	Providing and fixing in position motorised Rapid Rolling Doors of approved make and design, made of electrogalvanized steel structure, heavy duty gear operated motor 3 phase, opening speed of min 1.4m/s closing speed of max 0.5m/s, electronic controls for push button opening, partial opening, emergency stop, anti-crash device, manual override for opening and closing, photocell for remote sensing, both side handles for manual opening, flexible curtain of self-extinguishing type polyester 0.6mm, transparent PVC panels 2mm thick, fitted in aluminium extrusions as interchangeable panels; door having minimum wind resistance to 15m/s, complete with all other standard accessories of approved manufacturer. (Make- Avians, Gandhi, etc)				
10.13	Fully glazed aluminium windows...				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Glazed Aluminium Windows manufactured out of HE9WP/6063-T6 grade aluminium alloy sections of approved make (Jindal/Bhoruka/Hindalco etc.) confirming to L.S. specifications with sub frame 100x35mm as per detail drawing with mitered, hairline fit, frame and shutter member joints, including glass as described below, extruded aluminium snap-in glazing beads inside; theft proof, snap-in or fixed type glazing beads externally, vinyl insert glazing gaskets, concealed mid lock and nylon rollers for sliding windows, EBCOMAKE SS friction hinges for openable windows; with all necessary fixtures, powder coating 50 micron sth. / anodized to 15 micron, of approved shade from approved agency, sealing the crevices around the frame with approved sealant, cleaning etc. complete.				
	A) Two track with two shuttered window with 5mm thick clear float glass of approved make	QRO	SQM		-
	B) Three track three shuttered window with 5mm thick clear float glass of approved make.	23	SQM		-
	C) Four track four shuttered window with 5mm thick clear float glass of approved make.	QRO	SQM		-
	D) Addition of one shuttered mosquito mesh in above item A or B or C (For measurement Window sizes as per above item A or B or C, respectively shall be followed)	QRO	SQM		-
	E) Fixed glass window with 5mm thick clear float glass	QRO	SQM		-
	F) Counter Fixed glass window with 5 mm thick clear float glass and counter opening 300x300mm with sliding shutters	QRO	SQM		-
	G) Partly louvers + Partly fixed glass window with 5 mm thick clear float glass of Saint Gobain Evoplus (ETII150).	QRO	SQM		-
	H) Three Panel Windows Two fixed glass (5mm thick clear float glass) and one top hung	QRO	SQM		-
	I) Window same as per Existing Plant window of approximate size 2.06X2.025m (Vendor to visit the site and take actual measurements/Finish/ Member sizes). Client needs this new Windows as per Existing Plant window, hence vendor to price accordingly.	QRO	SQM		-
10.14	Aluminium frame with mosquito net...	23	SQM		-
	Providing and fixing aluminium frame of required size and fixing mosquito net of approved sample, sealing the crevices around the frame with approved sealant, cleaning etc. complete				
10.15	Glass louvered aluminium window...	QRO	SQM		-
	Providing and fixing in position Glass louvered Aluminium window / ventilators of various sizes, as per detailed drawing, with all necessary aluminium sections including necessary fixtures and fastening and 4mm thick clear frosted glass louvers, cleaning etc. complete. Window section to be powder coated (50 microns) / anodized (15 microns) as per approved colour, Aluminium section to be of 6063-T6 grade, minimum 2mm thick. (Item including Mosquito mesh at outer).				
10.16	Aluminium fixed louvered Ventilator with provision for exhaust fan...	4	SQM		-
	Providing and fixing in position anodised (as per IS 1868/1982) Aluminium fixed louvered Ventilator with provision for exhaust fan and aluminium rectangular pipe 63mm x 38.10mm x 1.22mm at weight 0.650Kg/Rmt, Aluminium angle of size 15 mm x 15 mm x 1 mm, aluminium channel of 9 mm sizes, S.S. mosquito net of 304 Grade, 4 mm thick float glass per detailed drawing & as directed by Engineer in charge etc. complete				
10.16	GI Grill for window...	QRO	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and fixing 2.5 mm thick GI Grill work for windows, ventilators, doors or window less opening etc. upto 15kg/sq.m as per drawing including openable panels/doors, with comprising flats, round and square bars etc. Items also including fixtures, fastenings, necessary welding and painting at joints with one coat of anticorrosive paint and two coats of synthetic enamel paint of approved make and shade complete with cleaning.				
10.17	MSG Grill	QRO	SQM		-
	Providing and fixing Mild Steel Grills in various sizes with 35x2mm MS square pipe frame and 10mm Sq MS Bars @ 120 mm/c, all fabrication and finishing with two coats of synthetic enamel of approved make and shade over a coat of primer etc complete. Weight of the grill upto 15kg/sqm				
10.18	Weld Mesh Panels....	QRO	SQM		-
	Providing and fixing weld mesh panels of required size using MS angle frame 30x30x5mm and MS flat 25x5mm and weld mesh of size 30x30 mm including supply, fabrication, erection, painting with two coats of synthetic enamel paint over a coat of primer etc complete				
10.19	Aluminium Louvered strip window & Door...	QRO	SQM		-
	Providing and fixing in position Aluminium louvered strip window with anodized (20 micron), as per detailed drawing with all necessary aluminium framing sections, fixtures and fastening, etc. complete with cleaning and filling the crevices around the frame with appropriate sealant. (Otherwise consider Aluminium frame by LLOYD, Aluminium tube 44x773.2mm thk. Jindal make, Aluminium louver Jindal 207781.7mm thk.)				
10.20	Toilet Entry doors (Laminated flush door)...				
	Providing and fixing Toilet Entry Door 38mm thk approved quality factory made solid core flush door shutter with marine grade ply facing, and finished with 1.5mm thick water proof laminate on both sides. door to be provided with mortise lock & key, 50mm wide teak wood beading on all four sides the door shutter, with all accessories like D shape handles, tower bolts, door closer, hinges etc to be in stainless steel and to be of Dorma, Assa Abloy or equivalent. (Door frame Section: Twin granite frame (Jet black) as approved & as shown in drawing).				
10.19.1	Toilet Entry doors (Laminated flush door)	QRO	SQM		-
10.19.2	Fixed louvers (Non Vision Type) of size 38mm x 300mm' in a cut out of size 600mm x 300mm	QRO	NO		-
	SUB-TOTAL OF DOORS AND WINDOWS				-
11.00	SECTION-11: MISCELLANEOUS ITEMS				
11.01	Grouting with non shrink grout...	3	CUM		-
	Providing and casting in situ non-shrink grout of 'Sika or Fosroc' make as per manufacturer's specifications including all materials, tools and plants, shuttering, mixing and pouring at specified consistency, cleaning and curing etc. complete.				
11.02	Rebaring in concrete...				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and fixing Steel bar in existing concrete surface including drilling holes upto required depth/length, cleaning with wire brush and blower, filling holes with chemical mortar and fixing specified diameter bar etc. as per manufacturers specifications or as directed by engineer-in-charge, cleaning and scaffolding etc. complete. (Hilti or equivalent make)				
	A) 8mm dia	QRO	NO		-
	B) 10mm dia	QRO	NO		-
	C) 12mm dia	QRO	NO		-
	D) 16mm dia	QRO	NO		-
	E) 20mm dia	QRO	NO		-
11.03	Plinth protection...	QRO	SQM		-
	Providing and laying Plinth protection to the outer wall of the building including necessary excavation, watering and compaction till achieve required proctor density by plate compactor or baby roller, spreading and compacting a layer of 60-40mm size metal 150mm thick and 100mm thick cement concrete M25 with broom finish including formwork, providing joints, laying the concrete to required slope and level as per the drawings, curing and cleaning etc. complete. Note: Reinforcement will be paid in relevant item.				
11.04	Toilet Partition..				
	Providing and installation of toilet modular restroom cubicles system of Merino restrooms make using BACCHUS/Athena lite/Titan series restroom as per drawing with merino compact laminate Board of 12 mm thick. Of door size 610mm, overall height of cubicles is 2100 mm (including gap of 150 mm from ground) with single approved colour to all cubicles with all top rail, wall channels, legs and other hardware as per manufacturers specifications etc. complete. (size of cubicles 1200x1550mm)				
	A) Divider partition	QRO	NO		-
	B) Front partition with door	QRO	NO		-
11.05	Clear toughened sandwitch double glass Canopy..	QRO	SQM		-
	Providing & fixing Clear toughened sandwitch double glass of 6mm thk. on both side of interlayer PVB film of 1.14mm, for canopy with all S. steel accessories and fixtures. Canopy shall be of hanging assembly. (Shop drawing for the same to be Submitted by Contractor for approval.)				
11.06	Structural Glazing (DGU-Double Glass unit)...	QRO	SQM		-
	Providing and fixing extruded colour anodized Aluminium glazing comprising of fixed and openable panels made out of framework of verticals and horizontals made out of specially designed extruded aluminium sections and fabricated with joints at right angles and fixed at all levels, elevation and height to the Masonry/RC/Structural walls with necessary clamps, brackets, anchor fasteners & Scaffolding. The extruded aluminium section shall be anodised in approved colour with anodic coating of minimum 20 microns. Deflection shall be limited to L/175mm or 19mm whichever is the least.				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Extruded sections shall be of 6063 T6 alloy conforming to ASTM B221. Any other fastening straps, nuts, bolts, rivets, washers, etc. shall be in stainless steel SS304 grade. All tapes shall be of Norton make. Rates shall include to provide weep hole and drain holes at the bottom and appropriate PVC caps to avoid dust accumulation. Rate shall also include to provide silicone sealant for perimeter sealing between the aluminium framework and the Masonry/RC/Structural work as per detailed drawings. The Structural glazing sealant shall be Dow Corning 983 and weather sealant shall be Dow Corning 991H. All sealants shall be black in colour.				
	Glass panel shall be insulated double glass unit. Out board glass shall be 8mm thick reflective glass of AIS, Saint Gobain or equivalent make with 10mm gap with pressure equalization. Inboard shall be 8 mm thick with Low-E glass of AIS, Saint Gobain or equivalent make. The reflective coatings shall be on surface #2. The insulated glass unit shall be hermetically sealed with the two lites of glass as mentioned above with 10mm air space with Aluminium spacers, using primary sealant as Poly-Isobutylene and secondary sealant by Dow Corning or approved equivalent. All necessary Anchor fasteners shall be of HILTI make SS304 grade if necessary.				
11.07	Structural Glazing (Single Glass unit)...	QRO	SQM		-
	Providing and fixing extruded colour anodized Aluminium glazing comprising of fixed and openable panels made out of framework of verticals and horizontals made out of specially designed extruded aluminium sections and fabricated with joints at right angles and fixed at all levels, elevation and height to the Masonry/RC/Structural walls with necessary clamps, brackets, anchor fasteners & Scaffolding. The extruded aluminium section shall be anodised in approved colour with anodic coating of minimum 20 microns. Deflection shall be limited to L/175mm or 19mm whichever is the least.				
	Extruded sections shall be of 6063 T6 alloy conforming to ASTM B221. Any other fastening straps, nuts, bolts, rivets, washers, etc. shall be in stainless steel SS304 grade. All tapes shall be of Norton make. Rates shall include to provide weep hole and drain holes at the bottom and appropriate PVC caps to avoid dust accumulation. Rate shall also include to provide silicone sealant for perimeter sealing between the aluminium framework and the Masonry/RC/Structural work as per detailed drawings. The Structural glazing sealant shall be Dow Corning 983 and weather sealant shall be Dow Corning 991H. All sealants shall be black in colour.				
	Glass panel shall be a single glass unit. Glass shall be 10 mm thick with Low-E reflective glass of AIS, Saint Gobain or equivalent make. The reflective coatings shall be on surface #2. The glass unit shall be sealed with using primary sealant as Poly-Isobutylene and secondary sealant by Dow Corning or approved equivalent. All necessary Anchor fasteners shall be of HILTI make SS304 grade if necessary.				
11.08	Providing and supplying Mascara Ventilated Facade Systems...	QRO	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	<p>Providing and supplying Mascara Ventilated Façade panels in approved colour and shade in High Density Fibre Cement (HDFC) panels of size, 1200 x 2400 to be installed with coated aluminium rivets in open groove rain screen method on concealed subframe of ferrous metal components including all necessary hardware and accessories set complete.</p> <p>1) Panel-MASCARA10 2) Core-Compressed HDFC 3) Compressive strength- $\geq 23\text{MPa}$ 4) Panel Thickness-10mm 5) Panel size-1200x2400 6) Design Module-Customized 7) Finish-Multitoned 8) Rear Surface-Hydrophobic Silver Coat 9) Colour warranty-10 years</p> <p>PHYSICAL & MECHANICAL PROPERTIES 1) Density-1340kg/cum 2) Water absorption REAR-1.50 to 3% 3) Ignitability-CLASS P 4) Thermal Conductivity-0.2w/m²k 5) Surface spread of flame-Class I (Best) 6) Bending Strength-10MPa</p>				
11.08	Aluminum Composite panels (ACP Cladding).	QRO	SQM		-
	<p>Providing & fixing in position 3mm thick Exterior grade Aluminum Composite Panels in external face, column/wall cladding and canopy ceiling of approved make confirming to IS standard / specifications sandwiched between two skins of special alloyed aluminum sheet to have overall thickness of 4mm with exterior coating of PVDF. Fixing of surface cladding to masonry / concrete faces / still structure as called for, including appropriate and adequate framework of aluminum tubular sections 50x25x2mm or as per design to fix the composite panels of the frame, straight/slope and curvilinear profile and shapes including all accessories and all incidental work. The cladding shall be done in accordance with the drawings, fixed to sides and faces of columns/piers, to sills and soffits of window opening, returned over coping, to RCC / structural steel system, etc, to line and level. The joints shall be properly sealed with Dow Corning / GE Silicone sealant to make the joints watertight and weatherproof including, fixing over aluminum frame using mechanical fasteners such as Aluminum cleats, and Stainless Steel Fasteners, including necessary accessories, with cleaning etc. complete as per detailed design drawing approved for execution. Item to be inclusive of cutting to size and edge-forming to trays strictly as per design drawings, getting approved 2 sq.mt. mock-up from Architect, cleaned finished complete. (Shop drawing for the same to be submitted by Contractor for approval.)</p>				
11.09	Weepholes	QRO	RMT		-
	<p>Providing and fixing Weep holes with 100 mm dia heavy duty (4Kg/cm²) PVC pipe at locations indicated and as directed etc. complete. Item includes Geotextile sheet or GImesh with 20-40mm metal filter media as per drawing and as per instructions of Engineer.</p>				
11.10	Stone pitching	QRO	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and Laying dry trap rubble stone pitching 230 mm thick,includinghandpacking,ramming,levelling&pointingwithC:M1:4etccomplete.				
11.11	Stone pitching with Available Stones on Site	QRO	SQM		-
	Laying dry trap rubble stone (Available on Site) pitching 230 mm thick, including shaping the available stones on site for the required size, hand packing, ramming, levelling & pointing with C:M 1:4 etc complete.				
11.12	Making through holes...				
	Making through holes in plain or reinforced cement concrete with Diamond core drilling system by using Bosch power tools of following diameters. Rate in Dia/mm				
	a) 52mm	QRO	Dia/MM		-
	b) 82mm	QRO	Dia/MM		-
	c) 112mm	QRO	Dia/MM		-
	d) 122mm	QRO	Dia/MM		-
	e) 152mm	QRO	Dia/MM		-
	f) 202mm	QRO	Dia/MM		-
11.13	GRP/FRP Gratings	QRO	SQM		-
	Providing, supplying and fixing GRP/FRP composite- gratings with frames, in required sizes, as per drawings, including, frame fixing in M20 grade concrete of minimum 300 x 200 mm size, the clear opening of the frame must be equal to the channel/ or chamber width; cleaning etc complete. The grating to have load capacity of 5 MT. (The gratings to be from " Everlast Composites Pvt. Ltd" or from "Thermodrain" or from other supplier with approved quality and make.)				
11.14	Sleeves in Concrete				
	Providing and fixing PVC sleeves of various sizes as per detailed drawing in RCC flooring/RCC walls/RCC Pardi including hold fasts, fabrication if required, fixing and placing in position, levelling etc. complete. (Rate including hold fast and fasteners)				
	a) 50mm dia	QRO	RMT		-
	c) 80mm dia	QRO	RMT		-
	c) 150mm dia	QRO	RMT		-
	c) 250mm dia	QRO	RMT		-
	d) 300mm dia	QRO	RMT		-
	e) 350mm dia	QRO	RMT		-
	f) 400mm dia	QRO	RMT		-
	g) 450mm dia	QRO	RMT		-
11.15	SS Gratings	QRO	SQM		-
	Providing, supplying and fixing S S gratings with frames, in required sizes, as per drawing (650x350x100), including S S angle frame below as per drawing, the clear opening of the frame must be equal to the channel/ or chamber width; cleaning etc complete. The grating to have load capacity of 250kg. (The gratings to be from approved quality and make and as per approved sample.) (size to be changed as per the project requirement.)				
11.16	Rungs...	QRO	NO		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and fixing of MS Rungs , made with 25X5 flat with PVC cover to protect from corrosion, fixing in correct level and line with required spacing for using it at maintenance time in all tanks wherever necessary.				
11.17	Chamber covers.....				
	Providing and fixing chamber frame and covers of following size and make as per drawing and design ,and fixing in position including cleaning etc. complete...				
	A) C.I.				
	I) 600x 600mm - C.I. Chamber covers	QRO	NO		-
	II) 600x750mm- C.I. Chamber covers	QRO	NO		-
	III) 600x900mm-C.I. Chamber covers	QRO	NO		-
	B) Precast				
	I) 600x600mm- Precast Chamber covers	QRO	NO		-
	II) 600x750mm- Precast Chamber covers	QRO	NO		-
	III) 600x900mm- Precast Chamber covers	QRO	NO		-
11.18	Providing and Fixing 75mm thick R.C. Pre-cast slab	QRO	NO		-
	Providing and Fixing 75mm thick R.C. pre-cast slab. The proportion of concrete should be 1:1.5:3 and providing reinforcement of 8mm bars and 12mm bars at 4" c/c as one mat. The rates to be inclusive of all labour, material and plastering etc., completed as per the instructions (1450MMX300MMX75MM)				
11.19	Providing and fixing uPVC (6Kg/sqcm class) pipe of specified dia below (as per IS 4985-200/IS 12235) and approved make as header & water down take pipe and header with all ready made or fabricated specials, clampings, fittings, bends, accessories, socket joints and with fixings solution for leak proof joint, including MS pipe support with brackets/clamps according to manufacturer's specification including and joining as per IS 7634 part 3, and made leak proof including application of Kempert treatment to joints, junctions and testing for water tightness, including cherry picker for working on heights. Rate applicable for both on and above ground pipes. (Make- Prince). For underground pipes, excavations shall be in civil contractor's scope.				
A	110mm dia-uPVC (6Kg/sqcm class) pipe	QRO	RMT		-
B	160mm dia-uPVC (6Kg/sqcm class) pipe	QRO	RMT		-
C	200mm dia-uPVC (6Kg/sqcm class) pipe	QRO	RMT		-
E	110mm dia-External Air Vent	QRO	RMT		-
11.20	Supply and Laying Filter media Aggregates and Sand				
A	40mm Aggregates	QRO	CUM		-
B	20mm Aggregates	QRO	CUM		-
C	10mm Aggregates	QRO	CUM		-
D	12mm Aggregates	QRO	CUM		-
E	Sand	QRO	CUM		-
11.21	Cow dung slurry/anaerobic activated sludge for developing an appropriate inoculum culture for Stage 1 & Stage 2 Chambers	QRO	CUM		-
11.22	Kadapa stone 1.8m wide and 800mm height and 20mm thick	QRO	NO		-
11.23	Plants for PBFCana, Colocasia, and Papyrus	QRO	NO		-
11.24	Precast boundary wall	42	RMT		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Construction of Boundary Wall with Precast & Prestressed Concrete (1:1.5:3) Panel of Size 2.250x0.30x0.05 Mtr. And Column 0.15x0.15x1.8 Mtr. (2.10 Mtr.above Ground Level and 0.60 Mtr. Below G.L.) including fixing of Panel in Column, Cost of all material labour and T&P etc. required for proper completion of work but excluding Excavation & C.C. for grouting of column.				
11.25	Concertinawirefencing...				
	ProvidingandfixingConcertinawirefencingwithcentralsteamof18gaugeand wings of 22 gauge of hot dip galvanised, to be fixed making 3 coil patternincluding50X 50X 5mmGalvanisedMSYangleforsupportingat2.250meter/c intervals,and6verticalrow of barbedwithallnecessary fittings such as GI hook setc.includingpaintingtheanglewithtwocoatsofsyntheticenamelof fapproved shade and make, over a coat of red oxide primer etc. complete.				
	a)610mmdia.	42	RMT		-
	b)750mmdia.	QRO	RMT		-
	c)1000mmdia.	QRO	RMT		-
11.26	Barbedwirefencing...	QRO	SQM		-
	ProvidinganderectingheavilycoatedGIbarbed wirefencing comprisedofthree ply 2.8 mm dia wire strands confirming to IS : 278 (Fourth Revision)having barb spacing at 100-125mm, fixed over vertical MS angle 50x50x6 mmembeddedinconcrete(M15)upto500mmdepthat1.5mc/casperdetail drawings. With all necessary fittings such as GI hooks, cross angled embededsupoortsatevery15mlengthandateachturnetc.includingpaintingthe angles withtwo coats of synthetic enamel of approvedshadeandmake over acoatofredoxideprimeretc.complete. Note:TheverticalangletohaveYshapeabovevith threestrands ofbarbedwire on each leg. The distance between two consecutive row of Barbed wire shallnotexceed125mm.				
11.27	Motorizedslidinggate...	QRO	KG		-
	ProvidingandfixingmotorizedMSgateas per detaileddrawinganddesignusing 16 mm round bars at 125mm centre to center with 20 gauge perforatedsheet at bottom, surrounding frameof M.S anglebox, as per drawingincluding nylon guide roller with bearings, polished bright bar as bottom rail on embedded channel section, end track stopper, accessories, locking arrangements,welding,rievting,electricmotor(single/threephase),manualrelease knob for emergency operation, additional push button, key switch,remote control with receiver, magnetic loop detector, safety photocell, flashinglight, vertical safety sesor and painting the gate with two coats of syntheticenamel paint over acoat of red oxide etc. complete. with maintainance manual , testing and gurentees. The gate to be from approved supplier and as per approvedshopdrawing. Make:-Avian,Gandhi,Nirmal&Equivalent				
11.28	Manualslidinggate...	QRO	KG		-
	Providing andfixing manual sliding MS gateas per detailed drawing and design using 16 mm round bars at 125mm centre to center with 20 gauge perforatedsheetatbottom,surroundingframeofM.Sanglebox,asper drawing including nylon guide roller with bearings, polished bright bar as bottom rail on embedded channel section, end track stopper, accessories,lockingarrangements, welding, riveting,paintingthegate withtwocoatsof synthetic enamel paint over a coat of red oxide etc. complete. with maintainancemanual , testing and guarentees. The gate to be from approvedsupplierandasperapprovedshopdrawing. Make:-Avian,Gandhi,Nirmal&Equivalent				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
11.29	M.S.Openablegate...	QRO	KG		-
	ProvidingandfixingM.S.openablegateofrequired patternin framesoftubeorpipe sectionswithM.S.flats, squarebars orroundbars,18gaugeperforatedsheets etc. as per drawing including accessories, locking arrangements, welding,Rivetingandpaintingwithtwocoatsofsyntheticenamelpaint(2x25microns thick) over a coat of red oxide zinc phospet primer (60microns)etc.complete. (Contractor tosubmit Shopdrawingfor approval) Make:-Avian,Gandhi,Nirmal&Equivalent				
11.30	Telescopicentrancegate...	1512	KG		-
	Providing and fixing MS telescopic gate, single side 2-3 leafs of required pattern in frames of tube or pipe sections with M.S.flats, square bars or roundbars, 18 gauge perforated sheets etc. as per drawing including accessories,lockingarrangements,welding,riveting,electricmotor(single/threephase),manual release knobforemergency operation,additional push button, keyswitch, remote control with receiver, magnetic loop detector, safety photocell,flashing light, vertical safety sesor and painting with two coats of synthetic enamelpaint(2x25micronsthick)overacoatofredoxidezincphospaeprimer(60 microns)etc.complete.(Contractorto submitShop drawing for approval) Make:-Avian,Gandhi,Nirmal&Equivalent				
11.31	Wicketgate..	158	KG		-
	Supplyandfixingof MS wicket gate including fabrication and supplyof steel asper specifications drawing, including welding, riveting, painting the gate withtwo coats of synthetic enamel paint over acoat of redoxide etc. complete,supply of all material, labour, T&P etc. required for proper completion of workasperinstructionsofEngineer-in-charge.				
11.31	M.S.decorativerailingtothecompoundwall...	QRO	KG		-
	ProvidingandfixingM.S.decorativerailingtothecompoundwall0.5meterheightasperdetaildrawing,comprisingofverticalsupportsandgrillpanelsfixed between the supports. The supports to be embeded 300mm deep, in concrete M20 blocks below, cast into compound wall. The fabricated grill panels are to be aligned correctly and fixed between the poles by bolting/welding.Thefabricationgrillshallincludem.s.flats/roundorsquarebars, hollow tubes, hot rolledangles, shaped m.s. plates etc. All thework tobepaintedwithtwocoatsofsyntheticenamel(2x25micronthick)ofapprovedmakeand shade, over acoat ofredoxidezincphospate primer(60microns).Rate to include all scaffolding, cleaning complete.				
11.32	Chainlinkfencing	QRO	SQM		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and erecting GI Chain link fencing conforming to IS: 2721: 2003 of size 50x50mm (12 SWG/2.60mm), fixing ISMC75 box as vertical column at an interval of every 2.5 mtr, ISA 50X50X6mm frame at the top, bottom and sides of chain link panel, fixing chain link to panel with MS round bar of 6mm diameter vertically and horizontally, fixing the panel to column with bolted connection, including minimum 300x300x700mm depth grouting in concrete and all necessary fittings such as cleats, holdfast, nut bolts, washer and GI Hook set c. including zinc plating and powder coating to MS section of approved shade etc. complete.				
11.33	Openable MS gate using GI Chain link fencing	QRO	SQM		-
	Providing and fixing manual openable MS gate as per detailed drawing and design using GI Chain link fencing of size 50x50mm (12 SWG/2.60mm), surrounding frame of M.S. angle ISA 50X50X6 mm and ISMC75 as column, including accessories, Hinges, bearing, locking arrangements, welding, riveting, testing and guarantees, painting the gate with two coats of synthetic enamel paint over a coat of red oxide etc. complete.				
11.34	Sliding MS Door using GI Chain link...				
	Providing and fixing manual sliding MS Door as per detailed drawing and design using GI Chain link of size 50x50mm (12 SWG/2.60mm), surrounding frame of M.S. angle and ISMC as column, including accessories, Hinges, bearing, locking arrangements, welding, riveting, testing and guarantees, painting the gate with two coats of synthetic enamel paint over a coat of red oxide etc. complete. (Shop drawing to be prepared by contractor for approval).				
	A) GI Chain link for Sliding Door...	QRO	SQM		-
	B) Structural steel work in hot rolled M.S sections for Sliding MS Door including accessories, Hinges, bearing, locking arrangements set c...	QRO	MT		-
11.35	DWC pipes...				
	Supply, installation, testing and commissioning (SITC) of DWC pipes for electrical, storm, sewer, and road crossing comply with IS 16098 (Part 2): 2013 including all fittings such as bends, sockets, tees, reducers, flanges and plug set c. complete and sealing them after pipe jointing with approved quality jointing material.				
	A) 100mm dia. DWC pipe	QRO	RMT		-
	B) 150mm dia. DWC pipe	QRO	RMT		-
	C) 200mm dia. DWC pipe	QRO	RMT		-
	D) 250mm dia. DWC pipe	QRO	RMT		-
	E) 300mm dia. DWC pipe	QRO	RMT		-
11.36	Single Layer LDPE sheet 250 to 300 micron...	QRO	SQM		-
	Supplying & laying Single Layer LDPE sheet 250 to 300 micron with overlapping area included				
11.37	Planting large Flowering/shady trees;-(Minimum Height to 1mtr.)...	QRO	NO		-

	Planting large Flowering/ shady trees; - (Minimum Height to 1 mtr.) Digging pit with size 0.9mx0.9mx0.9m Removing & Conveying unwanted stuff to a required distance as directed. Filling the pit with approved excavated material up to a height of 0.60 m with fresh garden soil and manure thoroughly well, leveling, as directed, watering previous night. planting two or three year old, minimum 1.0m height, healthy three saplings as per specification. maintaining till well established by watering, weeding, stirring of soil, staking, replacing of casualties etc. complete. Excavation will be paid separately in Cum.				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
11.38	COMMERCIAL TYPE SUSPENDED MODULAR CEILING. (600mm X 600mm)...	QRO	SQM		-
	<p>Providing, fabricating and fixing of Suspended type modular False ceiling with Acoustic mineral fiber board with following technical specifications.</p> <p>General requisites: Grid width: 15mm thick (Similar to Silhouette with Black reveal of Armstrong or approved equivalent make). The main Runners & cross Tees to have "Quick-Release clip" system made of corrosion protected high tensile steel or approved equivalent. Proprietary supplied ceiling suspension system to consist of 2mm or 3mm GI suspension rod / wire with adjustable butterfly clip or adjustable threaded "J" bolt of 3mm dia securely affixed to structural ceiling using soffit angle fixing bracket and 10mm dia hook type anchor fastener. Ceiling suspension system to be fixed at interval (grid) of 1200mm in both directions.</p> <p>Proprietary supplied Grid System to consist of Main Runners @ 1200mm and joined by Cross Tees @ 600mm to form overall grid opening of 600mm x 600mm. Additional cross tees are to be placed where appropriate for light fixtures, AC diffusers. The grid system used shall be hot dipped galvanized steel sections, with exposed surfaces chemically cleaned and capped prefinished in high-gloss polyester enamel with two coat system on cold rolled steel.</p> <p>Grid member sizes: (all materials of Armstrong) Main runners: 15mm x 15mm x 0.45mm Cross tees: 15mm x 15mm x 0.45mm Perimeter section: 19mm x 19mm x 0.45mm Tile specification: Lay-in tile type: Similar to "Dune Max micro look" of Armstrong. Tile size: 600mm x 600mm x 20mm thick.</p>				
11.39	Suspended false ceiling...	QRO	SQM		-

	<p>Providing,fabricatingandfixingofsuspendedfalseceilingconsistingof 12.5mm thick Gypsum plaster board suspended on GI framework with staggered joints. GI framework to consist of GI perimeter channels 0.55mm thick 20mm x 30mm along perimeter of false ceiling of ceiling, screw fixed to wall/partition with nylon sleeves and screws @ 600mm c/c. Suspending GI intermediate channels of size 0.9mm thick 45mm x 15mm from the soffit at max dist 1220mm c/c with ceiling angle 0.55mm thick 25mm x 10mm fixed to soffit using proprietary supplied GI cleats and steel expansion fasteners. Ceiling section 0.55mm thick web size 51.5mm and flanges 26mm each and 10.5mm lips are fixed to perpendicular to intermediate channel @ 457mm c/c using connecting clips 12.5mm thk. tapered gypsum plasterboard (IS 2095-1982) is screw fixed to ceiling section with 25mm drywall screws @ 230mm c/c. Board to be finished with proprietary supplied jointing tape and jointing compound and sand papered to achieve a smooth and seamless finish. and 2 coats of primer suitable for plasterboard applied and two coats of soft sheen enamel paint to be applied as per manufacturer's specification. Rate quoted to include vertical drops of 250mm and all cut-outs required for light fixtures, smoke detectors and other services cutouts complete as directed by Architect. (Vendor to account for additional supports as required). Rate quoted to include cost of providing support framework for intermediate channels for fixing light fixtures, AC grills / diffusers etc., Also to provide concealed perimeter channels support as required to support modular grid ceiling sections at junction between gypsum board false ceiling and modular grid tile ceiling - Make - India Gypsum</p>				
11.40	METAL GRID FALSE CEILING...	17	SQM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	<p>Providing & Fixing of Armstrong ALUMINUM Lay in Plain metal ceiling consisting of 600x600mm Lay in tiles in 0.7 mm thick Aluminum pre coated to Global white color to be laid on Armstrong grid systems with 15mm wide T-section flanges color white having rotary stitching on the Main Runner, 1200mm & 600mm Cross Tees.</p> <p>The tiles would have Fire Performance of Class A2-s1,d0 as per EN13501 standard in module size of 600 X 600mm, suitable for Green Building application, with Recycled content of 50%.</p> <p>The grid should be of "Armstrong" make with 15mm wide T-section flanges color white having rotary stitching on all T sections i.e. the Main Runner with C3 coupling, 1200mm & 600mm Cross Tees with Hardened XL2 Clip having a web height of 38mm and a load carrying capacity of 14Kgs/M. The T Sections have a Galvanizing of 90grams per M² having pull out strength of 100 Kgs. Suspension system for Armstrong grid to be of Armstrong make. The Tile & Grid system used together should carry a 10 year warranty.</p> <p>INSTALLATION: To comprise main runners spaced at 1200mm centers securely fixed to the structural soffit using Armstrong suspension system (specifications below) at 1200mm maximum centre. The First/Last Armstrong suspension system at the end of each main runner should not be greater than 450mm from the adjacent wall.</p> <p>Flush fitting 1200mm long cross tees to be interlocked between main runners at 600mm centre to form 1200x600mm module. Cut cross tees longer than 600mm require independent support. 600x600mm module to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200mm cross tees.</p>				
11.41	Sandwich PUFPanels(Roof/wall/partition/ceiling)..50mm thickness	QRO	SQM		-

	Providing and fixing of approved make 50 mm thick Polyurethane panels for Roof/wall/partition/ceiling with puf as core insulation material between the two metal sheet. External and internal sheet thickness will be 0.50 mm TCT, PPGLSMP coated AZ 150, YS 240MPA. Coating on the external surface (exposed) 25 microns and coating on inner surface will be 5 to 7 micron. The cover width of the panel will be one mtr with density will be 40+-2kg/m3, The rate shall include supply & fixing of all accessories such as SDST screws/ Stitching screws/Rivet/Silicone sealant and colour coated sheet Flashings 0.55mm TCT etc. complete. Make:- Kingspan, Lloyd or Metecno				
11.42	Sandwich PUF Panels (Roof/wall/partition/ceiling)..80mm thickness	1238	SQM		-
	Providing and fixing of approved make 80 mm thick Polyurethane panels for Roof/wall/partition/ceiling with puf as core insulation material between the two metal sheet. External and internal sheet thickness will be 0.50 mm TCT, PPGLSMP coated AZ 150, YS 240MPA. Coating on the external surface (exposed) 25 microns and coating on inner surface will be 5 to 7 micron. The cover width of the panel will be one mtr with density will be 40+-2kg/m3, The rate shall include supply & fixing of all accessories such as SDST screws/ Stitching screws/Rivet/Silicone sealant and colour coated sheet Flashings 0.55mm TCT etc. complete. Make:- Kingspan, Lloyd or Metecno				
11.43	Sandwich PUF Panels (Roof/wall/partition/ceiling)..150mm thickness	968	SQM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Providing and fixing of approved make 150 mm thick Polyurethane panels for Roof/wall/partition/ceiling with puf as core insulation material between the two metal sheet. External and internal sheet thickness will be 0.50 mm TCT, PPGLSMP coated AZ 150, YS 240MPA. Coating on the external surface (exposed) 25 microns and coating on inner surface will be 5 to 7 micron. The cover width of the panel will be one mtr with density will be 40+-2kg/m3, The rate shall include supply & fixing of all accessories such as SDST screws/ Stitching screws/Rivet/Silicone sealant and colour coated sheet Flashings 0.55mm TCT etc. complete. Make:- Kingspan, Lloyd or Metecno				
11.44	Construction of shotcreting/Guniting..	QRO	SQM		-
	Providing & applying of shotcreting/Guniting for rock cutting facing with cement mortar, 1:3 of 30 to 50 mm thick in two layers (average 40mm each) under pressure of 2.1 to 2.80 kg. per sq. cm including reinforcement in the form of welded wire mesh of 50x50, 10 gauge and main steel of 8mm dia steel reinforcement at 300mm c/c tieing to anchors, item including equipment required for Shotcreting/Guniting, accessories such as spacing devices to ensure required steel coverage and width dimensions, and shotcrete provision for compensation on terrain wall layer where required. Providing weep holes of 150mm dia & 0.6m length at 1m per 4m2, Geocomposite strip drains, waterproofing / surface coating over the finished surface. (Including removal of vegetation's, loose scaling, or loose rocks/soil, as and where required)				
11.45	Anchoring to ground..	QRO	NOS		-

	<p>Providing&fixinganchorsintothe groundtovertical faces.TopAnchorsof25mmdiameter, Fe500, 3m lengthat1.5mspacing;BottomAnchorsof25mm diameter, Fe500, 3m length at 1.5m spacing; Surface Anchors of 25mm diameter, Fe 500, 3 m length @ 1no. per 9 m2 spacing with cleaning the hole,anchoring,grouting withcement grouting materialincluding EpoxyPaintedWasherPlates,Nuts &UClamps etc. complete.Studsshallbeepoxy coated. (drillingof 40mmdiaholefor rockanchoringof 25mmdiaanchors)</p> <p>Control and pulltests relating to the construction of the nailed wall, in particular the conformity and control pull tests on the grout and concrete.(Pulltest shall bedoneasper requirement andinstructionof siteincharge)</p>				
11.46	<p>Designing,providing,installinginpositionSiphonicroofdrainage systemfrom OEM made of HDPE pipes (as per manufacturers specifications)...</p>	QRO	LumpSum		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	<p>Designing, providing, installing in position Siphonic roof drainage system from OEM made of HDPE pipes (as per manufacturers specifications) with "selfpriming outlets" suitable for SS gutters, designed in accordance to BS EN12056: 2000 part 3, including all the accessories, fixtures, jointing, supporting elements as per the site requirements. System comprises of Primary Roof drainage system make Horizontal / vertical fastening system with suitable anchor & sliding points along with support rail in square profile / C profile, suspension element, adjustable pipe brackets and tension wedge etc. System include Supply, Fixing, jointing and testing in position the Geberit / Valsir / Wavin / Smartflow Equivalent make PIPE & fittings produced with High Density Polyethylene (HDPE), Pressure classified as PE 80 in accordance to DIN 8075 and having Density- 0.95g/cm³. All pipes must have been passed through tempering process which give the test result for heat revision of pipes as radial dimension: < 0.6 % & axial dimension: < 1.0 % when tested accordance to DIN 8075. All pipe to pipe and pipe to fittings should be Buttwelded / fusion welded as per requirement. HDPE Pipe need to supply along with necessary fittings such as bends, Tee's, Y's, access pipe and reducers, expansion socket, electro fusion couplings etc. Rate to include water tight connection to the gutters and up to the outside rain water chambers including all consumables, scaffolding, cherry picker, tools tackles and testing for water tight system (Makes- Geberit / Valsir / Wavin / Smartflow Equivalent). Emergency drainage system to be included in the scope appropriately as per design. Design rainfall intensity 125mm/hr. (Vendor to visit site)</p> <p>Warranty/Guarantee- 10 Years Guarantee is required, commencing from Date of Project Handover. The Guarantee shall cover all the defects in material and workmanship and shall require to repair, replace or rectify any issue at no additional cost to Client.</p>				
11.47	Cutouts for Utilities in the finished wall sheeting/cladding/roofing system....	QRO	SQM		-
	Providing cutouts in the finished wall sheeting/cladding/roofing system with supporting MS frame for subsequent installation of feedthroughs as directed by Project Manager and including the cost of sealing, fixing flashing as detailed or required as per site condition to make the openings/cutouts watertight by Kempert treatment as approved by client				
	SUB-TOTAL OF MISCELLANEOUS ITEMS				-
12.00	SECTION-12: SANITATION AND PLUMBING				
	NOTES:-				
	1) Please note that, the contractor / subcontractor has to quote considering all required accessories mentioned in the BOQ and with additional requirement (if any) to make the system full proof in overall aspects & make it functional. No further deviation will be accepted.				
	2) Supply installation Testing commissioning of the system is the part of the scope of work of the contractor/subcontractor.				
	3) All the works to be carried out as per relevant IS specifications, whether or mentioned in description of works or not.				
	4) The quoted rates shall include for providing brackets, clamp set etc., in ducts and in ceiling for drawing and supporting the pipes etc., two coats of enamel painting for the brackets, colour coding the exposed pipe works, identification labels, making bores in masonry/RCC, chasing the surfaces for concealed plumbing and making good the chased surfaces and bores in CM 1:2:4/PCC 1:2:4 curing etc., complete.				

	5) If Employer supplies all the required CP and Sanitary fittings, the successful bidder has to fix them in position with their tools, tackles and the required fixing materials like thread, paint, screws, sand, cement, metal and bricks etc., complete.				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	6) All Materials including Sanitary & CP fittings are as per the approved list. All Sanitary ware shall be of White Colour unless otherwise stated in the BOQ.				
	7) The Plumbing Contractor shall co-ordinate with the Civil Contractor and shall arrange for all sleeves/ cut-outs to be left in RCC works before casting. No additional payment shall be made to the contractor in case, the sleeves/ cut-outs are not left at site.				
	8) The Plumbing Contractor shall prepare and submit Shop Drawings to Consultants for approval with sufficient time for review to ensure that site progress is not hampered.				
	9) All material submittals shall be submitted to Consultants for approval before procurement.				
12.01	Indian WC...	QRO	NO		-
	Supply, installation, Testing & commissioning (SITC) of in position INDIAN WATER CLOSET from 'Hindware or Cera' Sanitary ware at required line & level including : 1) Coloured glazed earthenware WC pan having right angled corners only with front inlet and size 580 X 440 mm, P or S trap, outlet pipe upto outside face of wall until the vertical stack, its jointing, sealing the holes in wall properly, 2) Including flush tank with dual flush. 3) Including the necessary brick seat around the pan with 1:2:4 cement concrete bedding 35mm thick complete. 4) Jaguarmaketwo way cock with CP health faucet with all accessories with 1.50 meter long flexible tube of 12mm dia etc. complete. 5) Basic rate of WC pan Rs. 2400				
12.02	Wall mounted EWC...				
	Supply, installation, Testing & commissioning (SITC) of in position EUROPEAN WATER CLOSETS from 'Hindware/Cera' Sanitary ware (Wall mounted) at required line and level including Cistern with twin flow arrangement with allowed flow range of 1 lpf to 5 lpf.: 1) Colour glazed earthenware EWC pan of approved make with integral P or S trap, all fixtures and fastenings, C.I. connection up to soil pipe at the outer face of the wall., sealing the holes in wall properly, Making necessary inlet and outlet connection in the wall and the slab in all respect including connection between flush tank and the commode and outlet with soil pipe. 2) Including flush tank with dual flush. 3) Jaguarmaketwo way cock with CP health faucet with all accessories with 1.50 meter long flexible tube of 12mm dia etc. complete. 4) mounting brackets with matching bolts and nuts 5) Heavy approved quality commode seat and cover with CP brassing, rubber bushes. (1 No.)				
	A) Basic rate of Wall mounted EWC Rs 8100	4	NO		-
	B) Basic rate of Wall mounted EWC Rs 11000	QRO	NO		-
12.03	Sensor urinal...				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Supply, installation, Testing & commissioning (SITC) URINALS WITH BATTERY OPERATED SENSORS at required places and level as per drawing including: 1) Sensor urinal from 'Hindware/Cera' Sanitary ware. 2) Brass CP distribution pipes from the sensor to urinals with the necessary special such as clamp spreaders, including fixing the same in concealed C.I. brackets. CP spreader, CP dome shaped waste coupling, PVC P trap with flanges flush pipe making inlet and outlet connections. etc. 3) 32 mm dia Brass CP heavy duty bottle trap and required length of 32 mm dia concealed outlet pipe. 4) Stopcock of 'Jaguar' or Equivalent Make. (Basic rate Rs.1100) 5) CP Brass waste coupling. 6) Polyurethane urinal screen of 150 mm size minimum.				
	A) Cera 'Calcia EFS' touchless urinal Cat No.: S4010101 (White)	QRO	NO		-
	B) Hindware edge sensor urinal Cat No.: 96015 (White)	QRO	NO		-
12.04	Urinal with pushcock...				
	Providing and fixing 'URINALS WITH PUSH COCK' at required places and level as per drawing, including urinal with auto closing type control flush cock/valve with wall flange : All fittings of CP to be 'Jaguar' or equivalent approved make. 1) Flat back largest standard urinal from 'Hindware' Sanitary ware catalogue no- 60002. 2) Brass CP distribution pipes from push cock or flush valve to urinals with the necessary special such as clamps and spreaders etc 3) 32 mm dia Brass CP heavy duty bottle trap and required length of 32 mm dia concealed outlet pipe. 4) Auto closing concealed urinal flush valve or auto closing system urinal valve (Basic rate Rs.2100) 5) CP Brass waste coupling. 6) Polyurethane urinal screen of 150 mm size minimum.				
	A) Starwhite (Urinal with pushcock)	QRO	NO		-
12.05	Washbasin (Under counter)...	QRO	NO		-
	Supply, installation, Testing & commissioning (SITC) of in position WASH BASIN (Under counter) at required line and level including : A) Coloured glazed earthenware wash basin from Hindware sanitary ware. of approved type. B) 32 mm dia brass CP bottle trap with CP brass waste coupling and using plumbers putty for all joints, and 32 mm dia concealed outlet pipe up to the nearest drain trap. C) Feed pipe with all Brass special. D) Fixing on 12 mm dia Brass CP press/push type auto closing system pillar tap of "Jaguar" make. (Basic rate Rs.2400) E) 12 mm dia Brass CP heavy angle stop cock - one no. of "Jaguar" make. (Basic rate Rs.1100) F) 12 mm dia. flexible pipe supply from angled stopcock. G) Basic rate of basin Rs.4100				
12.06	Washbasin (over counter)...	QRO	NO		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Supply, installation, Testing & commissioning (SITC) of in position WASHBASIN (over counter) at required line and level including : A) Coloured glazed earthenware wash basin from Hindware sanitary ware. B) 32mm dia brass CP bottle trap with CP Brass waste coupling and using plumbers putty for all joints and 32 mm dia concealed outlet pipe up to the nearest nahanitrap. C) Feed pipe with all Brass specials. D) Fixing on one 12mm dia Brass CP "Jaguar" make sensoronic sensor faucet of catalogue no SNR-CHR-51021. E) Fixing one no. of 12mm dia Brass CP "Jaguar" make angle stop cock (Basic rate Rs. 1100) F) 12 mm dia. flexible pipe supply from angled stop cock. G) Basic rate of basin Rs. 4500				
12.07	Wall hangor pedestal mounted wash basin...	2	NO		-
	Supply, installation, Testing & commissioning (SITC) of in position wall hangor pedestal wash basin at required line and level including: A) Coloured glazed earthenware wash basin from Hindware sanitary ware. of approved type. B) 32mm dia brass CP bottle trap with CP brass waste coupling and using plumbers putty for all joints, and 32 mm dia concealed outlet pipe up to the nearest nahanitrap. C) Feed pipe with all Brass specials. D) Fixing on one 12mm dia Brass CP press/push type auto closing system pillar tap of "Jaguar" make. (Basic rate Rs. 2400) E) 12mm dia Brass CP heavy angle stop cock - one no. of "Jaguar" make. (Basic rate Rs. 1100) F) 12mm dia. flexible pipe supply from angled stop cock. G) Basic rate of basin Rs. 4100				
12.08	Kitchen sink	QRO	NO		-
	Supply, installation, Testing & commissioning (SITC) of "Carysil" make kitchen sink of Carysil Vogue Single Bowl With Drainer, of bowl size 400 x 200 x 90mm, over the kitchen platform with 32mm bottle trap, 300mm long wall connection pipe of approved make & CP waste coupling; including providing and fixing G.I. waste pipe of 32mm dia 'C' class (approved make) below the sink up to Nahanitrap through required fixing arrangement like Jamnut, cleaning the whole assembly, testing against leakages etc. complete with as per the direction of the architect. The angle stop cock and swan neck tap from Jaguar should be included in quoted rate.				
12.09	Nahanitrap...				
	Supply, installation, Testing & commissioning (SITC) of in position 110mm dia NAHANI TRAP including necessary beddings, up to the outside face of the wall and stainless steel heavy type grating with ring of approved type complete.				
	A) CI	QRO	NO		-
	B) SWR Pipes (Make: Astral/Finolex/Prince)	4	NO		-
12.10	Urinal trap...	QRO	NO		-
	Supply, Installation, testing and commissioning in position 110mm dia urinal trap including necessary beddings, up to the outside face of the wall and stainless steel heavy type grating with ring of approved type complete.				
12.11	Multifloor trap...	QRO	NO		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Supply, Installation, testing and commissioning in in position 110 mm dia multifloor trap including necessary beddings, up to the outside face of the wall and stainless steel heavy type grating with ring of approved type complete.				
12.11	Gullytrap...	2	NO		-
	Supply, Installation, testing commissioning of prefabricated Gully Trap of 300X 300 mm wide and 450 mm depth to be installed out side the toilet block as shown in the drawing with 5T capacity chamber cover including required civil works.				
12.11	CI Pipes...				
	Providing, fixing in position & jointing CI Pipes (Heavy Duty) with all specials such as bends, tees, single junctions, double junctions, offsets, cowls etc. with appropriate jointing, including making holes in walls & floors, testing the line and joints, painting the exposed pipes with two coats of synthetic enamel paint over a coat of primer wherever specified etc. complete.				
	A) 80 mm dia. wastepipe- CI Pipes	QRO	RMT		-
	B) 100 mm dia. wastepipe- CI Pipes	QRO	RMT		-
12.12	UPVC Pipes...(for soil, wastewater).				
	Supplying and fixing UPVC Pipe 'ASTRAL' make conforming to IS 13592 and pipe specials conforming to IS 5382, cutting to required length, fixing pipe specials like tee, reducer, Y, bend, coupler etc. along with P.V.C. Pipe, using solvent cement solution to pipes of 75 mm dia to 160 mm dia laying the pipe to a gradient for works below floor level with 150 mm thick gravel of 15 mm size all around the embedded pipe, fixing the pipe and pipe specials in vertical locations using pipe clamps connecting to brackets, the distance of supporting clamp should be at every 1.8 meter distance max vertically and 0.9 meter horizontally, making holes in masonry, cutting grooves to conceal the pipes, restoring damaged portion to their original condition using cement, river sand, bricks, jelly etc. conducting water test for leak proof joints Fixing & removing scaffolding for pipe work in all location etc. complete.				
	A) 160 mm pipe work-UPVC Pipes	QRO	RMT		-
	B) 110 mm dia pipe work-UPVC Pipes	13	RMT		-
	C) 90 mm dia pipe work- UPVC Pipes	10	RMT		-
	D) 75 mm dia pipe work- UPVC Pipes	10	RMT		-
	E) 50 mm dia pipe work- UPVC Pipes	QRO	RMT		-
12.13	CPVC Pipes...				
	Supplying and fixing CPVC 4120, SDR 11 Plastic Pipe As Per ASTM D-2846 Pipes of 'ASTRAL' make conforming to IS 13592 and pipe specials conforming to IS 5382, cutting to required length, fixing pipe specials like tee, reducer, Y, bend, coupler etc. along with P.V.C. Pipe, using solvent cement solution to pipes, laying the pipe to a gradient for works below floor level with 150 mm thick gravel of 15 mm size all around the embedded pipe, fixing the pipe and pipe specials in vertical locations using pipe clamps connecting to brackets, the distance of supporting clamp should be as per manufacturer's specification, cutting grooves to conceal the pipes, restoring damaged portion to their original condition using cement, river sand, bricks, jelly etc. conducting water test for leak proof joints Fixing & removing scaffolding for pipe work in all locations etc. complete.				
	A) 15 mm dia.-CPVC Pipes	15	RMT		-
	B) 20 mm dia.-CPVC Pipes	QRO	RMT		-
	C) 25 mm dia.-CPVC Pipes	25	RMT		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	D)32mmdia.-CPVCPipes	QRO	RMT		-
	E)40mmdia.-CPVCPipes	QRO	RMT		-
	F)50mmdia.-CPVCPipes	QRO	RMT		-
	G)75mmdia.-CPVCPipes	QRO	RMT		-
12.14	Glpipes...				
	ProvidingandinstallingCclass,TATAMAKE(orotherapprovedmake)G.I.Pipes, 'R' Brand G.I. Pipe specials, applying 3coats of anti corrosive paint wherever pipesarelaidbelow groundlevel orconcealedinwall orfloors, applying2coatsofEnamelpaintofapprovedmakeandshadeorexposedpipe, wrappingwith Hessiandcloth dipped in hot bitumen for pipe portions whenlaid in trenchor underground, makingexcavationto requiredlength,width,depth upto1.5M below groundlevel inall kinds of soil (other than inrockrequiringblasting),cuttingpipestorequiredlengths,makingthreadedends,Usings ealingcopmpoundoverthethreadedpartbeforjoining,fixingtoG.I.Pipe specials, installingpipes to a perfect level, alignment, including chasing inmasonry toconcealthepipes,making holes,restoringthedamagedportions totheiroriginalcondition,conductinghydraulictesttoapressureof7KG/CM2 etc.complete.				
	A)15mmdia.Open/concealed-Glpipes	QRO	RMT		-
	B)20mmdia.Open/concealed-Glpipes	QRO	RMT		-
	C)25mmdia.Open/concealed-Glpipes	QRO	RMT		-
	E)32mmdiaOpen/concealed-Glpipes	QRO	RMT		-
	F)50mmdia.Open/concealed-Glpipes	QRO	RMT		-
12.15	Longbodytwowaybibcock...	QRO	NO		-
	Providing andfixing 'Jaguar' or equivalentmakelong body CP twoway bibcock 15mm diaof approvedquality andmakewithall specials, fittings etc.complete. (Basic rate Rs. 1100)				
12.16	LongbodyBibcock...	QRO	NO		-
	Providing andfixing 'Jaguar' or equivalent make longbody CP bib cock15 mmdiaof approvedquality withall specials, fittings etc. complete. (BasicrateRs.1100)				
12.17	ShortbodyBibcock...	QRO	NO		-
	Providingandfixing'Jaguar'orequivalentmakeshort bodyCPbibcock 15mmdiaof approvedquality withall specials, fittings etc. complete. (BasicrateRs.1400)				
12.18	Stop cock...	QRO	NO		-
	Providingand fixing'Jaguar'orequivalentmakeCPangularstop cockof 15mmdiaof approvedqualitywithall specials, fittingsetc. complete. (BasicrateRs.1100)				
12.19	Pillarcock...	QRO	NO		-
	Providing and fixing 'Jaguar' or equivalentmake CP pillar cock 15 mm dia ofapproved quality with all specials, fittings etc. complete. (BasicrateRs.1500)				
12.20	SwanNeckTap..	QRO	NO		-
	Providingand fixing 'Jaguar' orequivalent make Swan Neck Tap of15 mmdiaof approved quality with all specials, fittings etc. complete. (BasicrateRs.1800)				

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
12.21	Sensorfaucetforwashbasin...	QRO	NO		-
	Providingandfixing'Jaguar'orequivalentmakeCPsensorfaucetforwashbasin 15 mm dia of approved quality with all specials, fittings etc. complete. (BasicrateRs.10000)				
12.22	Pushcock...	QRO	NO		-
	Providing and fixing 'Jaguar' or equivalent make CPpush cock 15 mm dia of approved quality with all specials, fittings etc. complete. (BasicrateRs.1500)				
12.23	Healthfaucet	QRO	NO		-
	Providingandfixing'Jaguar'orequivalentmakeCPhealthfaucetwithallaccessories with 1.50 meter long flexible tube of 12 mm dia etc. complete. (BasicrateRs.1500)				
12.24	ToiletPaperholder...	4	NO		-
	Providing and fixing 'Jaguar' or equivalent make paper holder in toilets with all specialsetc.complete. (BasicrateRs.1200)				
12.25	WashBasinTissuePaperDispenser...	QRO	NO		-
	Providingand fixingapproved makewashbasintissue paperdispenser withallfixtures and fasteners and specials etc. complete. (BasicrateRs.5000)				
12.26	Towelrod...	6	NO		-
	Providingandfixingtowelrodo'Jaguar'orequivalentmakeintoiletsandbathroomwithal l fixtures, fastenersandspecialsetc. complete. (BasicrateRs.1300)				
12.27	Soapdish...	QRO	NO		-
	Providing and fixing "jaquar" or equivalent make soap dish in toilets includingfixing in position and in line and levelwith cement slurry,curing,cleaning etc.complete.(Basicrate-Rs450)				
12.28	SoapDispenser...				
	Providing and fixing 'Jaquar' or approved make soap dispenser with all fixtureand fasteners etc.complete.				
	A)Automatic(Caltlogno-)(basicrateRs-6880).	QRO	NO		-
	B)PushButton(Catlogno-)(basicrateRs-1180)	2	NO		-
12.29	WallmountedPapertoweldispenser	QRO	NO		-
	Providing and fixing 'Jaquar' or approved make wall mounted paper toweldispenser including fixture and fasteners etc.complete (Catlog no-) (basic rate Rs-5600)				
12.30	Handdryer..				
	Providing and fixing Euronics make hand dryer near basin in toilets includingfixinginpositionandinlineandlevelorequivalent.				
	A)Model: EH26NW	QRO	NO		-
	B)Model:EH24S	QRO	NO		-
12.31	W.CBrushholder				
	Providingand fixing'Jaguar'orapprovedmakeBrushholderin W.Cwithall specialsetc.				
	1.KubixprimeW.cbrushholder(AKP-CHR-35743P)(basicrateRs-1570)	QRO	NO		-
	2.ContinentalW.cBrushHolder(ACN-CHR-1143N)(basicrate-1130)	QRO	NO		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
12.32	Disposalbucket...				
	Supply,Installation,testing&Commissioningofapprovedmakeandcolour disposalbuckets.	QRO	NO		-
12.33	Flushvalves...				
	Providing and fixing 'Jaguar' or equivalent make approved CP flush valve withall fixtures, fasteners and specials etc. complete.				
	A)32mm(BasicrateRs.3000)-Flushvalves	QRO	NO		-
	B)40mm(BasicrateRs.3200)-Flushvalves	QRO	NO		-
12.34	Mirror...	3	SQM		-
	Supplying mirror made of imported plate glass of 6mm thick silvering to high standardproviding12mmthickplywoodtobackmirrorapplying3coats enamel paint to wooden surfaces making holes on mirror and wood fixingmirror towall dado withsuitable chromium plated detachable head screws etc.complete. (Contractor to produce samples for approval).				
12.35	SINTEX'tank...	QRO	LITER		-
	Providingandfixing"SINTEX"makewaterstoragetankofrequiredcapacityincluding all connections, accessories, transportation, hoisting, erection etc.complete including giving test against leakages.				
12.36	BallValves...				
	Providing and fixing Heavy Quality Gun Metal Ball Valves with stainless steel ballcomplete.				
	A) 25mmdia.- BallValves	QRO	NO		-
	B) 32mmdia.- BallValves	QRO	NO		-
	C) 40mmdia.- BallValves	QRO	NO		-
12.37	Gatevalves...				
	Providingandfixingapprovedmakegunmetalfushvalvesetc.complete				
	A) 25mm dia. -Gatevalves	2	NO		-
	B) 50mm dia. -Gatevalves	QRO	NO		-
	C) 75mmdia.-Gatevalves	QRO	NO		-
12.38	CPhotandcoldmixer...	QRO	NO		-
	Providing and fixing 'Jaguar' or equivalent make CP brass hot and cold mixerof approved quality with all specials including testing for water tightness, fittings, cleaning, etc. complete. (BasicrateRs.4500)				
12.39	Showerwitharmpipe....	QRO	NO		-
	Providing andfixing 'Jaguar' or equivalent makeCP shower witharm pipe withallspecials,fittings etc.complete. BasicrateRs. 2500)				
12.40	WaterTankSystem				
A	ProvidingandfixingtriplelayersISmarkLofttankwithnecessaryplumbingfittings in GI C class pipe like tank Nipple , Overflow Pipe and ball cock ectcomplete required to complete the system- 2000 liters	1	NO		-
B	ProvidingandfixingtriplelayersISmarkWaterstoragetankwithnecessaryplumbing fittings in GI C class pipe like tank Nipple , Overflow Pipe and ballcock ect completetorequiredtocompletethesystem- 5000liters	QRO	NO		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
12.41	GI Fabricated FM Approved Bolted Fire tank	50000	LTR		-
	Supply & installation of FM Approved Bolted Fire tank with GI Panel of 600gsm coating natural Zinc colour, Reinforced PVC liner, roof trusses 5 mm thick, roofing of 0.5mm zinc alumesteel & required nutbolts, PVC Caps, fittings & circumferential railing at the top with cage ladder & HDG Internal HDG ladder. (Make: COEP/Rostfrei/equivalent)				
12.42	Supply, installation, testing & commissioning of exposed on wall faces, floor, shaft & Terrace following sizes of Lead Free Solvent Weld Schedule 40 UPVC Pipes conforming to ASTM D 1785 for water supply including provision of all fittings such as elbows, Tees, unions, reducers etc. as per ASTM D 2467, cutting of pipes, jointing with solvent cement joints as per manufacturer's specifications, hydraulic testing, including holes in walls, slabs etc. provision PVC coated GI clamps & necessary MS brackets 50mm X 6mm with 100 microns hot dip Galvanizing and making good the damages by bringing them to good original condition, etc. complete as directed by the engineer-in-charge. (From UGT to Shaft for Domestic, Flushing Rising Main & Irrigation Pipe)				
A	50mm dia-UPVC Pipes	QRO	RMT		-
B	40mm dia-UPVC Pipes	QRO	RMT		-
C	32mm dia-UPVC Pipes	QRO	RMT		-
D	25mm dia-UPVC Pipes	QRO	RMT		-
E	20mm dia-UPVC Pipes	QRO	RMT		-
F	15mm dia-UPVC Pipes	QRO	RMT		-
12.43	Supply, installation, testing & commissioning of cPVC Pipe of SDR11 of following sizes for inside toilet with all necessary fittings & accessories like tees, bends, elbows, reducers, unions, nipples, etc. / including concealing the pipes in walls or under floors, making chases in the walls, fixing in the wall with clamps and making good the wall surface etc. complete hydraulic pressure testing conforming to ASTM D-2846 for water supply after laying the pipes as specified including making holes in the walls or floors as required and making good to the damages by bringing them to good original condition and complete in all respects including redoing the plaster to original condition complete as directed by engineer-in-charge.				
A	50mm dia-cPVC pipe	21	RMT		-
B	40mm dia-cPVC pipe	QRO	RMT		-
C	32mm dia-cPVC pipe	QRO	RMT		-
D	25mm dia-cPVC pipe	QRO	RMT		-
E	20mm dia-cPVC pipe	QRO	RMT		-
F	15mm dia-cPVC pipe	QRO	RMT		-
12.44	Supply & installation of insulation to hot water pipe for connection between geyser to mixer of following diameter with elastomeric nitrile rubber sleeve of approved make of 9 mm thickness concealed into toilets including covering the nitrile rubber with a protective tape and fire retardant resin etc. complete as directed by engineer-in-charge. (Rate to be quoted per m of pipe length)				
A	15mm-insulation to hot water pipe	QRO	RMT		-
12.45	Providing and fixing forged brass ball valve with forged brass balls suitable for operating pressure of not less than 10kg/sq.cm of the following size (Cost shall be inclusive of providing necessary union/flange connection)				
A	50mm dia- forged brass ball valve	1	NO		-
B	40mm dia- forged brass ball valve	QRO	NO		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
C	32mmdia- forgedbrassballvalve	QRO	NO		-
D	25mmdia- forgedbrassballvalve	QRO	NO		-
E	20mmdia- forgedbrassballvalve	QRO	NO		-
F	15mmdia- forgedbrassballvalve	QRO	NO		-
12.46	Supply, installation, testing & commissioning of Wafer Type Butterfly Valves with Body of Cast Iron, Disc of Cast Iron/Stainless Steel and body lining of EPDM / Nitrile Rubber including jointing with Galvanised Iron pipes including hydraulic testing (Operating pressure not less than 10 Kg/Sq.cm) etc. complete as directed by the engineer-in-charge.				
A	80mmdia-WaferTypeButterflyValves	QRO	NO		-
B	65mmdia-WaferTypeButterflyValves	QRO	NO		-
C	50mmdia-WaferTypeButterflyValves	QRO	NO		-
12.47	Supply, installation, testing & commissioning of Air Release Valve of 15mmdia on top of downtake with forged brass ball valve complete with all accessories as required.				
A	15mmdia-AirReleaseValve	1	NO		-
12.48	PUMPS AND ANCILLARY ITEMS				
12.48.1	Supply, Installation, Testing & Commissioning of Stainless Steel vertical Pump Sets consisting of 1 Working & 1 Standby pump having Built-in Overload Protection, Motor Housing, Suction Plate, Bottom Screen & all nut, bolt & washer to be of stainless steel, Motor Cover & Pump Housing to be of corrosion proof Cast Iron, Pump to have Stainless Steel Impeller & Double Mechanical seals in oil chambers, including necessary supports (Hot dip galvanised supports)/foundations, Main Suction Header & Delivery Header along with Y Strainers, Isolation and N.R valve, Pressure Gauges & Pressure Switches, anti vibration pad, skid all necessary fittings, and Cable from Panel to the individual pumps etc. complete as per directions of engineer in charge.				
	Contractor to submit the GA drawing along with the Control layout to the Consultants before manufacturing of the same.				
A	Domestic Pumps (Pump Discharge=5Cu.m./ Hr, Head=25m)(1W+1S)	1	NO		-
B	Flushing Pumps (Pump Discharge=5Cu.m./ Hr, Head=25m)(1W+1S)	1	NO		-
	Note:-				
	Contractor to note that the suction header is required to have inlet connection from the Puddle Flange @ water tanks and to the pump suction. Provision of delivery header is required to have outlet connection from the pumps. Suitable outlet flanges from the delivery main fold/headers shall be provided as required.				
	SUB-TOTAL OF SANITATION AND PLUMBING				-
13.00	SECTION- 13: ROADWORK				
	All relevant MORTH specifications in the following items are latest edition 5				

13.01	GranularSubBase(250mmorasrequiredbydesign)...	30	CUM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing&layingGranularSubbaseofcompacted(200mmthk.)requiredthicknessusing wellgradedaggregatesoftrappedstones andas pergradationincluding compacting withVibratory roller10MTtoachievethe desireddensityof 97%of maximum drydensity obtainedfrom laboratory test asper IS 2720(part 8) and moisture content before compaction shall be +/- 1%of Optimummoisture content. Camber and super elevation shall be maintained as perinstructionofEIC.Materialshallbespreadwiththehelpofmotograderofadequate capacity.Itemincludesallmateriallabourequipmentsmachinery testingandincidentalsrequiredtocompletethejobasperclause400of MORTH specification. Frequency of testing should be as per relevant clause.				
13.02	WetMixMecadam(200mmorasrequiredbydesign)...	15	CUM		-
	Providing&laying,spreading&compactinggradedcrushedstoneagregatetowet mix macadam satis faction including pre mixing the material with water toOMC in mechanical mix (pugmill) carriage of mix material by tipper to sitelaying in unifoMeter layer of75mm to 100mm (compacted thickness each) withsensor paver finisher on prepared subbase & compacting with vibratory roller(10tonne) to achieve desired density including lighing, guarding barricating&maintenance of diversion etc. asdirected by the Engineer, (Rebate for notusingsensorpavershouldbetaken:- MORTH-406				
13.03	DenseBituminousmacadam(compactedthickness85mmthk)...	13	CUM		-
	Provingandlayingdensebituminousmacadamusingcrushed aggregatesofspecified grading premixed with bituminous binder @ 4.50 per cent by weightoftotalmixandfiller,transportedtositewithVTS,laidoverapreviously prepared surface,finished to the requiredgrade,level,alignment,and rollingtoachieve the desired compaction VG-30 Bitumen, using 80 TPH Batch mix typehot mix plant with Sensor Paver, Intelligent Compactor with compactionanalyzerandV-SatattachmentwithStoneDustfiller.Spec.No.:AsperMORTHspecification EditionClauseNo.505andIRC-SP-97-2013				
13.04	PrimeCoat...	150	SQM		-
	Proving andapplying prime coat with bitumen emulsion on prepared surface ofgranular subbsae includingcleaningof road surface and spraying primer attherateof0.6kg/sqmusingsmechanicalmeans. Spec.No.:AsperMORTHspecification				
13.05	BITUMINOUSCONCRETEONEXISTINGROAD...	QRO	CUM		-
	Providingandlayingbituminousconcreteonexistingroadssurfaceusing crushed aggregates of grading 1, premixed with bituminous binder @ 5.20 percentbyweightoftotalmixandfiller,transportedtositewithVTS,laidoverapreviously available road surface, rolling toachieve thedesired compaction for25mmcompactedthickness withspecified gradeof Bitumen.For Bitumenofspecified grade USING Batch mix type hot mix plant with SCADA, SensorPaver,Vibratory roller with Stone Dust filler. (VG-30 bulk bitumen to be consiedred). The scopeincludes,makingall necessarypreparations ofexistingtop surface to receive the final layer of Bitumen concrete including tack coat inrequiredgradeandlevel.MORTHSpec509				

13.06	BITUMINOUS CONCRETE FOR NEW ROAD WORK...	6	CUM		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Providing and laying bituminous concrete using crushed aggregates of grading 1, premixed with bituminous binder @ 5.20 per cent by weight of total mix and filler, transported to site with VTS, laid over a previously prepared surface, finished to the required grade, level, alignment, and rolling to achieve the desired compaction for 40mm compacted thickness with specified grade of Bitumen, Excluding prime / tack coat. For Bitumen of specified grade USING Batch mix type hot mix plant with SCADA, Sensor Paver, Vibratory roller with Stone Dust filler. (VG-30 bulk bitumen to be consigned) MORTH Spec 509				
13.07	Providing and applying tack coat on the prepared surface heating by flames in Boiler and spraying bitumen 80/100 grade with sprayer on B.T. surface @ 3kg/10M ² . VG-30 bulk Spec. No.: MORTH-503	300	SQM		-
13.08	Seal Coat...	150	SQM		-
	Providing and laying premix seal coat 15mm thick for sealing the voids in the bituminous surface laid to specified levels, grade and cross fall using Type B seal coat with bitumen grade 80/100 (VG-10) at 1.5 kg per square meter and spreading grit, brushing, rolling, etc. complete as per clause no 511 of MORTH specification and as directed by engineer in charge. The rate includes sealing voids and cross fall using Type A seal coat using 60/70 bulk if required before laying seal coat B.				
13.09	VDF flooring With RMC for Road..				
	Providing and laying design mix reinforced cement concrete of following Grades for floor in bays including PVC sheet of 300 micron below the floor, laps of 200 mm at the joints, leveling the concrete surface, providing VDF treatment to the cement concrete floor comprising of screed vibrating, bull floating, power floating and power trowelling, finishing with required texture, curing by ponding for 14 days, panel size 4m x 4m, groove cutting of 6x15mm, filling semi-rigid epoxy joint filler of approved make, cleaning, etc complete. The ready mix concrete design using appropriate fly ash be approved by prior to execution. Vendor to give batch wise certificate for every lot. The quoted rate is inclusive of barricade in tarpauline to arrest dust in nearby areas, nali gutter to road side. (Rate for Reinforcement, M S Bar bars & M S Angles at expansion joint to be paid separately in relevant item). (The VDF surface to be thoroughly cleaned with washing, manual scraping of all the adhered dust, after the curing is over And the concrete surface should be completely dry).				
	I) For M25 Grade-Road-(with broom finish & tikitar joint filling)	QRO	CUM		-
	II) For M30 Grade-Road-(with broom finish & tikitar joint filling)	19	CUM		-
13.10	Expansion Joint in Concrete Floor-Road	QRO	RMT		-
	Providing and fixing expansion joint system as per approved drawing by the consultant using MS angle and necessary accessories complete...				
13.11	Road curbing...(Curbstone)	53	RMT		-

	Providing and fixing road curbing with precast blocks from approved supplier and as per approved sample, of size 450X300X150mm thk including excavation, backfilling and joining the slabs in CM 1:4. The bottom of 150 mm curb shall be grouted with concrete 1:2:4 to hold in position before backfilling etc. complete. The chamfered edge of the precast block to be on road side.				
13.12	Paving blocks of approved make like.....				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Providing and fixing rubber moulded concrete interlocking paving blocks of approved colour & make like Shivam, Innovative, etc by providing 50mm stone dust bed below with line and level as per supplier's specification complete.				
	a) 60mm thick blocks with comp. Strength min. 35N/mm²	QRO	SQM		-
	b) 80mm thick blocks with comp. Strength min. 40N/mm²	QRO	SQM		-
13.13	Thermoplastic Paint	QRO	SQM		-
	Providing and laying of hot applied thermoplastic compound 2.5mm thick in width including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes all complete as per Technical specifications and as directed by the Engineer-in-charge.				
13.14	Rubber road hump...	QRO	RMT		-
	Providing and fixing heavy duty pre-moulded road hump/speed breakers of approved make, (750x250x50mm), and as per approved mockup; made of Carbon Black Mixed rubber, with additive of LDPE for reinforcement and UV resistant colouring agent or pure epdm, The pre-moulded hump blocks to have glass elements/reflector to provide better visibility in the night, and to have grooved surface to help better rainwater drainage. Four Metal washer bonded grooves for fixing Bolts to anchor the hump to the road. Work to include all fixtures, fasteners and cleaning etc complete.				
13.15	Parking/Road marking Strips	QRO	RMT		-
	Providing and painting parking/ road marking strips 100 mm wide on concrete road/ parking surfaces in straight or curved lines as per drawing with two coats of water based road marking paint from Asian or equivalent make and of approved shade, cleaning etc complete, including cleaning the surface before painting with wire brush and making it dust / oil / grease free, washing and drying thoroughly.				
13.16	Boom barrier...				
	Providing and fixing Rod type Entry Barrier on road as located in the drawing, of approved make and type, fully steel construction, scratch proof painted, compact gear operated, with all installation, cabling, control panel assembly etc complete with testing. The installation to have following fixtures: and guarantee. Release arrangement for manual opening obstacle detecting system, speed adjustment, opening, partial opening and closing command; Hold-to-run command; UPS backup for 15min, reverse movement safety arrangement etc.				
	a) Size 3.5m boom	QRO	NO		-
	b) Size 4.5m boom	QRO	NO		-
	c) Size 6.0m boom	QRO	NO		-
	d) Size 9.0m boom	QRO	NO		-
	SUB-TOTAL OF ROADWORK				-

14.00	SECTION-14:STORMANDWASTEWATERNETWORK				
14.01	UPVCPipes...(forsoil,wastewater)...				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Supplying and fixing UPVC Pipe 'ASTRAL' make conforming to IS 13592 and pipe specials conforming to IS 5382, cutting to required length, fixing pipe specials like tee, reducer, Y, bend, coupler etc. along with P.V.C. Pipe, using solvent cement solution to pipes of 75 mm dia to 160 mm dia laying the pipe to a gradient for works below floor level with 150 mm thick gravel of 15 mm size all around the embedded pipe, fixing the pipe and pipe specials in vertical locations using pipe clamps connecting to brackets, the distance of supporting clamp should be at every 1.8 meter distance max vertically and 0.9 meter horizontally, making holes in masonry, cutting grooves to conceal the pipes, restoring damaged portion to their original condition using cement, river sand, bricks, jelly etc. conducting water test for leak proof joints. Fixing & removing scaffolding for pipe work in all location setc. complete.				
	A) 160 mm pipe work-UPVC Pipes...	QRO	RMT		-
	B) 110 mm dia pipe work-UPVC Pipes...	11	RMT		-
	C) 90 mm dia pipe work-UPVC Pipes...	QRO	RMT		-
	D) 75 mm dia pipe work-UPVC Pipes...	QRO	RMT		-
	E) 50 mm dia pipe work-UPVC Pipes...	QRO	RMT		-
14.02	Chamber covers...				
	Providing and fixing chamber frame and covers of following size and make as per drawing and design, and fixing in position including cleaning etc. complete.				
	A) Precast				
	I) 600x600mm-Chamber covers	QRO	NO		-
	II) 600x750mm-Chamber covers	QRO	NO		-
	III) 600x900mm-Chamber covers	QRO	NO		-
14.03	RC Chume pipe...				
	Providing, laying and jointing RC CHUME PIPES of NP2 class with all specials below ground level at all depths including excavation in all strata and refilling including Gravel encasing of 300 mm wide, cutting, jointing with hemp yarn and C.M. 1:1 and cleaning, curing, testing etc. complete				
	A) 150 mm dia.-RC Chume pipe	44	RMT		-
	B) 200 mm dia.-RC Chume pipe	29	RMT		-
	C) 300 mm dia.-RC Chume pipe	70	RMT		-
	D) 450 mm dia.-RC Chume pipe	21	RMT		-
	E) 600 mm dia.-RC Chume pipe	QRO	RMT		-
	F) 900 mm dia.-RC Chume pipe	QRO	RMT		-
14.04	Chambers with light duty FRP covers...				

	<p>Providing and constructing (SITC of) masonry inspection/catch pit chamber up to 1500 mm depth in 230 mm thick Fly ash brick masonry in C.M. 1:4, including excavation up to required depth in soil and murrum strata, 100 mm thick 1:3:6 P.C. bedding, plaster in C.M. 1:3 from inside & outside surfaces with smooth cement plaster rendering on the internal surface, haunches, channels including supplying and fixing GRP/FRP composite chamber cover with frame, in required sizes, including frame fixing in M15 grade concrete of minimum 300 x 200 mm size, the clear opening of the frame must be equal to the chamber size in both directions, curing, cleaning etc. complete.</p> <p>All cement mortar to have integral liquid waterproofing additive of approved make. The cover to have load capacity of 2.5 MT. (The cover to be from "Everlast Composites Pvt. Ltd" or from "Thermodrain" or from others with approved quality and make).</p> <p>Note: Excavation in hard rock will be paid separately in relevant item.</p>				
	A) 600mm x 450mm - Inspection Chambers	QRO	NO		-
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	B) 600mm x 600mm - Inspection Chambers	9	NO		-
	C) 600mm x 750mm - Inspection Chambers	QRO	NO		-
	D) 600mm x 900mm - Inspection Chambers	2	NO		-
	E) 750mm x 750mm - Inspection Chambers	QRO	NO		-
	F) 900mm x 900mm - Inspection Chambers	QRO	NO		-
	F) 1200mm x 1200mm - Inspection Chambers	QRO	NO		-
	G) 1500mm x 1500mm - Inspection Chambers	QRO	NO		-
14.05	Chambers with medium duty FRP covers...				
	Same as per item no 2.04 but using medium duty chamber covers having load carrying capacity 10 MT.				
	A) 600mm x 450mm - Chambers with medium duty FRP covers	QRO	NO		-
	B) 600mm x 600mm - Chambers with medium duty FRP covers	QRO	NO		-
	C) 600mm x 900mm - Chambers with medium duty FRP covers	QRO	NO		-
	D) 600mm x 1200mm - Chambers with medium duty FRP covers	QRO	NO		-
	E) 900mm x 1200mm - Chambers with medium duty FRP covers	QRO	NO		-
	F) 1200mm x 1200mm - Chambers with medium duty FRP covers	QRO	NO		-
14.06	Chambers with heavy duty FRP covers...				
	Same as per item no 2.04 but using heavy duty chamber covers having load carrying capacity 20 MT.				
	A) 600mm x 600mm - Chambers with heavy duty FRP covers	QRO	NO		-
	B) 600mm x 900mm - Chambers with heavy duty FRP covers	QRO	NO		-
	C) 600mm x 1200mm - Chambers with heavy duty FRP covers	QRO	NO		-
	D) 900mm x 1200mm - Chambers with heavy duty FRP covers	QRO	NO		-
	E) 1200mm x 1200mm - Chambers with heavy duty FRP covers	QRO	NO		-
14.07	Chambers with extra heavy duty FRP covers...				
	Same as per item no 2.04 but using extra heavy duty chamber covers having load carrying capacity 35 MT.				
	A) 600mm x 600mm - Chambers with extra heavy duty FRP covers.	QRO	NO		-
	B) 600mm x 900mm - Chambers with extra heavy duty FRP covers.	QRO	NO		-
	C) 600mm x 1200mm - Chambers with extra heavy duty FRP covers.	QRO	NO		-
	D) 900mm x 1200mm - Chambers with extra heavy duty FRP covers.	QRO	NO		-
	E) 1200mm x 1200mm - Chambers with extra heavy duty FRP covers.	QRO	NO		-
14.08	Chambers with light duty precast covers...				

	Providing and constructing (SIT Co) masonry inspection/catch pit chambers upto 1500mm depth in 230mm thick burnt brick/fly ash brick masonry in C.M. 1:4, including excavation upto required depth in soil and murrum strata, 100mm thick 1:3:6 P.C. bedding, plaster in C.M. 1:3 from inside and outside surfaces with smooth cement plaster rendering on the internal surface, haunches, the clear opening of the frame must be equal to the chamber size in both direction, fixing the chamber cover in M15 concrete mortar coping, curing, cleaning etc. complete. All cement mortar to have integral liquid waterproofing additive of approved make. The medium duty plain or perforated precast cover of KK/Sneh Precast or FUJI Silvertch make to have load carrying capacity of 10 MT. Note: Excavation in hard rock will be paid separately in relevant item.				
	A) 600mm x 450mm - Precast Inspection Chambers	QRO	NO		-
	B) 600mm x 600mm - Precast Inspection Chambers	QRO	NO		-
	C) 600mm x 750mm - Precast Inspection Chambers	QRO	NO		-
	D) 600mm x 900mm - Precast Inspection Chambers	QRO	NO		-
	E) 750mm x 750mm - Precast Inspection Chambers	QRO	NO		-
	F) 900mm x 900mm - Precast Inspection Chambers	QRO	NO		-
14.09	Chambers with medium duty precast covers...				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Same as per item no 2.08 but using medium duty chamber covers having load carrying capacity 10MT.				
	A) 450mm x 450mm - Chambers with medium duty precast covers	QRO	NO		-
	B) 600mm x 600mm - Chambers with medium duty precast covers	QRO	NO		-
	C) 600mm x 900mm - Chambers with medium duty precast covers	QRO	NO		-
	D) 600mm x 900mm - Chambers with medium duty precast covers	QRO	NO		-
	E) 750mm x 750mm - Chambers with medium duty precast covers	QRO	NO		-
	F) 900mm x 900mm - Chambers with medium duty precast covers	QRO	NO		-
	G) 900mm x 1200mm - Chambers with medium duty precast covers	QRO	NO		-
	H) 1200mm x 1200mm - Chambers with medium duty precast covers	QRO	NO		-
14.10	Chambers with Heavy duty precast covers...				
	Same as per item no-2.08 but using heavy duty chamber covers having load carrying capacity 20MT.				
	A) 600mm x 450mm - Chambers with Heavy duty precast covers	QRO	NO		-
	B) 600mm x 600mm - Chambers with Heavy duty precast covers	QRO	NO		-
	C) 600mm x 900mm - Chambers with Heavy duty precast covers	QRO	NO		-
	D) 900mm x 1200mm - Chambers with Heavy duty precast covers	QRO	NO		-
	E) 1200mm x 1200mm - Chambers with Heavy duty precast covers	QRO	NO		-
	E) 1500mm x 1500mm - Chambers with Heavy duty precast covers	QRO	NO		-
14.11	Chambers with extra heavy duty precast covers...				
	Same as per item no-2.08 but using extra heavy duty chamber covers having load carrying capacity 35MT.				
	A) 600mm x 600mm - Chambers with extra heavy duty precast covers	QRO	NO		-
	B) 750mm x 750mm - Chambers with extra heavy duty precast covers	QRO	NO		-
	C) 600mm x 1200mm - Chambers with extra heavy duty precast covers	QRO	NO		-
	D) 1000mm x 1000mm - Chambers with extra heavy duty precast covers	QRO	NO		-
	E) 1500mm x 1500mm - Chambers with extra heavy duty precast covers	QRO	NO		-
14.12	Round chambers...				

	Providing and constructing (SITC of) 600mm dia round chamber with min. 230mm thick burnt brick/fly ash masonry inspection/catch pit chambers up to 3000 mm depth, including excavation up to required depth in soil and murrum strata, 100mm thick 1:3:6 P.C.C. bedding, masonry using 1:4 cement mortar, plaster in C.M. 1:3 from inside and outside surfaces with smooth cement plaster rendering on the internal surface, haunches, the clear opening of the frame must be equal to the chamber size in both direction, fixing the chamber cover in M15 concrete mortar coping/slab, cleaning etc. complete. All cement mortar to have integral liquid waterproofing additive of approved make. The medium duty or heavy duty precast cover of K Kor FUJI Silvertch and FRP cover of Everlast Composites Pvt. Ltd or "Thermodrain" make to have load carrying capacity of 10/20/35 MT. Note: Excavation in hard rock will be paid separately in relevant item.				
	A) Medium duty precast cover (10MT)	QRO	NO		-
	B) Heavy duty precast cover (20MT)	QRO	NO		-
	C) Extra Heavy duty precast cover (35MT)	QRO	NO		-
	D) Medium duty FRP cover (10MT)	QRO	NO		-
	E) Heavy duty FRP cover (20MT)	QRO	NO		-
	F) Extra heavy duty FRP cover (35MT)	QRO	NO		-
14.13	PVCR/W pipe...				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	AMOUNT
	Supply, installation, testing and commissioning (SITC) of 4kg/cm ² pressure PVC rain water pipe of Prince/Finolex/Astral make with all fittings such as bends, sockets, tees, reducers, flanges, clamps and plugs etc. complete and sealing them after pipe jointing with approved quality jointing material. The vertical pipe to be fitted such as to have clear gap of minimum 50mm from plastered wall surface to the external pipe surface. The MS support system is the part of pipe installation and pre approved.				
	A) 100mm dia. (PVCR/W pipe)	QRO	RMT		-
	B) 150mm dia. (PVCR/W pipe)	QRO	RMT		-
	C) 200mm dia. (PVC R/W pipe)	20	RMT		-
14.14	DWC pipes.....				
	Supply, installation, testing and commissioning (SITC) of DWC pipes for electrical, storm, sewer, and road crossing comply with IS 16098 (Part 2): 2013 including all fittings such as bends, sockets, tees, reducers, flanges and plug sets. complete and sealing them after pipe jointing with approved quality jointing material.				
	A) 100mm dia.	QRO	RMT		-
	B) 150mm dia.	QRO	RMT		-
	C) 200mm dia.	QRO	RMT		-
	D) 250mm dia.	QRO	RMT		-
	E) 300mm dia	QRO	RMT		-
14.15	Precast U-Shaped drain....				
	Supply, installation, testing and commissioning (SITC) of precast U-Shaped drain with perforated or no hole lid of Fuji Silvertch (T-25) make or equivalent capable of carrying a wheel load of 5 ton for heavy vehicle movement for electrical, storm, sewer, and road crossing comply with IS 16098 (Part 2): 2013 including excavation, preparing bed by watering and ramming, laying 100 mm thick 1:3:6 PCC bed, laying cement mortar, fixing the U drain and jointing the drain using cement mortar 1:3, curing, backfilling and cleaning etc. complete as per manufacturers specifications.				
	A) 300 X 300 mm -T25	QRO	RMT		-
	B) 450 X 450 mm -T25	QRO	RMT		-
	C) 600 X 600 mm -T25	QRO	RMT		-

	D) 750 X 750 mm - T25	QRO	RMT		-
	E) 900 X 900 mm -T25	QRO	RMT		-
	F)1200X 1200mm- T25	QRO	RMT		-
14.16	PrecastU-Shapedrain...				
	Sameasaboveasperitemno-2.15butfor capableof carryingawheelloadof 2.4tonforlightvehiclemovement(FujiSilvertech(T-6)makeorequivalent				
	A) 300 X 300 mm -T6	QRO	RMT		-
	B)450X450mm-T6	QRO	RMT		-
	C)600X600mm-T6	QRO	RMT		-
	D) 750 X 750 mm - T6	QRO	RMT		-
	E) 900 X 900 mm -T6	QRO	RMT		-
14.17	PrecastRCCGutter..	QRO	RMT		-
	ProvidingandlayingprecastRCC Gutterofsize 2000x 600x 600mm including excavation, preparing levelled base, 1:3:6 pcc bed concrete, layingtrenchesinproposlopeasperdrawing,backfillingthesides,joiningaspemanufacturer'sssecs,alltransport,loadingunloading, cleaningandtesting complete.				
14.18	CatchPitChambers...				
SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and constructing masonry CATCH PIT CHAMBERS up to 1500 mmdepth in 230 mm thick fly ash brick masonry in C.M. 1:6, including excavationuptorequireddepthinallkindofstrata,100mmthick1:3:6P.C.C.bedding, plasterinC.M.1:4frominsideandoutsidesurfaceswithsmoothcementplaster rendering on the internal surface, haunches, the clear opening of the framemustbeequaltothechambersizeinbothdirection;cleaningetccomplete.Allcementmortortohaveintegralliquidwaterproofingadditiveofapproved make. The cover to have load capacity of 5 MT. (Thecovers tobefrom " EverlastComposits Pvt. Ltd" or from " Thermodrain" or from others withapproved quality and make). (Notes:-Thecoversareavailableinround/rectangularandsquaresizes. Please refer to the info and specify accordingly. Similarly loading also need tobepesifiedasper need. Theseareavailable withaloadcapacity from 1.5MT to 40 MT).				
	A)600mmx450mm-CatchPitChambers	QRO	NO		-
	B)600mmx600mm-CatchPitChambers	2	NO		-
	C)600mmx750mm-CatchPitChambers	QRO	NO		-
	D)600mmx900mm-CatchPitChambers	QRO	NO		-
	E)750mmx750mm-CatchPitChambers	1	NO		-
	F)900mmx900mm-CatchPitChambers	QRO	NO		-
14.19	ReadymadeprecastRainwaterharvestingchamber	QRO	NO		-
	Providing and installing readymade rain water harvesting chamber/pit include2no'sof150mmDIAPERFORATEDGICCLASSPIPE15mmHOLESAT 100mmPITCH,Boredholesuptothedepthof30mtoreachnaturalgroundwater table for recharging groundwater (Rainwater Harvesting) alongwithprecastRCCfilterchamber ofsize1.2mx1.2mat suitablelocationsasperdrawing, andincludingprovisionof M.S. casingpipeof 8"diameterupto adepth of 6 m below ground level, all excavation, providing Sand, Gravel &BoulderBeddingof200mmdeptheachorasperdrawing,providing20mm thickcementplaster(1:3)frominside&outsideofthechamberwithHot DippedGalvanizedMSperforatedcoverwithframe(designedforAAtraffic load). mAKE-Furratorequivalent.				

14.20	ReadymadeRCCHumepipesepticTank				
	Providing and fixing readymade RCC Hume pipe septic tank at given location of Approved make including excavation, back filling, fixing in level with 100mm thick PCC at bottom, connecting the incoming and outgoing pipes as per manufacturer's manual, cleaning, testing etc. complete. Capacity of tank as given in drawing.				
14.20.1	Septic Tank-50 users	QRO	NO		-
14.20.2	Septic Tank-75 users	QRO	NO		-
14.20.3	Septic Tank-100 users	QRO	NO		-
14.21	Sleeves in Concrete...				
	Providing and fixing PVC sleeves of various sizes as per detailed drawing in RCC flooring/RCC walls/RCC Pardi including holdfasts, fabrication if required, fixing and placing in position, levelling etc. complete. (Rate including hold fast and fasteners).				
	a) 50mm dia (Sleeves in concrete)	QRO	RMT		-
	c) 80mm dia (Sleeves in concrete)	QRO	RMT		-
	c) 150mm dia (Sleeves in concrete)	QRO	RMT		-
	c) 250mm dia (Sleeves in concrete)	QRO	RMT		-
14.22	Saucer drain...	53	RMT		-

SR.NO	DESCRIPTION	QUANTITY	UNIT	UNITRATE	AMOUNT
	Providing and fixing KK/Sneh precast or equivalent make M30 grade cement concrete precast saucer drain having size 914x255x100/125 mm along road side in concrete (1:3:6) as per drawing. Including finishing the surface with Neat cement, making necessary slope so as to direct water to nearest chamber/Gutter, cleaning, Curing etc. complete.				
14.23	Nali gutter in concrete...	QRO	RMT		-
	Providing and constructing Nali Gutter in concrete (1:3:6) of 200mm dia size, half round as per drawing including finishing the surface with neat cement, cleaning and curing etc. complete				
	SUB-TOTAL OF STORM AND WASTE WATER NETWORK				-

LIST OF APPROVED MAKES		
APPROVED MAKES LIST – CIVIL & ARCHITECTURAL WORKS		
SRNO	ITEM	APPROVED MAKES/VENDORS
1	Cement	Ultratech, ACC, Birla Super, Ambuja
2	Paints	Asian, Nerolac, Akzo Nobel, Berger, Birla Opus
3	Steel doors and fire doors	Shakti Hormann/Tata Pravesha/Metaflex/ IGI/ Godrej security
4	Sectional door/Rapid roll up door	Gandhi Automation/Assa Abloy/Shakti Hormann/Avians
5	Door fixtures and fastenings	Dorma/Assa Abloy/Hafele
6	Sliding glass door	Fenesta, Veka, Tostem, Dorma
7	Anti-Termite	PC approved-Bayer/UPL/Sumitomo/Dhanuka/ Pidelite
8	G I Pipes	Tata /Zenith/Jindal,Hindustan/Swastik
9	Plumbing fittings	Jaguar/CERA/Hindware
10	Sanitary ware	Parryware/ Hindware/ Kohler/Jaguar/ CERA
11	Glass(High performance)	Saint Gobain/ Modi Float/Asahi Float
12	Roofing and cladding sheets	JSW/Tata Blue scope/Arcelor Mittal Nippon Steel India
13	Skylight sheets	GE/Palram/Ultralite
14	Plasticizer and floor hardener	Sika/ Myk/ Fosroc/ Pidilite/ BASF
15	Chemical anchor fastener	Hilti/ Wurth/Fischer
16	Welding Rod	Advani Oerlikon/Indian Oxygen /Philips /Esab
17	PVC/CPVC/UPVC Pipes and fittings	Supreme/Prince/Astral/Finolex
18	Tile Adhesives and tile joint filler	Mapei/MYK/Kerakoll/Pidilite/Laticrete
19	Ready made Plaster	Saint Gobain/Nuvoco Vistas/Godrej/JSW
20	Waterproofing	BASF-MBS/Fosroc/Sika/STP/Kemper/Pidilite
21	Waterproof Plywood / Flush Doors	Century Ply, Greenply Industries, Kitply Industries, Anchor, Swastik, Merino, Tower
22	PVC moulded doors	Masonite/Kalpataru/Eureka
23	Vitrified and Ceramic Tiles	RAK / Kajaria/Johnson/ Somany/ Nitco
24	Aluminum Sections for doors, windows and partitions	Jindal/Hindalco/Indal/Boruka
25	Sealants	GE / Sika/ Fosroc/ Dow-Corning / Hindustan Mineral / Pidilite
26	Expansion Joint Fillers	STP/Polysulphide/Heavy duty Epoxy/MYK Arment/BASF/Pidilite
27	Tor /Mild steel reinforcement	Kalika/Rajuri/Trishul/SRJ/Uma/Sail/Tisco/ RINL
28	Interlocking paver block	Sneh Precast or equivalent
29	Raised Flooring	KABEO or equivalent
30	Kerb stone	Sneh Precast/KK
31	Structural Steel/tube/hollow sections	Sail/Jindal/Tata/APL Apollo/ISPAT/ESSAR

LIST OF APPROVED MAKES		
APPROVED MAKES LIST – CIVIL & ARCHITECTURAL WORKS		
SRNO	ITEM	APPROVED MAKES/VENDORS
32	Glass Wool Insulation	SAINT-GOBAIN TWIG INSULATION/ Owens Corning
33	Rockwool insulation	Saint-Gobain Rockinsul, Roxul, Inner Engineering
34	Epoxy flooring	Fosroc, Cipy, BASF, Asian
35	ACP	Saintgobain/Alubond/Eurobond
36	Mineral/metal false ceiling	Armstrong/Saintgobain/Gypsum India
37	Dry wall Partition boards	SaintGobain or Equivalent
38	Puff panel/ Aluminum coving	Lloyds/Rinac/Kingspan
39	Laminated door	Merino/Greenply/greenlam/supreme
40	SS Floor drains	Aco/Chobhe/Chilly
41	High speed shutter	Gandhi/Shakti Hormon/Avians
42	Floor finish/Ucrete	Masterbuild solution/BASF/Dr.Cipy
43	Toilet cubical/partition	Merino besco/T-Line/GreenLam/Macro/Cubical India /SVT design
44	Rolling shutter / Fire / Accoustic	Gandhi /Avians or Equivalent
45	AAC Block	Godrej/Altratech/Aerocon/Eco green/Ecolite/Siporex
46	Hand dryer	Euronics
47	ESD floor	Cipy/ Dr. Beck / Fosrocor Equivalent
48	Glass Partition	Cubik /Dorma or Equivalent
49	Roller Blind	Vista/ Apex/ Marc/ AD/ Wellborn/ or Equivalent
50	Siphonic Roof Drainage System	Geberit/ Valsir/ Wavin/Smartflow /Sangir
51	Grout Chemical	Sika, Fosroc, MYK Arment, BASF, Pidilite
52	Adhesive Chemical	Sika, Fosroc, Fevicol, Araldite

<div> <div>PROJECT NAME :- COLD STORAGE (G+4) PROJECT</div> <div>ADDRESS :- VASHI, MUMBAI, Maharashtra</div> <div>DATE :- 17.10.2025</div> </div>			
SR NO	GRAND SUMMARY		
	ELEMENT	AMOUNT	REMARK
1	PEB WORKS (LUMP SUM BASIS)	-	
	TOTAL AMOUNT (EXCLUDING GST AND LABOUR CESS)		

PROJECTNAME:-COLDSTORAGE(G+4)PROJECT ADDRESS:-VASHI,MUMBAI,Maharashtra DATE:-17.10.2025						
PEB WORK(LUMP SUM BASIS)						
Scope of work including following but not limited to: 1) COLD STORAGE (G+4) INCLUDING TERRACE ROOF						
SR.NO	ITEM	BRIEF TECHNICAL SPECIFICATION	UNIT	QUANTITY	FABRICATION & SUPPLY RATE	FABRICATION & SUPPLY AMOUNT
M	Roof Monitor Sheets	As per design and drawing	Sqm.			₹ 0.00
N	Deck Sheets for Mezzanine including shear studs	Min. 0.8mm thick or as per design	Sqm.			₹ 0.00
O	Life Line (KARAM)	As per design and drawing	R.M.			₹ 0.00
P	Turbo ventilator	To be designed considering 8 air Changes	NOS			₹ 0.00
Q	LOUVERS FOR VENTILATION	Not applicable	SQM			₹ 0.00
R	WALKWAY	As per design and drawing	NOS			₹ 0.00
S	Chequered Plate	As per design and drawing	MT			₹ 0.00
T	MS Support for Windows	Not applicable	MT			₹ 0.00
U	Roof Accessory	Fittings, waterproof glue, self drilling screw, rivets, etc.	Sq.m			₹ 0.00
V	Wall Accessory	Fittings, waterproof glue/sealant, self drilling screw, rivets, etc.	Sq.m			₹ 0.00
Sub Total:			M.T.			₹ 0.00
5	Transportation and Erection cost					
A	Transportation cost		MT			₹ 0.00
B	Erection Cost (Including decksheets)		MT			₹ 0.00
Sub Total:						₹ 0.00
6	Any Additional Work					
A	Any Additional work, which is missing in above list / items, if any.		Lump-sum			₹ 0.00
Sub Total:						₹ 0.00
				Grand Total :-		₹ 0.00
						-
Note:-Total tonnage The supply and erection price has been fixed on the basis of total tonnage of all structures. Fluctuation in total agreed tonnage of steel at positive(+) side will not be paid extra by CLIENT. If total agreed tonnage (as mentioned in above in TABLE - A) of all structures will fluctuate more than -2% (minus side) of agreed tonnage then it will be recovered and deducted by purchaser from agreed cost of supply and erection, recovery cost will be worked out on the basis of actual difference of tonnage as "Total agreed tonnage – Total received tonnage at site." The rate of recovery will be mutually agreed rate per MT.						

TABLE -A TOTAL PEB TONNAGE IN METRIC TON (Strictly to be provided by Bidder)
-

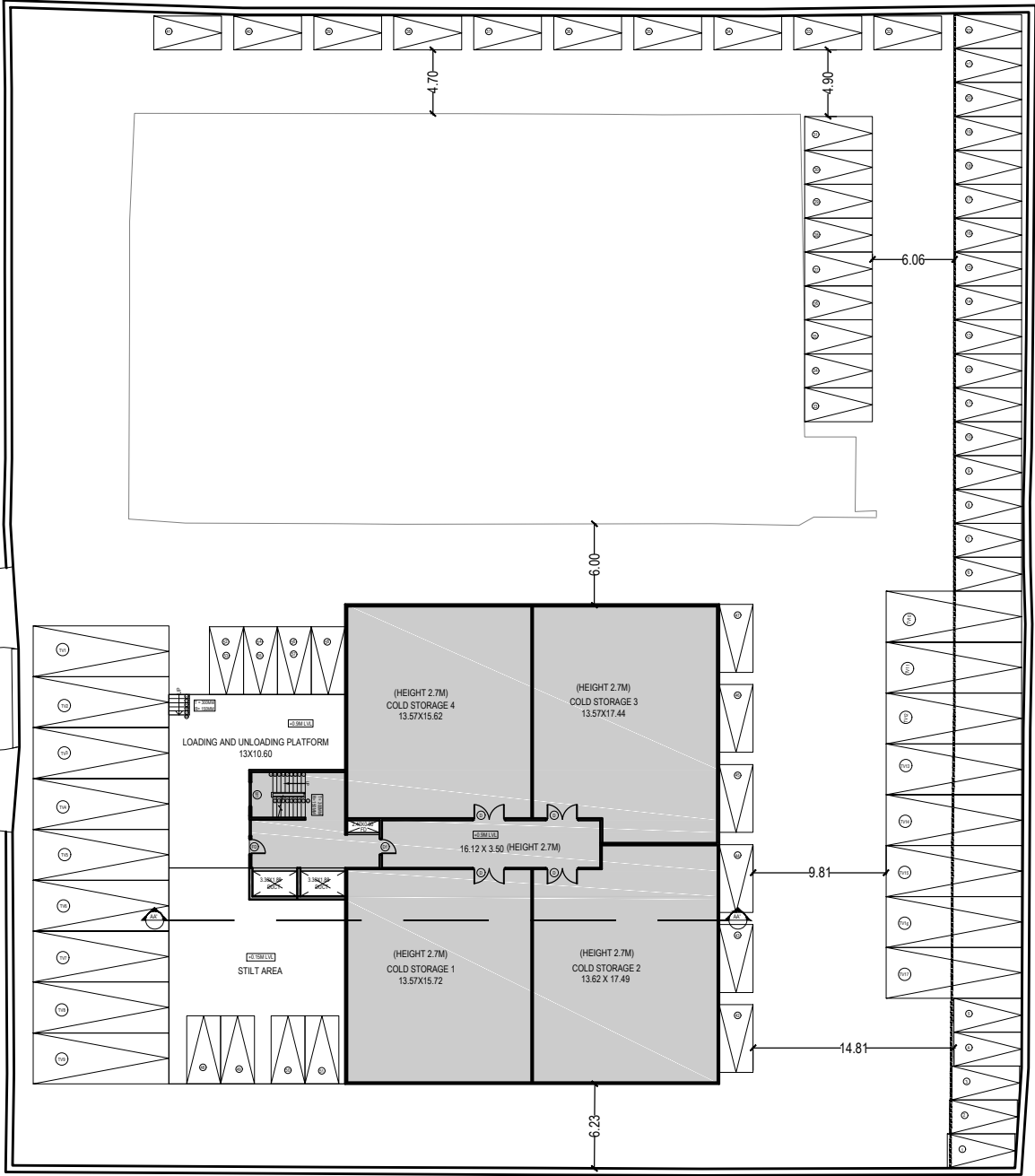
ANNEXURE – 3
DRAWINGS

VPR STATEMENT		
AREA OF PLOT	6000	SQ.MT
VPR	4	
PERMISSIBLE VOLUME	24000.00	CU.MT
VOLUME OF GROUND FLOOR	2772.31	CU.MT
VOLUME OF FIRST FLOOR	3630.91	CU.MT
VOLUME OF SECOND FLOOR	2982.91	CU.MT
VOLUME OF THIRD FLOOR	3306.91	CU.MT
VOLUME OF FOURTH FLOOR	3306.91	CU.MT
TOTAL VOLUME	15999.95	CU.MT
VPR PROPOSED	2.667	
VPR BALANCE	1.333	
BALANCE VOLUME	8000.05	CU.MT
STILT AREA	190.00	SQ.MT

AREA STATEMENT			
FLOOR	AREA (SQ.M)	HT. (M)	VPR (CU.M)
GROUND FLOOR	1026.78	2.70	2772.31
FIRST FLOOR (A)	1104.78	2.70	2982.91
FIRST FLOOR (B)	120.00	5.40	648.00
SECOND FLOOR	1104.78	2.70	2982.91
THIRD FLOOR	1224.78	2.70	3306.91
FOURTH FLOOR	1224.78	2.70	3306.91
TOTAL	5805.90	13.50	15999.93

CAR PARKING REQUIREMENTS		
AS PER NMMC (STORAGE)		
PARKING REQUIRED		
FLOOR AREA	NO OF PARKING /SQ M	CAR PARKS REQD
5805.90	One parking space for every 100sq.mt. or part there of	58
PARKING PROVIDED		

TRUCK PARKING REQUIREMENTS		
FLOOR AREA	NO OF PARKING /SQ M	CAR PARKS REQD
5805.90	loading and unloading spaces shall be provided for mercantile, industrial and storage land uses as one space for every 100 sq.mt of floor area or part thereof upto 500 sq.mt and one for every 500 sq.mt	17
PARKING PROVIDED		



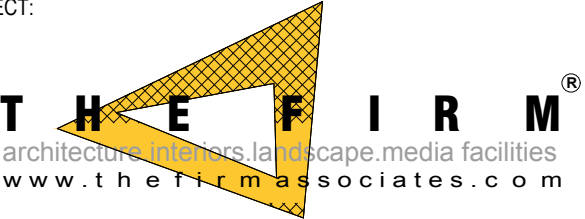
1 SITE PLAN
Scale: 1:500

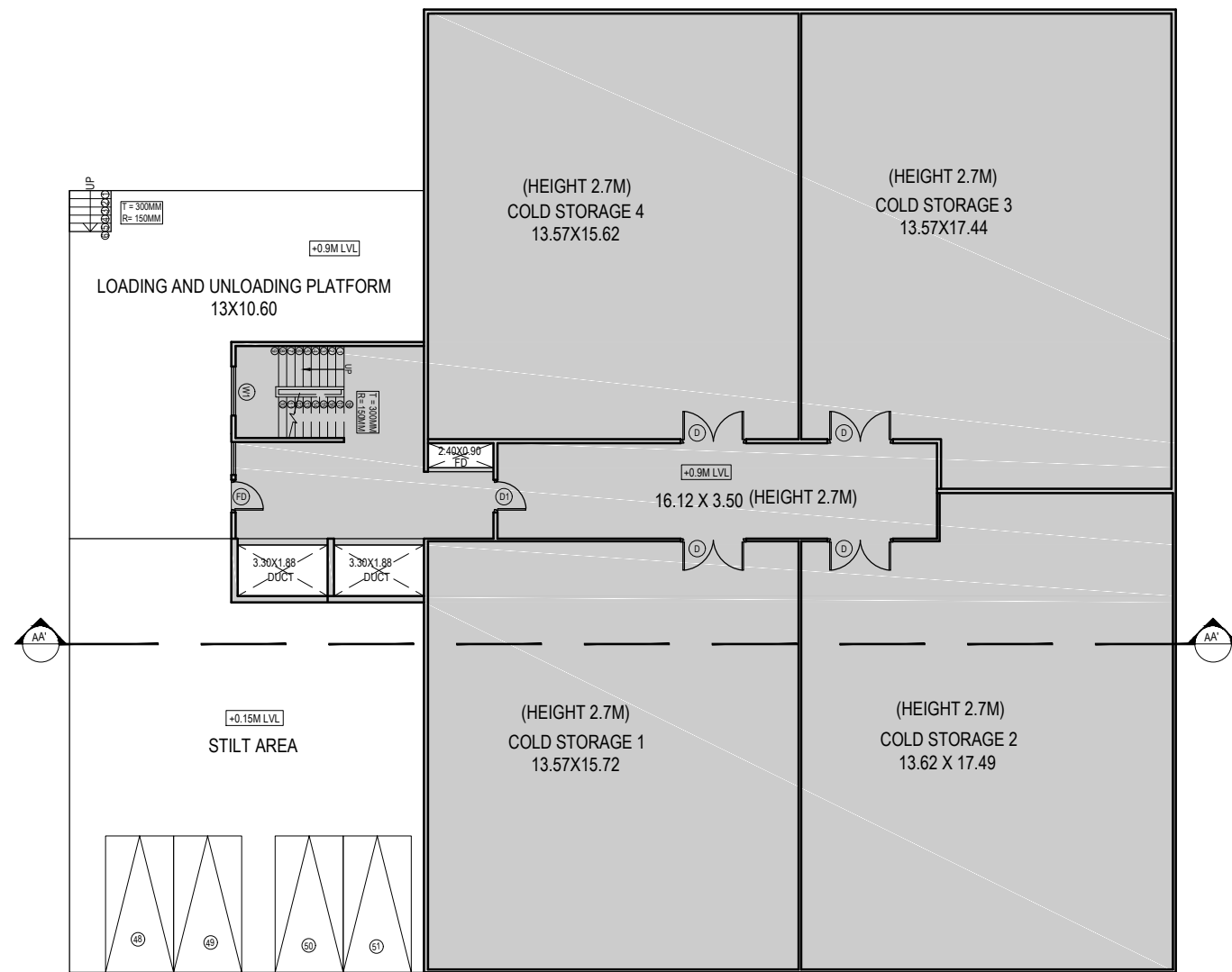
PROPOSED COLD STORAGE BUILDING

AT SECTOR 18 VASHI
1ST CUT PRESENTATION -12.12.2018-

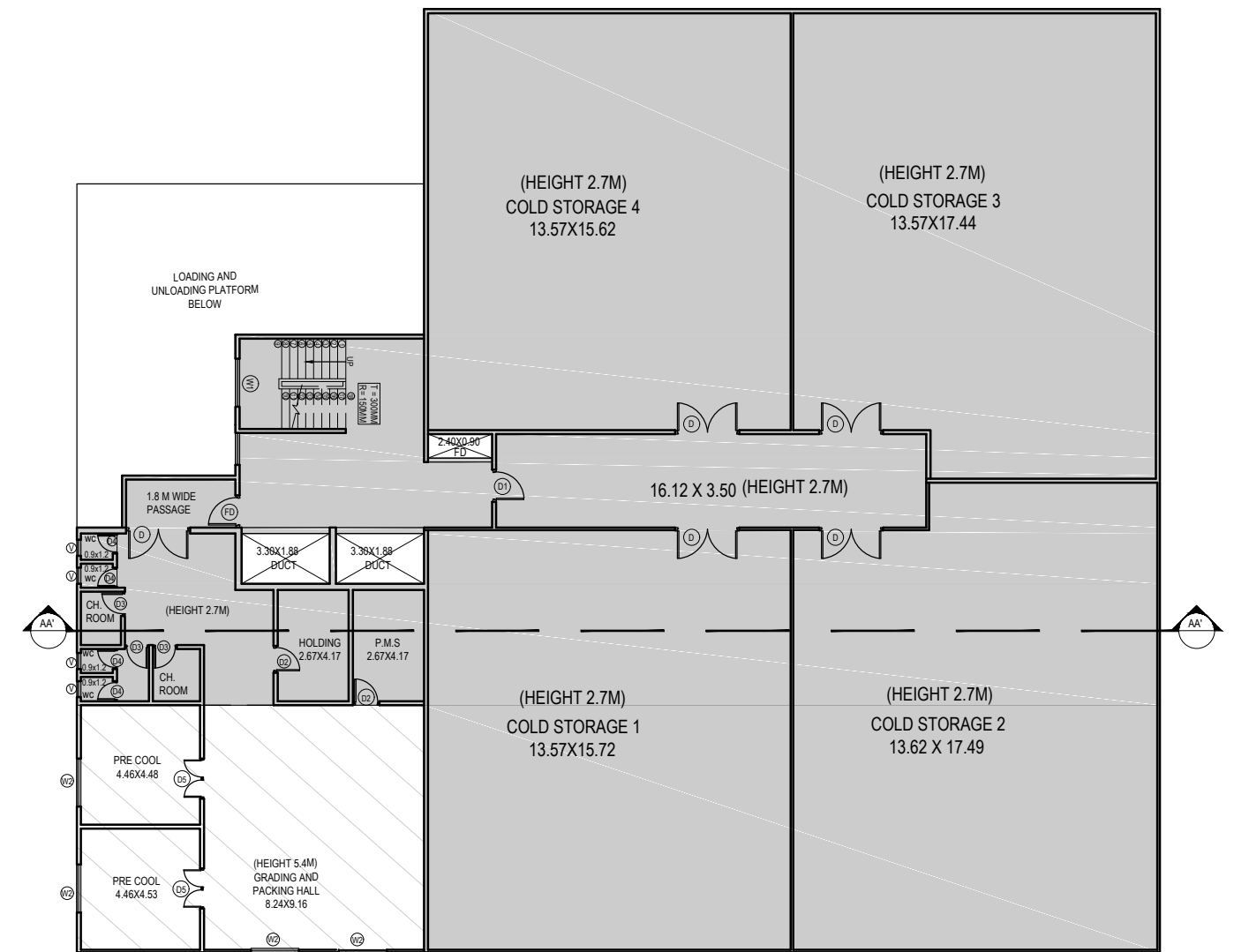
CLIENT:

ARCHITECT:





1 GROUND FLOOR
Scale: 1:250



2 FIRST FLOOR
Scale: 1:250

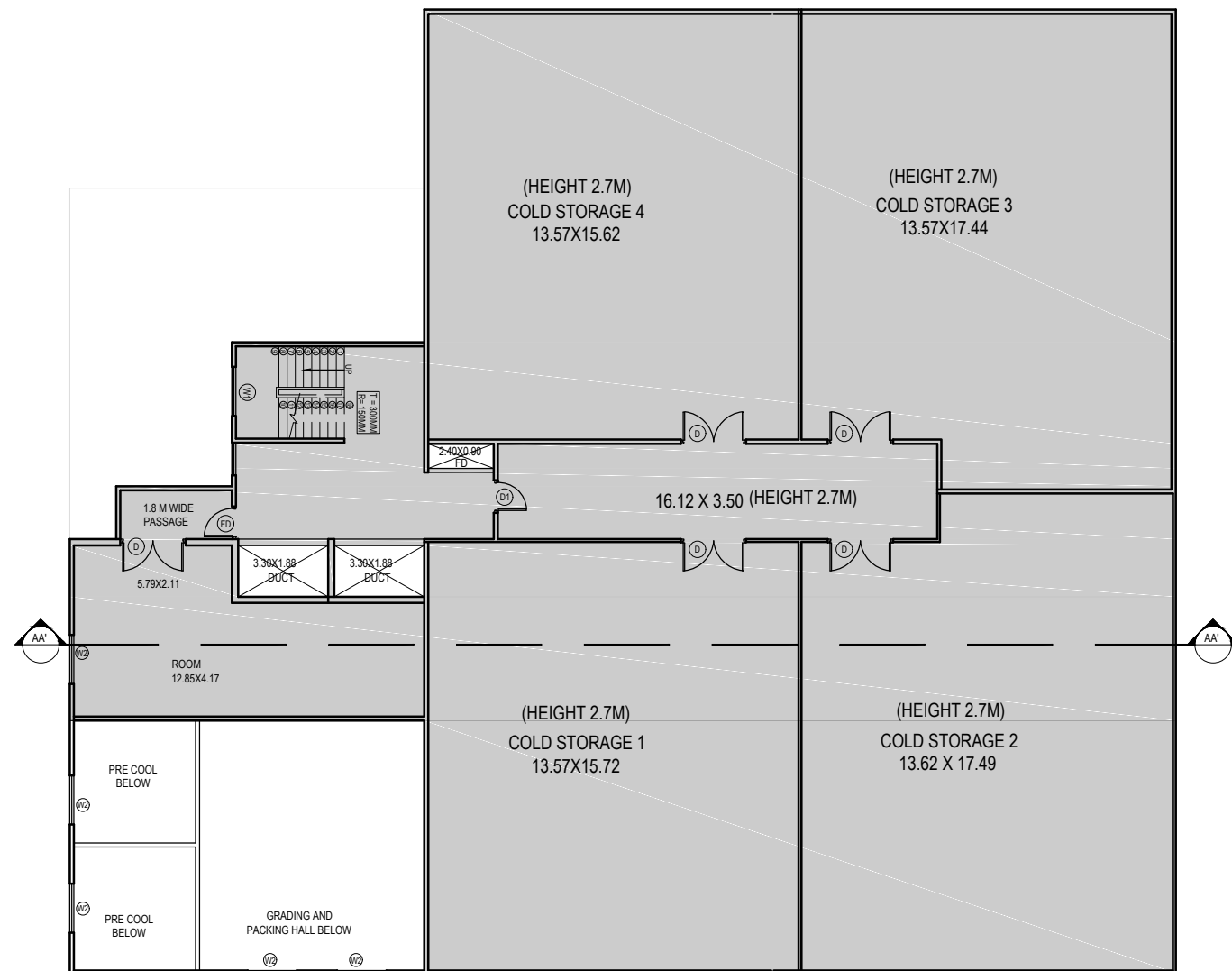
PROPOSED COLD STORAGE BUILDING

AT SECTOR 18 VASHI
1ST CUT PRESENTATION -12.12.2018-

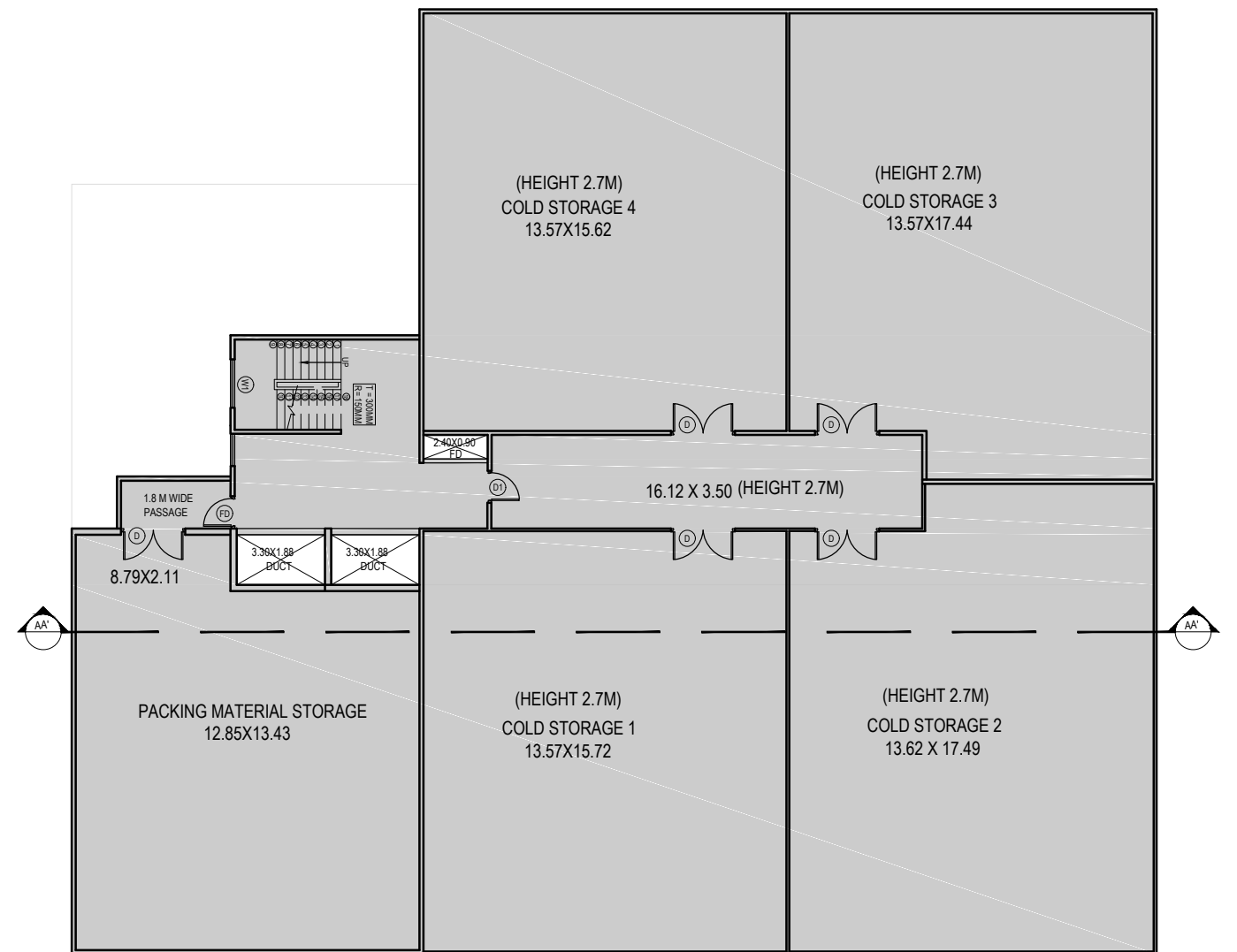
CLIENT:

ARCHITECT:





1 SECOND FLOOR
Scale: 1:250



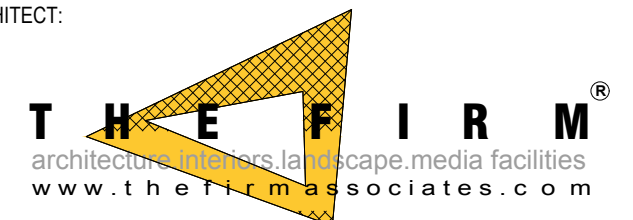
2 THIRD FLOOR
Scale: 1:250

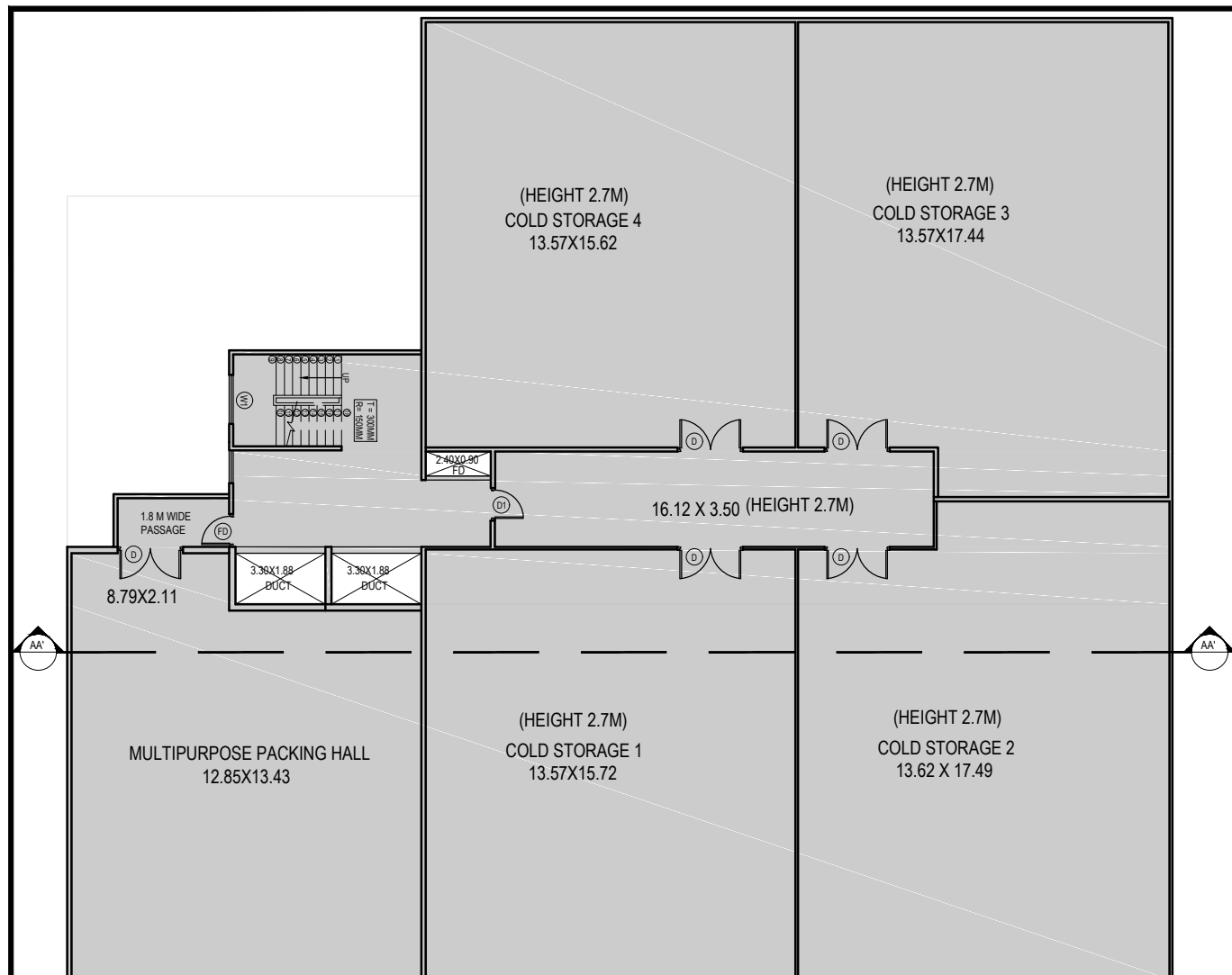
PROPOSED COLD STORAGE BUILDING

AT SECTOR 18 VASHI
1ST CUT PRESENTATION -12.12.2018-

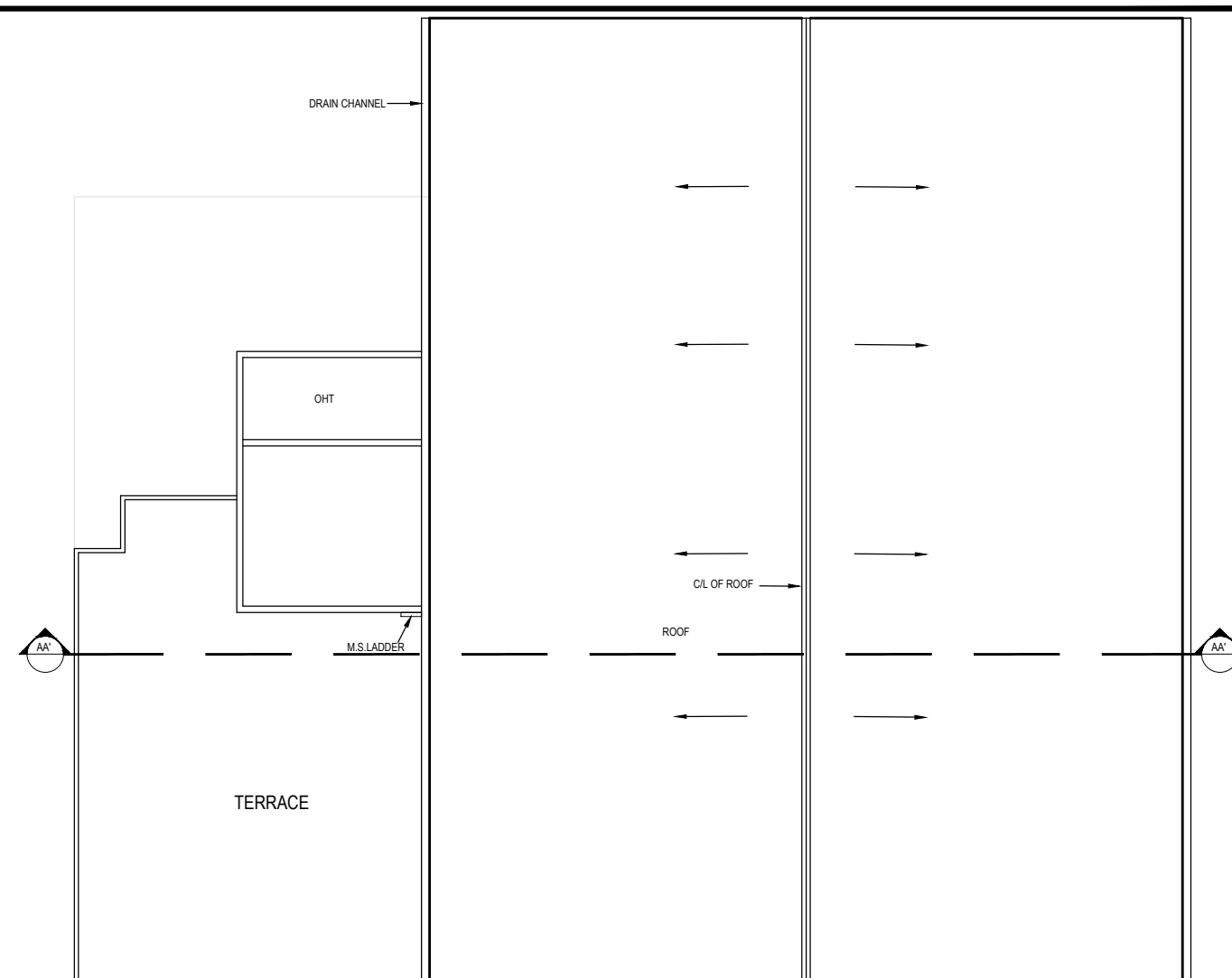
CLIENT:

ARCHITECT:

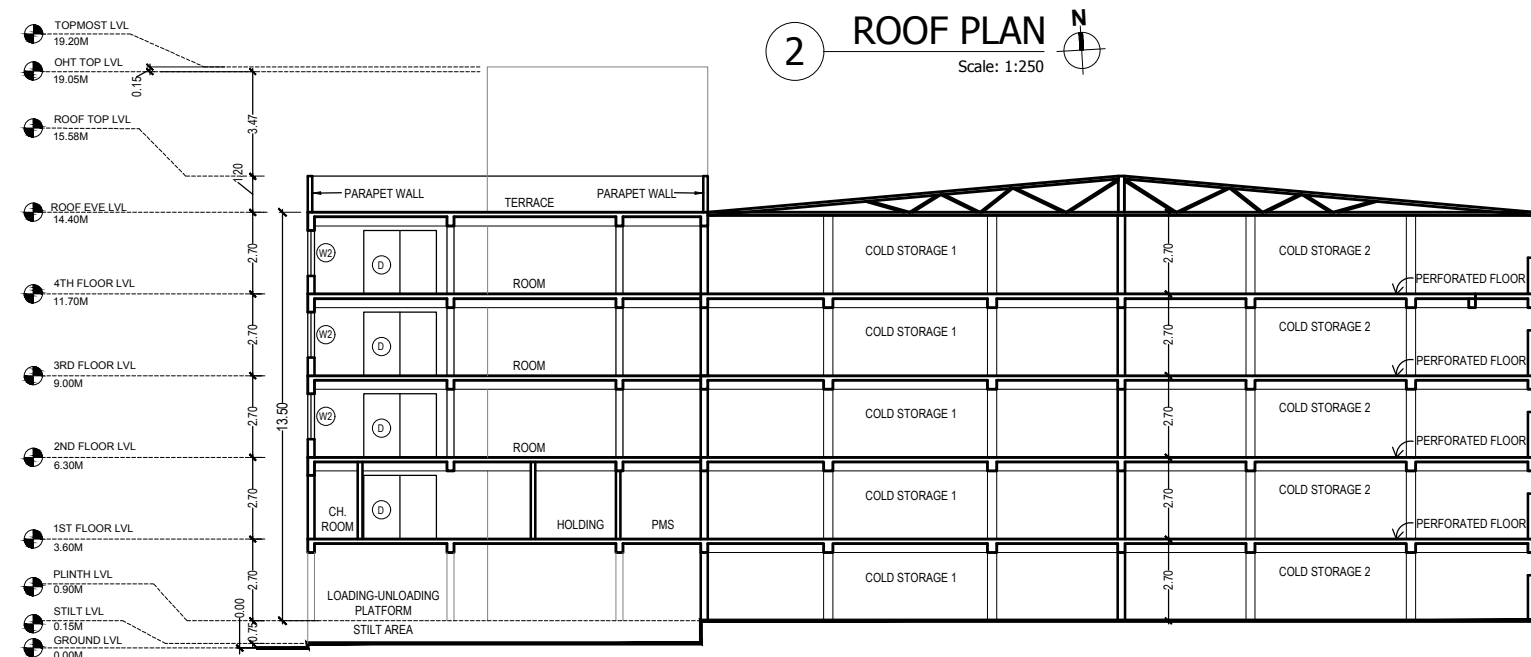




1 FOURTH FLOOR
Scale: 1:250



2 ROOF PLAN
Scale: 1:250



3 SECTION AA'
Scale: 1:250

PROPOSED COLD STORAGE BUILDING

AT SECTOR 18 VASHI
1ST CUT PRESENTATION -12.12.2018-

CLIENT:

ARCHITECT:

