



DEPARTMENT OF HORTICULTURE
(Government of Karnataka)



INVITATION FOR TENDER

**“Construction of Cold Storage of Capacity 2000 MT at Murukkanahally
Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka”**

The Director of Horticulture
DEPARTMENT OF HORTICULTURE
Lalbagh, Bengaluru
Karnataka - 560 004
Mail-id: jdhveg@gmail.com

DEPARTMENT OF HORTICULTURE

(Government of Karnataka)
Lalbagh, Bangalore, Karnataka-560004
E-mail: horticulturedirector@gmail.com

NO:DH/JDH/VEG/SADH/PHM/AHO-2/33/2023-24

Date:10-03-2024

INVITATION FOR PRE-QUALIFICATION

(Through Government of Karnataka e-procurement portal only)

Name of Project: “Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka”

- The Joint Director of Horticulture, Karnataka Horticulture Board, Karnataka invites tenders from eligible Contractors registered with CPWD / KPWD / Railways / MES or any State Government Organizations for **“Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka under NABARD RIDF 29”**
- The tenderers may submit tenders for works given in the table through e-procurement portal of the Government of Karnataka (<https://kppp.karnataka.gov.in/>) from 10-03-2024.
- The Tenderers are advised to note the minimum qualification criteria specified in Clause 3 of the Instructions to Tenderers to qualify for award of the contract.
- Tenderers shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of Karnataka.
- **Tenders from Joint venture between Civil and HVAC works is acceptable.** The Mechanical, HVAC and electrical supplies can be of sub-contractor also and their credentials will be taken in to account in case of MOU made with the supplier in Rs 100 stamp paper having the eligibility as per general conditions. The Tenderer or the Mechanical supplier should not have incurred any loss in the last five financial years.
- Tenders must be accompanied by earnest money deposit specified for the work in the Table below. Earnest money deposit will have to be in any one of the forms as specified in the Tender document and shall have to be valid for 180 days beyond the validity of the tender.

Sl No	Name of Work	Est Cost (Rs. In Lakhs)	EMD Amount	Stipulated Period of Completion (in Months)
1	“Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District, Karnataka”	1017.06	EMD Rs. 1,00,000 (One Lakh) through E-payment. EMD Rs. 10,17,000.00 through Bank Guarantee. (Validity BG in days from last day of Bid submission: 135 days)	

1. Bank Guarantee (BG): Security for an amount of Rs. 10,32,000.00 to be submitted as BG to the Department of Horticulture. The selected bidder shall deposit BG through RTGS/NEFT to the account. After successful completion of the project for the period of 2 years the BG amount without interest will be refunded to the bidder up on request. The defaulted/ barred / black listed bidders BG will be forfeited
Karnataka State Horticulture Development Agency (KSHDA),
Directorate of Horticulture,
Lalbagh, Bangalore, Karnataka-560004
Account No: 00000064037414538
Branch: Vidhana Soudha
IFSC: SBIN0040277, MICR: 560002419
2. The last date and time for uploading the proposal using the E-Procurement platform (proposal due date) is 10/03/2024
3. A Pre-tender meeting will be held on 21/03/2024. at 11.00 AM hours at the office of Joint Director of Horticulture, (Vegetable Section), Lalbagh, Bengaluru to clarify the issues if any, and to answer questions on any matter that may be raised at that stage as stated in Clause 8.2 of ‘Instructions to Tenderers’ of the tender document

The Calendar of Events

Date of Publishing Tender Document on e- Portal	10.03.2024 at 3.00 pm
Last date of submission of tender through e-Procurement Portal of the Government of Karnataka (https://kppp.karnataka.gov.in/).	20.04.2024 at 5.30 pm
Date and time of opening of technical bids	22.04.2024 at 11.00 am
Date and time of opening of financial bids tentative	26.04.2024 at 11.00 am
Approximate Tender Cost	1017.06 lakhs
Amount of EMD	1.00 lakh
Date Place of pre bid meeting, opening of bids & address for communication	21/03/2024 at 11.00 am Joint Director of Horticulture (Vegetable Section), Lalbagh, Bengaluru Karnataka - 560 004 Email id: jdhveg@gmail.com
For e-Procurement information	https://kppp.karnataka.gov.in/

Essential Conditions

- a. Tender documents may be downloaded from Government of Karnataka e-Procurement website <https://kppp.karnataka.gov.in/> under login for Contractors. Aspiring Bidders/Contractors who have not registered in e-procurement should register before participating through the website <http://eproc.karnataka.gov.in> or contact e-Procurement Helpdesk at 080 – 22485867 / 22485927
- b. The Tender will remain valid for 180 Days from the Date of Opening of Tender.
- c. Earnest Money Deposit specified for the work in the Table must accompany tenders. Earnest Money Deposit will have to be in specified in the KW-6 Standard Tender document and shall have to be valid for 90 days beyond the validity of the tender (if EMD in the form of BG/FDR. Shall submit to this office for verification from bank before last date and time for receipt of tender).
- d. Any Corrigendum / Modification will be notified in the e-procurement portal only.

The Joint Director of Horticulture
Vegetable section,
Lalbagh, Bengaluru

DEPARTMENT OF HORTICULTURE

(Government of Karnataka)
Lalbagh, Bangalore, Karnataka-560004
E-mail: horticulturedirector@gmail.com

Prequalification with joint venture for the work of “**Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka under NABARD RIDF29**”

PART I: ON ITEM RATE TENDER BASIS

- A. Construction of 2000 MT Capacity - Cold Storage
- B. Cold storage facility including insulated panel structure refrigeration and allied systems including Utility room, miscellaneous items, electrical installation,
- C. Basic infrastructure facilities – Security room, Sump, Compound wall, Roads, Storm water drain, basic electrical and plumbing, transformer, Generator etc.,

TENDER REFERENCE:

File No.: NO:DH/JDH/VEG/SADH/PHM/AHO-2/33/2023-24

Dated:10-03-2024

Place of Opening of PQ Applications	:	Joint Director of Horticulture (Vegetable Section), Lalbagh, Bengaluru Karnataka - 560 004 Email id: jdhveg@gmail.com
Address for Communication	:	Joint Director of Horticulture (Vegetable Section), Lalbagh, Bengaluru Karnataka - 560 004 Email id: jdhveg@gmail.com

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ABBREVIATIONS AND ACRONYMS

BOQ	Bill of Quantities
GCOC	General Conditions of Contract
GITA	General Instructions to Applicants, in the SPD
IF	Information Forms
IFT	Invitation for Tenders
IFP	Invitation for Pre-qualification
ITB	Instructions to Tenderers
JV	Joint Venture
JVA	Joint Venture Agreement
PQ	Pre-qualification
PITA	Particular Instructions to Applicants, in the SPD
STD	Standard Tender Document
SPD	Standard Pre-qualification Document

GLOSSARY

Employer	One of the two parties to a works contract, the other party being the “Contractor.”
Contractor	The legal entity that is party to and performs a works contract, the other party to the contract being the “Employer.”
Joint venture	An ad hoc association of firms that pool their resources and skills to undertake a large or complex contract in the role of “Contractor,” with all firms (partners in the JV) being legally liable, jointly and severally, for the execution of the contract in the event of a partner’s withdrawal.
Management contractor	A firm, acting in the role of “Contractor,” that does not usually perform contract construction work directly, but manages the work of other (sub) contractors, while bearing full responsibility and risk for price, quality, and timely performance of the contract.
Construction Manager	A consultant, acting as agent of the Employer, engaged to coordinate and monitor the timing of preparation, tender award, and execution of a number of different contracts comprising a project, but does not take on the responsibility for price, quality, or performance of those contracts.
Nominated Subcontractor	A specialist enterprise selected and approved by the Employer to provide a pre-specified item in the BOQ, and nominated as subcontractor to the Contractor for such purpose.
Post-qualification	An assessment made by the Employer after the evaluation of tenders and immediately prior to award of contract, to ensure that the lowest-evaluated, responsive, eligible bidder is qualified to perform the contract in accordance with previously specified qualification requirements.
Pre-qualification	An assessment made by the Employer of the appropriate level of experience and capacity of firms expressing interest in undertaking a particular contract, before inviting them to tender.

Prime contractor	A firm that performs a substantial part of a contract construction work itself and the balance, if any, by subcontractors, while bearing full responsibility for the whole contract.
Provisional sum	A sum included provisionally in the BOQ of a contract, normally for a specialized part of the Works or for contingencies, which sum shall be used only on the instructions of the Employer for payments to the contractor and/or to nominated subcontractors.
Slice and Package	A procedure whereby a large homogeneous work is sliced into smaller similar contracts, which are bid simultaneously so as to attract the interest of both small and large firms; firms offer bids on individual contracts (slices) or on a group of similar contracts (packages), and award is made to the combination of bids offering the lowest cost to the Employer Slices comprising a number of similar construction units together in a small area are sometimes referred to as “lots,” which are bid concurrently with other similar “lots” as part of the larger “package.”
Turnover	The gross earnings of a firm (in this context, a construction contractor), defined as the billings for contract work in progress and/or completed, normally expressed on an annual basis, and excluding income from other sources
Works	The total work involvement in a construction contract, including the “Permanent” Works or finished product as specified, and the “Temporary” Works required by the Contractor for the execution of the contract.
Writing	For the purpose of this document, any authenticated handwritten, typed, or printed communication, including telex, cable, electronic mail, and facsimile transmission, with proof of receipt when requested by the sender.

1. INVITATION FOR PRE-QUALIFICATION

Name of Project: “Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka”

The Joint Director of Horticulture, Karnataka Horticulture Board, Karnataka invites tenders from eligible Contractors registered with CPWD / KPWD / Railways / MES or any State Government Organizations for **“Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka under NABARD RIDF 29”**

PART I: ON ITEM RATE TENDER BASIS

- A. Construction of 2000 MT Capacity - Cold Storage
 - B. Cold storage facility including insulated panel structure refrigeration and allied systems including Utility room, miscellaneous items, electrical installation,
 - C. Basic infrastructure facilities - Security room, Sump, Compound wall, Roads, Storm water drain, basic electrical and plumbing, transformer, Generator etc.,
1. Pre-qualification will be conducted through pre-qualification procedures specified in paragraph 27 of Karnataka Transparency in public procurement rules 2000 and is opened to all eligible tenderers. Paragraph 27 States that: The Tender inviting authority shall for reasons to be recorded in writing provide for pre-qualification of tenderers on the basis of:
 - a. Experience and past performance in the execution of similar contracts.
 - b. Capabilities of the tenderer with respect to personnel, equipment and construction or manufacturing facilities,
 - c. Financial status and capacity
 - d. Only the tenders of pre-qualified tenderers shall be considered for evaluation
 2. Interested eligible tenderers may obtain further information from and inspect the tender documents which are available online in the Government of Karnataka e-procurement portal and the tenders are to be submitted online through the e-procurement portal <https://kppp.karnataka.gov.in/> only. Tenders submitted in any other manner will not be

accepted. Tenderers are required to obtain Level III digital signature from designated firms (available on the e-procurement portal) and then register with the Government of Karnataka e-procurement platform and submit tenders by using their ID and digital signature.

3. A Pre-bid meeting will be held as per E- procurement portal in the office of Joint Director of Horticulture, Department of Horticulture, (Vegetable section), Lalbagh, Bangalore – 560 004, Karnataka. To clarify the issues if any, and to answer questions on any matter that may be raised at that stage regarding the tender document. Applications for pre-qualification should be submitted through e-procurement portal only on or before as per E-Procurement portal
4. Tender documents along with the necessary information/documents must be uploaded to the e-procurement portal <https://kppp.karnataka.gov.in/> as per the tender document on or before (as per e-procurement portal) and first folder containing the Techno commercial tender will be opened (as per e-procurement portal) at the stipulated venue, in the presence of the Tenderers or their authorized representatives who wish to attend. If the office happens to be closed on the date of opening of the tenders as specified, the tenders will be opened on the next working date at the same time and venue.
5. The Employer shall not be liable for any delays due to the system failure beyond its control, Even though the system will attempt to notify the Tenderers of any tender updates, the Employer shall not be liable for any information not received by the Tenderers. It is the Tenderer's responsibility to verify the e-procurement portal for the latest information related to the tender, E-mail address of the Helpdesk is hphelpdesk.blr@intarvo.com. E-procurement portal help desk telephone numbers are: 080 – 22485867 / 22485927 (Timings 9:00 hours to 21:00hours). The tenderer is required to ensure browser capability of the computer well in advance to the last date and time for receipt of tenders, The employer shall not be responsible for non-accessibility of e-procurement portal due to internet connectivity issues and technical glitches

The Joint Director of Horticulture
Department of Horticulture,
Karnataka

2. GENERAL INSTRUCTIONS TO APPLICANTS (GITA)

1. <u>SCOPE OF WORKS</u>		
Scope of Works	1.1	The Joint Director of Horticulture, Karnataka Horticulture Board, Karnataka invites tenders from eligible Contractors registered with CPWD / KPWD / Railways / MES or any State Government Organizations for “Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka”
Slice and Package	1.2	NA -Deleted
Tender Invitation	1.3	The tenderers may submit tenders for works given in the table through e- procurement portal of the Government of Karnataka https://kppp.karnataka.gov.in/ from 10.03.2024
Type of Contract	1.4	On the stipulated date of opening of Tenders, initially, only the Technical Bids are opened. The Technical Bids shall be evaluated by the Employer in accordance with the stipulated Qualification and Evaluation criteria as in clause 3. No amendments or changes to the Technical Bids would be permitted after the opening of Technical Bids. Tenderers who are qualified in the Technical Evaluation, their Price Bid shall be opened at a date and time advised by the Employer through e-tendering portal. The Price Bids are evaluated and the Contract is awarded to the Tenderer whose Tender has been determined to be the lowest evaluated substantially responsive tender.
Site Information	1.5	General information on the climate, hydrology, topography, geology, access to site, transportation and communications facilities, medical facilities, project layout, expected construction period, facilities, services provided by the Employer, and other relevant data is attached as an Annex to the PITA.
2. <u>FRAUD AND CORRUPTION</u>		
	2.1	The GOK requires that the tenderers/ Contractors observe the highest

		standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, GOK:
		a. will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question; and
		b. will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a GOK contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a GOK contract.
3. <u>ELIGIBILITY OF TENDERERS</u>		
Eligible Tenderers	3.1	Tenderers shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by GOK
4. <u>QUALIFICATION CRITERIA</u>		
General	4.1	Qualified tenders will be based on Applicants meeting all the following minimum pass-fail criteria regarding their general and particular construction experience, financial position, personnel and equipment capabilities, and other relevant information as demonstrated by the Applicant's responses in the Information Forms attached to the Letter of Application. Additional requirements for joint ventures are given in Section 5. The qualifications, capacity, and resources of proposed subcontractors will not be taken into account in assessing those of individual or joint venture Applicants, unless they are named specialist subcontractors pursuant to Sub-Clause 4.4.
Nominated Subcontracting	4.2	If so, listed in the PITA, the Employer intends to execute certain specialized elements of the Works by Nominated Subcontractors in accordance with the GCOC of the tender documents, and for which Provisional Sums will be included in the BOQ for the subject Works.
Subcontracting	4.3	If an Applicant intends to subcontract parts of the Works such that the total of subcontracting is more than the 20-percentage stated in the PITA

		of the Applicant's approximated Tender Price, that intention shall be stated in the Letter of Application, together with a tentative listing of the elements of the Works to be subcontracted.
Specialist Subcontracting	4.4	If an Applicant / tenderer / JV intends to subcontract Electro-mechanical/Cold store works to specialist subcontractors, such elements and the proposed subcontractors shall be clearly identified, and the experience and capacity of the subcontractors shall be scribed in the relevant Information Forms.
Acceptable Substitutes	4.5	With reference to Sub-Clauses 4.3 and 4.4, the Employer may require Applicants to provide more information about their proposals. If any proposed subcontractor is found ineligible or unsuitable to carry out an assigned task, the Employer may request the Applicant to propose an acceptable substitute, and may conditionally Pre-qualify the Applicant accordingly, before issuing an invitation to tender.
Contractor's Responsibility	4.6	After award of contract, the subcontracting of any part of the Works, other than for the provision of labor and materials, or to subcontractors named in the Contract, shall require the prior consent of the Employer. Notwithstanding such consent, the Contractor shall remain responsible for the acts, defaults, and neglects of all subcontractors during contract implementation.
General Construction Experience	4.7	The Applicant shall provide evidence that:
		a. It has been actively engaged in the civil works construction business for at least 5 years immediately prior to the date of submission of applications, in the role of prime contractor, management contractor, partner in a joint venture, or subcontractor &
		b. That the applicant has generated an average annual construction turnover of period greater than the Rs.50.00 crores (the average annual turnover is defined as the sum of certified payment certificates for works in progress or completed by the applicant, divided by the number of years)

Particular Construction Experience	4.8	The applicant / tenderer / JV shall provide evidence that:
		a. Satisfactory completed, at least one similar work of Civil works value not less than Rs.9.00 crores as prime contractor
		b. Satisfactory completed, at least one similar work of Cold store works value not less than Rs. 5.00 Crores as prime contractor (or)
		c. Similar works means construction of RCC or Steel Multi-storied buildings minimum G Plus 2 with Plinth area not less than 1500 sqm. Similarly for the cold stores the contractor or the partner of JV should have executed cold stores/ CA stores for not less than 2000 MT in a single work.
		d. The Applicant / tenderer / JV shall also provide evidence that it has achieved the minimum monthly and/or annual production rates of the key construction activities.
Financial Capabilities	4.9	The Applicant / tenderer / JV shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements for the subject contract(s) in the event of stoppage, start-up, or other delays in payment, of the minimum estimated amount Rs. 3.00 Crores, net of the Applicant's commitments for other contracts.
	4.10	In the relevant Information Form, the Applicant shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.
	4.11	The audited balance sheets or other financial statements acceptable to the Employer, for the last five years (unless otherwise stated in the PITA) shall be submitted and must demonstrate the current soundness of the Applicant's financial position and indicate its prospective long-

		term profitability. If deemed necessary, the Employer shall have the authority to make inquiries with the Applicant's bankers.				
Personnel Capabilities	4.12	The Applicant shall supply general information on the management structure of the firm, and shall make provision for suitably qualified personnel to fill the key positions listed in the PITA, as required during contract implementation. The Applicant shall supply information on a prime candidate and on an alternate for each key position, both of whom shall meet the experience requirements specified.				
		Position	Minimum no of personnel	Qualification	Total Works/ Business Experience years)	In similar works (Years)
Equipment Capabilities	4.13	The Applicant shall own, or have assured access (through hire, lease, purchase agreement, other commercial means, or approved subcontracting) to key items of equipment, in full working order, as listed in the PITA, and must demonstrate that, based on known commitments, they will be available for timely use in the proposed contract. The Applicant may also list alternative types of equipment that it would propose for use on the contract, together with an explanation of the proposal.				

S. No	Name of Equipment, plant / vehicles	Total requirement for this work	Equipment owned by the Applicant			Equipment leased with the applicant			Equipment to take lease by the applicant		
			Nos	Year of	Present	Nos	Year of	Present	Nos	Year of	Present
	Excavator - 200/300	1									
	RMC Plant with all equipment - 30 m ³ /hour	1									
	Transit Mixer - 6 m ³	2									
	Concrete Pump	1									
	CRAWLER crane- 40 tons	1									
	Hydraulic crane 14 M.T	1									
	Vacuum Dewatering set	1									
	Tipper / Lorry 10 cum	1									
	Water lorry with sprinkler 10 KL	1									
	Concrete Mixer 2 CUM	1									
	Needle	2									

[illegible]

		means all facilities, equipment, machinery, tools, apparatus, appliances or things of every kind required in or for installation, completion and maintenance of Facilities	ed for installation, completion and maintenance of Facilities																
Litigation History	4.14	The Applicant shall provide accurate information on the related Application Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Applicant or any partner of a joint venture may result in failure of the application.																	
Slice and Package	4.15	NA – Deleted																	
Right to Waive	4.16	The Employer reserves the right to waive minor deviations in the qualification criteria if they do not materially affect the capability of an Applicant to perform the contract.																	
Approach and Construction Methods	4.17	The applicant must attach with their application, a note giving a general description on the approach to the construction methods, technologies, quality assurance schemes proposed, deployment schedule of equipment proposed to be used, etc., for ensuring completion of the work as per specifications within the desired time- frame.																	

Tender Capacity	4.18	Applicants who meet the minimum qualification criteria will be qualified only if their available tender capacity at the expected time of tendering is more than the total estimated cost of the works. The available tender capacity will be calculated as under:
		Assessed Available Tender Capacity = (A*N*1.5-B), where
		A = Maximum value of works executed in any one year during the last five years which will take into account the completed as well as works in progress;
		B = Value at current price level of the existing commitments and on-going works to be completed during the next 2 years and 6 months (30 Months) (period of completion of works for which tenders are invited); and
		N = Number of years prescribed for completion of the works for which the tenders are invited.
	4.19	Applicants meeting the above criteria, are nevertheless subject to be disqualified if they have:
		a. made misleading or false representation in the form, statements and attachments submitted; and/or
		b. record of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures, etc.
5. <u>JOINT VENTURES</u>		
Eligibility	5.1	If the Applicant comprises a number of firms combining their resources in a joint venture, the legal entity constituting the joint venture and the individual partners in the joint venture shall be registered and shall otherwise meet the requirements of Clause 3 above.

Qualification Criteria	5.2	The joint venture must satisfy collectively the criteria of Clause 4. For this purpose, the following data of each member of the joint venture may be added together to meet the collective qualifying criteria:
		a. average annual turnover (Sub-Clause 4.7 [b]);
		b. particular experience including key production rates (Sub-Clause 4.8);
		c. financial means (Sub-Clause 4.9, 4.10, and 4.11);
		d. personnel capabilities (Sub-Clause 4.12); and
		e. equipment capabilities (Sub-Clause 4.13).
		Each partner must satisfy the following criteria individually:
		a. general construction experience for the period of years stated in Sub-Clause 4.7 (a),
		b. adequate sources to meet financial commitments on other contracts (Sub- Clause 4.10),
		c. financial soundness (Sub-Clause 4.11), and
		d. litigation history (Sub-Clause 4.14).
		e. In accordance with the above, the Application shall include all related information required under Clause 4 for individual partners in the joint venture.
Partner in Charge	5.3	Lead Partner in charge: One of the partners, who is responsible for performing a key function in contract management or is executing a major component of the proposed contract, shall be nominated as being in charge during the pre-qualification and tendering periods and, in the event of a successful tender, during contract execution. The partner in charge /Lead partner shall have 50% of the qualifying criteria specified for Average annual turnover and Line of credit / liquid assets. The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture;

		this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.
Partner Limitation	5.4	The maximum no. of partners shall of 3 nos. One of the partners, who is responsible for performing a key function in contract management or is executing a major component of the proposed contract, shall be nominated as being in charge during the tendering periods and, in the event of a successful tender, during contract execution.
Joint and Several Liability	5.5	All partners of the joint venture shall be legally liable, jointly and severally, during the tendering process and for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under Sub-Clause 2.4 above. To enable the above, each of the partners of the joint venture other than lead partner shall meet not less than 25% of the qualifying criteria specified for Average annual turnover and Line of credit/ liquid assets
Joint Venture Agreement	5.6	A copy of the Joint Venture Agreement (JVA) entered into by the partners shall be submitted with the Application. Pursuant to Sub-Clauses 2.2 to 2.5 above, the JVA shall include among other things: the JV's objectives; the proposed management structure; the contribution of each partner to the joint venture operations; the commitment of the partners to joint and several liability for due performance; recourse/sanctions within the JV in the event of default or withdrawal of any partner; and arrangements for providing the required indemnities
Dissolution of Joint Venture	5.7	The pre-qualification of a joint venture does not necessarily pre-qualify any of its partners to tender individually or as a partner in any other joint venture or association. In case of dissolution of a joint venture prior to the submission of tenders, any of the constituent firms may pre-qualify if they meet all of the pre-qualification requirements, subject to the written approval of the Employer. Individual members

		<p>of a dissolved joint venture may participate as subcontractor to qualified Applicants, subject to the provisions mentioned below:</p> <ol style="list-style-type: none"> Only firms and joint ventures that have been pre-qualified under this procedure may submit a tender. A firm shall submit only one tender in the same tendering process, either individually as a Tenderer or as a partner of a joint venture. No firm can be a subcontractor while submitting a tender individually or as a partner of a joint venture in the same tendering process. A firm, if acting in the capacity of Subcontractor in any tender, may participate in more than one tender, but only in that capacity. A Tenderer who submits, or participates in, more than one tender will cause all the proposals in which the Tenderer has participated to be disqualified.
6. <u>REQUEST FOR CLARIFICATION</u>		
Notification and Response	6.1	<p>Applicants are responsible for requesting any clarification of the Tender documents. A request for clarification shall be made in writing to the Employer's address indicated in the PITA. The Employer will respond to any request for clarification that it receives earlier than 14 days prior to the deadline for submission of applications. Copies of the Employer's response, including a description of the inquiry but without identifying its source, will be forwarded to all purchasers of the tender documents.</p>
7. <u>SUBMISSION OF APPLICATIONS</u>		
Delivery	7.1	<p>The Tendering through E-procurement system: The tenderer shall upload their tenders through e-procurement platform. No other modes of submission are permitted. The tendering is through website https://kppp.karnataka.gov.in. Detailed guidelines</p>

		for viewing of tenders and submission of online tenders are given in the website. The prospective tenderers can submit their tender online. However, the tenderers are required to have enrolment/registration in the web site and should have valid Digital Signature Certificate (DSC). The DSC can be obtained from any authorized certifying agencies as given in the e-procurement portal. The tenderers should register in the web site https://kppp.karnataka.gov.in . After this, the tenderer can log in the site through the secured login. Tenders must be submitted/uploaded no later than on (as per the e-procurement platform) The e-procurement platform will not accept the tenders after the stipulated date and time (as per the clock of the e-procurement platform).
Late Applications	7.2	Tenders cannot be uploaded by the tenderers after the dead line for submission / uploading of tenders (as per the clock of the e-procurement platform) prescribed by the employer
Lack of Information	7.3	Failure of an Applicant to provide comprehensive and accurate information that is essential for the Employer's evaluation of the Applicant's qualifications, or to provide timely clarification or substantiation of the information supplied, may result in disqualification of the Applicant.
Material Changes	7.4	Applicants, and those subsequently pre-qualified or conditionally pre-qualified, shall inform the Employer of any material change in information that might affect their qualification status. Tenderers shall be required to update key pre- qualification information at the time of tendering Prior to award of contract, the lowest evaluated tenderer will be required to confirm its continued qualified status in a post-qualification review process.
8. <u>EMPLOYER'S NOTIFICATION AND TENDER PROCESS</u>		
Invitation for Tender	8.1	Within the period stated in the PITA from the date for submission of applications, the Employer will notify all Applicants in writing of the results of their application, and of the names of all pre-qualified and

		conditionally pre-qualified applicants (see Sub-Clause 8.2 below). At the same time, successful applicants will be invited to submit a tender, in the format of the Invitation for Tenders annexed to the PITA.
Conditional Pre-qualification	8.2	NA- Deleted .
One Tender per Tenderer	8.3	Only firms and joint ventures that have been pre-qualified under this procedure may submit a tender. A firm shall submit only one tender in the same tendering process, either individually as a Tenderer or as a partner of a joint venture . No firm can be a subcontractor while submitting a tender individually or as a partner of a joint venture in the same tendering process. A firm, if acting in the capacity of Sub contractor in any tender, may participate in more than one tender, but only in that capacity. A Tenderer who submits, or participates in, more than one tender will cause all the proposals in which the Tenderer has participated to be disqualified.
Earnest Money Deposit	8.4	Tenderers will be required to provide earnest money deposit in the form and amount indicated in the tender documents. The successful tenderer will be required to provide performance security in the form and amount indicated in the tender documents.
Changes after Pre- qualification	8.5	<p>Any change in the structure or formation of an Applicant after being pre-qualified and invited shall be subject to written approval of the Employer prior to the deadline for submission of bids. Such approval will be denied if as a consequence of any change:</p> <ul style="list-style-type: none"> a. an individual firm, or a joint venture as a whole, or any individual member of the JV fails to meet any of the collective or individual qualifying requirements. b. the new partners to a joint venture were not pre-qualified in the first instance, either as individual firms or as another joint venture; or c. in the opinion of the Employer, a substantial reduction in competition may result.

Employer's Rights	8.6	The Employer reserves the right to take the following actions, and shall not be liable for any such actions:
		<ul style="list-style-type: none"> a. amend the scope and cost of any contract to be tendered under this project, in which event tenders will be invited only from those applicants who meet the resulting amended pre-qualification requirements; b. reject or accept any pre-qualification application, and/or any late application; and c. cancel the pre-qualification process and reject all applications.

3. PARTICULAR INSTRUCTIONS TO APPLICANTS (PITA)

The PITA below is formatted for pre-qualification related to either a single (individual) contract or multiple contracts (“slice and package”).

GITA Sub-Clause Reference	These particular instructions and related Information Forms (IF) are intended to complement, amend, or supplement the provisions in the GITA. In the event of conflict or ambiguity, the provisions in the PITA shall prevail over those in the GITA.
1.1	<p><u>Name of Project:</u></p> <p>“Construction of Cold Storage of Capacity 2000 MT at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka under NABARD RIDF 29”</p> <p>PART I: ON ITEM RATE TENDER BASIS</p> <p>A. Construction of 2000 MT Capacity - Cold Storage</p> <p>B. Cold storage facility including insulated panel structure refrigeration and allied systems including Utility room, miscellaneous items, electrical installation,</p> <p>C. Basic infrastructure facilities – Security room, Sump, Compound wall, Roads, Storm water drain, basic electrical and plumbing, transformer, Generator etc.,</p>
1.2	<p><u>The Employer:</u></p> <p>Joint Director of Horticulture (Vegetable Section), Lalbagh, Bengaluru Karnataka - 560 004 Email id : jdhveg@gmail.com</p>
1.3	<p><u>Slice and Package:</u> <i>NO</i></p> <p><u>Concurrent tendering on more than one contract:</u></p>
1.4	<p><u>Tender Invitation</u></p> <p>Date: 10.03.2024</p>
4.11	<p><u>Audited Balance Sheets or Financial Statement</u></p> <p>5 Years (Financial year 2018-19 to 2022-2023,) the applicants should furnish</p>

	balance sheet, Profit and loss statement, IT returns or any other relevant document to establish the financial capabilities
5.4	<p><u>Joint Ventures</u></p> <p>Partner Limitation is three. [To enable the JV, the partner in charge /Lead partner shall have 50% of the qualifying criteria specified in sub-clause 4.7(b) and 4.9 of PITA (Part B). All members of the Joint Venture must have experience in execution of similar works stated in 4.8 (a)] of PITA (Part B).</p>
6.1	<p><u>Requests for Clarification:</u></p> <p>Address: Joint Director of Horticulture (Vegetable Section), Lalbagh, Bengaluru Karnataka - 560 004 Email id : jdhveg@gmail.com</p>
7.1	<p><u>Submission of Applications:</u></p> <p>The tenderer shall upload their tender through E-procurement platform. No other modes of submission are permitted. The Tendering is through website https://kppp.karnataka.gov.in. The detailed guidelines for viewing of tenders and submission of online tenders are given in the website. The prospective tenderers can submit their tenders online. However, the tenderers are required to have enrollment/ registration in the website and should have valid digital signature certificate (DSC). The DSC can be obtained from any authorized certifying agencies as given in the e-procurement portal. The tenderers should register in the website https://kppp.karnataka.gov.in . After this, the tenderers can login in the site through the secured login. Tenders must be submitted/ uploaded no later than (As per e-procurement portal). The e-procurement platform will not accept the tenders after the stipulated date and time. As per the clock of the e-procurement platform.</p> <p>Address: Joint Director of Horticulture (Vegetable Section), Lalbagh, Bengaluru Karnataka - 560 004 Email id : jdhveg@gmail.com</p>
8.1	<p><u>Employer's Notification</u></p> <p>Time period from the closing date for submission of application- 45 Days</p>

4. SPECIAL CONDITIONS OF CONTRACT

A. GENERAL

1. Definitions

1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meanings. Bold letters are used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Tender.

Compensation events are those defined in Clause 38 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Employer in accordance with Sub Clause 46.1.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.2 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body whose Tender to carry out the Works has been accepted by the Employer.

The **Contractor's Tender** is the completed Tender document submitted by the Contractor to the Employer.

The **Contract price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; **months** are calendar months.

A **Defect** is any part of the Works not completed in accordance with the Contract.

The **Defects liability period** is the period named in the Contract Data and calculated from the Completion Date.

The **Employer** is the party who will employ the Contractor to carry out the Works.

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

The **Initial Contract price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Contract Data. The Intended Completion Date may be revised only by the Employer by issuing an extension of time.

Materials are all supplies, including consumables, used by the contractor for incorporation in the Works.

Plant is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

The **Site** is the area defined as such in the Contract Data.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Employer.

The **Start Date** is given in the Contract Data. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

A **Variation** is an instruction given by the Employer which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the Contract Data.

2. Interpretation

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Employer will provide instructions clarifying queries about the Conditions of Contract.

2.2 The documents forming the Contract shall be interpreted in the following order of priority:

- a. Agreement
- b. Letter of Acceptance, notice to proceed with the works
- c. Contractor's Tender
- d. Contract Data
- e. Conditions of Contract
- f. Specifications
- g. Drawings
- h. Bill of quantities and
- i. any other document listed in the Contract Data as forming part of the Contract.

3. Law governing contract

3.1 The law governing the Contract is the Laws of India supplanted by the Karnataka Local Acts.

4. Employer's decisions

4.1 Except where otherwise specifically stated, the Employer will decide contractual matters between the Employer and the Contractor.

5. Delegation

5.1 The Employer may delegate any of his duties and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Employer but may not assign the Contract without the approval of the Employer in writing. Subcontracting does not alter the Contractor's obligations.

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer.

9. Personnel

9.1 The Contractor shall employ the technical personnel (of number and qualifications) as may be stipulated by GOK from time to time during the execution of the work. The technical staff so employed shall be available at site as may be stipulated by the Employer.

9.2 If the Employer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. Employer's and Contractor's risks

10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's risks

11.1 The Employer is responsible for the excepted risks which are:

- a. rebellion, riot commotion or disorder unless solely restricted to employees of the Contractor or his Sub-Contractors arising from the conduct of the Works; or
- b. a cause due solely to the design of the Works, other than the Contractor's design; or
- c. any operation of the forces of nature (in so far as it occurs on the Site) which an experienced contractor:
 - Could not have reasonably foreseen; or
 - Could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures.
 - › prevent loss or damage to physical property from occurring by taking appropriate measures or
 - › insure against such loss or damage

12. Contractor's risks

12.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Contractor.

13. Insurance

13.1 The Contractor shall prior to commencing the works, effect and thereafter maintain insurances, in the joint names of the Employer and the Contractor, (cover from the first working day after the Start Date to the end of Defects Liability Period), in the amounts stated in the Contract Data:

- a. for loss of or damage to the Works, Plants and Materials and the Contractor's equipment;
- b. for liability of both Parties for loss, damage, death and injury to third parties or their property arising out of the Contractor's performance of the Contract including the Contractor's liability for damage to the Employer's property other than the Works and
- c. for liability of both Parties and of any Employer's representative for death and injury to the Contractor's personnel except to the extent that liability arises from the negligence of the Employer, any Employer's representative or their Employees.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Employer for his approval before the Start Date. All such insurance shall provide for compensation to be payable to rectify the loss or damage incurred. All payments received from insurers relating to loss or damage shall be held jointly by the Parties and used for the repair of the loss or damage or as compensation for loss or damage that is not to be repaired.

13.3 If the Contractor fails to effect or keep in force any of the insurances referred to in the previous subclauses or fails to provide satisfactory evidence, policies or receipts, the Employer may without prejudice to any other right or remedy, effect insurance for the cover relevant to such default and pay the premiums due and recover the same as a deduction from any other monies due to the Contractor. If no payments is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Employer.

13.5 Both Parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports:

14.1 The Contractor, in preparing the tender, shall rely on any site investigation reports referred to in the Contract data, supplemented by any information available to the Tenderer.

15. Queries about the Contract Data

15.1 The Employer will clarify queries on the Contract Data.

16. Contractor to construct the Works

16.1 The Contractor shall construct the Works in accordance with the Specification and Drawings.

17. The Works to be completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Employer, and complete them by the Intended Completion Date.

18. Approval by the Employer:

18.1 The Contractor shall submit Specification and drawings showing the proposed Temporary Works to the Employer, who is to approve them if they comply with the Specifications and Drawings.

18.2 The Contractor shall be responsible for the design of Temporary Works

18.3 The Employer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.4 The Contractor shall obtain approval of third parties to the design of third parties to the design of the temporary Works where required.

18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Employer before their use.

19. Safety

19.1 The Contractor shall be responsible for the safety of all activities on the Site.

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Employer of such discoveries and carry out the Employer's instructions for dealing with them.

21. Possession of the Site

21.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the Contract Data the Employer is deemed to have delayed the start of the relevant activities and this will be Compensation Event.

22. Access to the Site

22.1 The Contractor shall allow the Employer and any person authorized by the Employer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

23. Instructions

23.1 The Contractor shall carry out all instructions of the Employer which comply with the applicable laws where the Site is located.

24. Procedure for resolution of Disputes:

24.1 If the Contractor is not satisfied with the decision taken by the Employer, the dispute shall be referred by either party to Arbitration within 30 days of the notification of the Employer's decision.

24.2 If neither party refers the dispute to Arbitration within the above 30 days, the Employer's decision will be final and binding.

24.3 The Arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract.

B. TIME CONTROL

25. Program

25.1 Within the time stated in the Contract Data the Contractor shall submit to the Employer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works.

25.2 The Employer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Employer again at any time. A revised Program is to show the effect of Variations and Compensation Events.

26. Extension of the Intended Completion Date

26.1 The Employer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date.

26.2 The Employer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Employer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information.

27. Delays ordered by the Employer

27.1 The Employer may instruct the Contractor to delay the start or progress of any activity within the Works.

28. Management meetings

28.1 The Employer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the progress achieved and the plans for remaining work.

28.2 The responsibility of the parties for actions to be taken is to be decided by the Employer either at the management meeting or after the management meeting and stated in writing to be distributed to all who attended the meeting.

C. QUALITY CONTROL

29. Identifying defects

29.1 The Employer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Employer may instruct the Contractor to search for a Defect and to uncover and test any work that the Employer considers may have a Defect

30. Tests

30.1 If the Employer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

31. Correction of defects

31.1 The Employer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

31.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Employer's notice.

32. Uncorrected defects

32.1 If the Contractor has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, and the Contractor will pay this amount.

D. COST CONTROL

33. Bill of Quantities (BOQ)

33.1 The BOQ shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.

33.2 The BOQ is used to calculate the Contract Price. The Contractor is paid for the quantity of the workdone at the rate in the BOQ for each item.

34. Variations

34.1 The Employer shall have power to order the Contractor to do any or all of the following as considered necessary or advisable during the progress of the work by him

- › Increase or decrease of any item of work included in the Bill of Quantities (BOQ);
- › Omit any item of work;
- › Change the character or quality or kind of any item of work;
- › Change the levels, lines, positions and dimensions of any part of the work;
- › Execute additional items of work of any kind necessary for the completion of the works; and
- › Change in any specified sequence, methods or timing of construction of any part of the work.

34.2 The Contractor shall be bound to carry out the work in accordance with any instructions in this connection, which may be given to him in writing by the Employer and such alteration shall not vitiate or invalidate the contract.

34.3 Variations shall not be made by the Contractor without an order in writing by the Employer, provided that no order in writing shall be required for increase or decrease in the quantity of an item appearing in the BOQ so long as the work executed conforms to the approved drawings.

34.4 The Contractor shall promptly request in writing the Employer to confirm verbal orders and if no such confirmation is received within 15 days of request, it shall be deemed to be an order in writing by the Employer.

35. Payments for Variations

35.1 Payment for increase in the quantities of an item in the BOQ up to 25% of that provided in the Bill of Quantities shall be made at the rates quoted by the Contractor.

35.2 For quantities in excess of 125% of the tendered quantity of an item as given in the BOQ, the Contractor shall be paid at the rate entered in or derived from in the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract.

35.3 If there is no rate for the additional, substituted or altered item of the work in the BOQ, efforts would be made to derive the rates from those given in the BOQ or the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) and if found feasible the payment would be made at the derived rate for the item plus or minus the overall percentage of the original tendered rates over the current Schedule of Rates prevalent at the time of award of contract.

35.4 If the rates for additional, substituted or altered item of work cannot be determined either as at 35.1 or 35.2 or 35.3 above, the Contractor shall be requested to submit his quotation for the items supported by analysis of the rate or rates claimed, within 7 days.

35.5 If the Contractor's quotation is determined unreasonable, the Employer may order the Variation and make a change to the Contract Price which shall be based on Employer's own forecast of the effects of the Variation on the Contractor's costs.

35.6 If the Employer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.

35.7 Under no circumstances the Contractor shall suspend the work on the plea of non-settlement of rates for items falling under this Clause.

36. Submission of bills for payment

36.1 The Contractor shall submit to the Employer monthly bills of the value of the work completed less the cumulative amount paid previously as per Schedule in Annexure- A

36.2 The Employer shall check the Contractor's bill and determine the value of the work executed which shall comprise of (i) value of the quantities of the items in the BOQ completed and (ii) valuation of Variations and Compensation Events.

36.3 The Employer may exclude any item paid in a previous bill or reduce the proportion of any item previously paid in the light of later information.

37. Payments

37.1 Payments shall be adjusted for deductions for advance payments, other recoveries (5% additional security deposit) in terms of the contract and taxes, at source, as applicable under the law. The Employer shall pay the Contractor the within 60 days of submission of bill.

37.2 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

38. Compensation events

38.1 The following are Compensation events unless they are caused by the Contractor:

- › The Employer does not give access to a part of the Site by the Site Possession Date stated in the Contract Data.
- › The Employer orders a delay or does not issue drawings, specifications or instructions required for execution of works on time.
- › The Employer instructs the Contractor to uncover or to carry out additional tests upon work which is then found to have no Defects.
- › The Employer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- › The effect on the Contractor of any of the Employer's Risks.
- › The Employer unreasonably delays issuing a Certificate of Completion.
- › Other Compensation Events listed in the Contract Data or mentioned in the Contract.

38.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Employer shall decide whether and by how much the Contract Priceshall be increased and whether and by how much the Intended Completion Date shall be extended.

38.3 As soon as information demonstrating the effect of each Compensation event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Employer and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, theEmployer shall adjust the Contract Price based on Employer's own forecast. The Employer will assume that the Contractor will react competently and promptly to the event.

38.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with theEmployer.

39. Tax

39.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other taxes that theContractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

40. Price Adjustment

40.1 Deleted

40.2 Deleted

41. Liquidated damages

41.1 The Contractor shall pay liquidated damages to the Employer at the rate of 0.1% per day for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the Contract Data). The total amount of liquidated damagesshall not exceed 10% of the contract value. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages does not affect the Contractor's liabilities.

41.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment of bill.

42. Advance Payments:

42.1 The Employer shall make 5 % payment to the Contractor against provision by the Contractor of an unconditional bank guarantee in a form acceptable to the Employer issued by a Nationalized/Scheduled Bank in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest will not be charged on the advance payment.

42.2 The Contractor is to use the advance payment only to pay for Mobilization expenses required specifically for execution of the Works. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Employer.

42.3 The advance payment shall be recovered at the rate of 7.50 % of the RA bills between the 10 % and 90 % of the contract values. That means the recovery will start after the cumulative RA bill of above 10% of the contract value.

43. Securities:

43.1 The Security deposit of 5% shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and type of instrument acceptable to the Employer. The Security deposit shall be valid until a date 30 days from the date of expiry of Defects Liability Period and the additional security for unbalanced tenders shall be valid until a date 30 days from the date of issue of the certificate of completion.

44. Cost of Repairs:

44.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. FINISHING THE CONTRACT

45. Completion

45.1 The Contractor shall request the Employer to issue a Certificate of Completion of the Works and the Employer will do so upon deciding that the Work is completed.

46. Taking over

46.1 The Employer shall take over the Site and the Works within seven days of issuing a certificate of Completion.

47. Final account

47.1 The Contractor shall supply to the Employer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Employer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 90 days of receiving the Contractor's account if it is correct and complete. If it is not, the Employer shall issue within 90 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Employer shall decide on the amount payable to the Contractor and make payment within 60 days of receiving the Contractor's revised account.

48. As built drawings and /or Operating and Maintenance Manuals

48.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

48.2 If the Contractor does not supply the Drawings by the dates stated in the Contract Data, or they do not receive the Employer's approval, the Employer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

49. Termination

49.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

49.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- the Contractor stops work for 45 days when no stoppage of work is shown on

the current Program and the stoppage has not been authorized by the Employer;

- the Employer instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 60 days;
- The Contractor becomes bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- a payment due to the Contractor is not paid by the Employer within 90 days of the date of the submission of the Bill by Contractor;
- the Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Employer;
- the Contractor does not maintain a security which is required;
- the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Contract data; and
- if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in the executing the Contract.

For the purpose of this paragraph: “corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition.”

49.3 When either party to the Contract gives notice of a breach of contract to the Employer for a cause other than those listed under Sub Clause 49.2 above, the Employer shall decide whether the breach is fundamental or not.

49.4 Notwithstanding the above, the Employer may terminate the Contract for convenience.

49.5 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

50. Payment upon Termination

50.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Employer shall prepare bill for the value of the work done less advance payments

received up to the date of the bill, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Contract Data. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer.

50.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Employer shall prepare bill for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract, and less taxes due to be deducted at source as per applicable law and make payment accordingly.

51. Property

51.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a contractor's default.

52. Release from performance

52.1 If the Contract is frustrated by any event entirely outside the control of either the Employer or the Contractor the Employer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

F. SPECIAL CONDITIONS OF CONTRACT

53. Labour

53.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

53.2 The Contractor shall, if required by the Employer, deliver to the Employer a return in detail, in such form and at such intervals as the Employer may prescribe, showing the staff and the

numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Employer may require.

54. Compliance with labour regulation

54.1 During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, Employer shall have the right to deduct any money due to the Contractor including his amount of security deposit. The Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

54.2 The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

55. Protection of Environment

55.1 The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

56. Arbitration (Clause 24)

56.1 The procedure for arbitration shall be as follows:

- a. In case of dispute or difference arising between the Employer and the Contractor relating to any matter arising out of or connected with this agreement it shall be settled in accordance with the Arbitration and Conciliation Act 1996. The disputes or differences shall be referred to a Sole Arbitrator. The Sole Arbitrator shall be appointed by agreement between the parties; failing such agreement, by the Appointing Authority (any one of the Organizations as per list enclosed in Annexure)
- b. Arbitration proceedings shall be held at Director of Horticulture, Department of Horticulture, Lalbagh, Bangalore – 560 004, Karnataka, India.
- c. The cost and expenses of arbitration proceedings will be paid as determined by the Arbitrator. However, the expenses incurred by each party in connection with the preparation, presentation, etc., shall be borne by each party itself.
- d. Performance under the contract shall continue during the arbitration proceedings and payments due the Contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.

Annexure:

List of Organizations who are considered as Appointing Authority for Appointment of Arbitrators:

1. Indian Council of Arbitration, New Delhi;
2. International Centre for Alternative Disputes Resolution (India);
3. Indian Roads Congress;
4. Indian Building Congress;
5. Indian Institute of Bridge Engineers;
6. Indian Institute of Public Health Engineers;
7. Institute of Water Works

5. CONTRACT DATA

The following documents are also part of the contract and clause reference is provided in the list below:

1	The schedule of operating and maintenance manuals	48 of CC
2	The methodology and program of construction	25 of CC
3	Site investigation Reports	14 of CC
4	The schedule of key and critical equipment to be deployed on the work as per agrees program of construction	25 of CC
5	The Employer is The Joint Director of Horticulture <u>Address:</u> Joint Director of Horticulture (Vegetable Section), Lalbagh, Bengaluru Karnataka - 560 004 Email id : jdhveg@gmail.com	1.1 of IIT
6	Name of the Contract: Tender No:..... Dated:	
7	The Site possession date is.....	21 of CC
8	The start Date / Zero date is the date of issue of notice to proceed with the work	1.1 of ITT
9	The defect liability period is 12 months after the commissioning and handing over of the plant.	31 of CC

1. Description of work

In Karnataka, horticulture crops are grown in an area of 23.25 lakh ha with total production of 183.46 lakh MT. However, less than 2% of the total production of fruits and vegetables are being processed into different products. About 25-30% of the produce is lost due to improper post – Harvest management. Post – harvest management of produce is a highly important aspect of farming. Some quantity of produce needs to be stored for further processing or for future table use. The losses that can occur by not storing the produce under proper conditions can be avoided using

a cold storage. It enhances their shelf life and also facilitates continuous supply of produce in the market. The cold storage method stabilized the price of the product, provide equal distribution and marketing of the product.

It is being realized that proper and timely storage of produce is an essential factor in the agriculture industry and due importance is given for the same. Research has suggested that the Indian cold storage industry is making a steady growth and the annual growth rate is estimated to be 25.8 %. Currently there are more than 6000 cold storages in India and they are capable of storing a produce of 30 million tonnes.

On realizing the issues of the inefficient post-harvest management, the Karnataka Horticulture Board proposes to **Construct a Cold Storage of 2000 MT capacity at Murukkanahally Horticulture Farm, K.R. Pete Taluk, Mandya District – Karnataka** and the major components of the projects are listed below:

SL.NO	DESCRIPTION
1	Cold Storage -2000 MT - Civil + PEB + Electrical
2	Technician Shed – Quality test lab, Dormitory, Supervisor room, waiting area etc
3	Security room, Sump, compound wall, road
4	Plumping – water supply lines, storm drains, sewer lines etc
5	Electrical - Trans Yard – 160 KVA transformer, 160 KVA DG room, HT line, LT lines, Street lighting etc., complete

2. Mile stones

- The Start date shall be the date of issue of notice to proceed with the work.
- The intended completion date for the whole of the works is 12 months for the below projects from the date of handing over of site and execution of the

agreement

Intermediate Milestone for the above listed works will be:

Milestone	Physical works to be completed	Period from the date of issue of notice to proceed with the work.
Mile stone 1	Formation and Foundation works Mobilization, Formation of Layout, Site grading, Excavation, Filling, Foundation up to basement	2 nd month
Milestone 2	Super structure work Concreting of super structure including Completion of all Roof. I. Cold store with PEB roof II. Technician shed III. Others – Security room, EB yard etc	5 th month
Milestone 3	Joinery and Finishing works Internal works such as construction & finishing of PUF walls, partition walls, cup boards, WC fixing, Fixing of Doors, windows, ventilators, finishing of flooring, white washing, colour washing, Emulsion Painting, internal water supply, Internal sanitary and Internal electrical arrangements.	9 th month
Milestone 4	Execution of HVAC Works Manufacturing of Equipments, Pre-dispatch inspection by PMC and Client.	10 th month

	Supply and Erection of HVAC Equipment's, Refrigeration system and Miscellaneous plants. Supply and Erection of Pipelines, Control Panels and Cabling and Inspection	
Milestone 5	Electrical installation Works Manufacturing of Equipment's, Pre-dispatch inspection by PMC and Client. Supply and Erection of Pipelines, Control Panels and Cabling and Inspection.	11 th month

3. Insurance Requirements

Insurance requirements are as under

S.No	Type of Cover	Minimum cover for Insurance
1	Works and of plant and Materials	The sum stated in the agreement plus 20%
2	Loss of damage to equipment	Full replacement cost
3	Loss of damage to property of third party	Full replacement cost
4	Personal injury or death insurance	
	a. For third party	Rs. 20 lakhs to cover 4 persons @ Rs.5 lakhs each
	b. For contractors' employees or labour	In accordance with the statutory requirements applicable to Karnataka

4. Liquidated Damage (Clause 41 of CC)

The liquidated damages for the whole of the works are Rs. 2200.00 Per day and that for the milestones are as under.

S.No	Milestone	LD per day
1	Milestone 1	Rs.2200.00 Per day
2	Milestone 2	Rs.2200.00 Per day
3	Milestone 3	Rs.2200.00 Per day
4	Milestone 4	Rs.2200.00 Per day
5	Milestone 5	Rs.2200.00 Per day
6	Milestone 5	Rs.2200.00 Per day

The maximum amount of liquidated damages for the whole of the works is 10 percent of final contract price.

5. Advance Payments (Clause 44 of CC)

The amount of the advance payment is:

Nature of Advance	Amount (Rs)	Conditions to be fulfilled
Mobilization	5% of the contract price	On submission of un-conditional bank guarantee (to be drawn before end of 20% of contract period)

The advance payment will be paid to the contractor no later than 30 days after fulfilment of the above conditions.

Repayment of advance payment for mobilization – (Clause 42 of CC)

The recovery shall be at the rate of 7.50 % of the RA bills between the 10 % and 90 % of the contract values. That means the recovery will starts after the cumulative RA bill of above 10% of the contract value.

6. As built drawings and Operation & Maintenance manuals (Clause 48 of CC)

The date by which “as-built” drawings in 2 sets are required is within 30 days of issue of certificate of completion of Whole or Section of the Work as the case may be.

The date by which Operating and Maintenance Manuals are required is within 30 days of issue of certificate of completion of Whole or Section of the Work as the case may be.

The amount to be withheld for failing to supply “as built” drawings or supply of Operation and Maintenance Manuals shall be submitted before final payment.

7. Termination

The following events shall also be fundamental breach of the contract. (Clause 49.2)

The contractor has contravened sub clause 7.1 and Clause 9 of CC.

The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be 30 percent. (Clause 50.1)

6. Annexure- A

SCHEDULE OF FOR INTERIM PAYMENTS

PAYMENT FOR CIVIL, ELECTRICAL AND FIRE FIGHTING WORKS

The Running Account bill will be payable by the Owner after submission of Bills accompanied by the relevant documents duly on monthly basis for the completed portion of the works as per the BOQ items and rates. The actual quantity of work executed will be paid as per the quoted rates, all the IT & GST deductions will be made as per the IT and GST rules applicable in force. Security deposit 5% will also be recovered in the running bills as per the relevant clause. The bills will be recorded by the client based in the certificate's payments will be released after the deductions applicable.

PAYMENT SCHEDULE FOR HVAC WORKS

The contract for the HVAC WORK components and the payment shall be made as under. This part does not attract escalations and the cost quoted is final and binding on the contractor. No escalations are payable under this schedule.

Sr.No.	Item of work	Rate per unit (as percentage of total Cost tendered)
1	2	3
1	On approval of drawings	20% of the contract price shall be paid against approval of construction/ fabrication drawings as certified by the consultants and on submission of a bank guarantee for an equal amount valid till issue of the certificate. The entire design shall be done by the contractor.
2	On progress of supply	50% of the contract price shall be paid on pro-rate basis depending on the receipt of goods at site in good condition. Payment will be made based on bills certified by the consultants, provided each bill amount is not less than 5% of the total contract price.
3	On progress of erection	15% of the contract price shall be paid on pro-rata basis, depending on the completion of erection of goods at site. Payment will be made based on bills certified by the

		consultants, provided each bill amount is not less than 5% of the total contract price.
4	On completion of work:	10 % of the contract price shall be paid on satisfactory commissioning of the entire system and on taking over in good condition subject to the clause on Liquidated damages for late delivery, on 'Taking over' of the system by the Purchaser after commissioning.
5	The remaining 5% of the contract price shall be paid	After the Defect Liability period of 12 months, commissioning and guarantee run of all systems.
	<ol style="list-style-type: none"> 1. The plant operation and maintenance cost will be paid as per the quoted rates. 2. All statutory deductions as applicable such as TDS, work contract tax etc. shall be made from each bill before settlement. All payments shall be made in Indian rupees only. 3. Any additional work, plant, machinery or services needed during execution other than those mentioned in BOQ needs to be quoted at the SOR Karnataka state rate of the corresponding financial year at which the tender is called for. 	

LETTER OF APPLICATION

Note: Spaces marked * on this and on subsequent forms are to be completed by the Employer.

[letterhead paper of the Applicant or partner responsible for a joint venture, including full postal address, and telephone, facsimile and telex numbers, and cable address]

Date: _____

To: _____
*[name and address of the Employer]**

Name of Project: * _____

1. Being duly authorized to represent and act on behalf of (hereinafter referred to as “the Applicant”), and having reviewed and fully understood all of the pre-qualification requirements and information provided, the undersigned hereby applies for pre-qualification to tender on the contract or contracts indicated below:

****Note:** If pre-qualification refers to only one contract, delete the following paragraph and table, and insert the single contract reference and title.

**** We have indicated (by signature) in column (3) below our preference for individual contract consideration, or for any combination thereof within our pre-qualified capacity as assessed by you.**

Contract reference*(1)	Contract title*(2)	Preferred individual contract (3)
1.		
2.		
3.		
etc.		

[See Annexure for the suggested number of slices]

2. Attached to this letter are copies of original documents defining²:

- (a) the Applicant's legal status;
 - (b) the principal place of business; and
 - (c) the place of incorporation (for Applicants that are corporations), or the place of registration and the nationality of the owners (for Applicants that are partnerships or individually owned firms).
3. With reference to GITA Sub-Clause 4.3, it is our intention to subcontract approximately percentage of the Tender/Contract Price, details of which are provided herein.
 4. Your Agency and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this application, and to seek clarification from our bankers and clients regarding any financial and technical aspects. This Letter of Application will also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information to provide such information deemed necessary and as requested by yourselves to verify statements and information provided in this application, such as the resources, experience, and competence of the Applicant.
 5. Your Agency and its authorized representatives may contact the following persons for further information³:

General and managerial inquiries	
Contact 1	Address and communication facilities
Contact 2	Address and communication facilities

Personnel inquiries	
Contact 1	Address and communication facilities
Contact 2	Address and communication facilities

Technical inquiries	
Contact 1	Address and communication facilities
Contact 2	Address and communication facilities

Financial inquiries	
Contact 1	Address and communication facilities
Contact 2	Address and communication facilities

6. This application is made with the full understanding that:

- (a) tenders by pre-qualified Applicants will be subject to verification of all information submitted for pre-qualification at the time of submission of tenders;
- (b) your Agency reserves the right to:
 - amend the scope and value of any contracts to be tendered under this project; in which event, tenders will be invited only from those Applicants who meet the resulting amended pre-qualification requirements; and
 - reject or accept any application, cancel the pre-qualification process, and reject all applications.
- (c) your Agency shall not be liable for any such actions under 6(b) above.

7. Appended to this application, we give details of the participation of each party, including capital contribution and profit/loss agreements, in the joint venture or association. We also specify the financial commitment in terms of the percentage of the value of the <each> contract, and the responsibilities for execution of the <each> contract.

8. We confirm that if we tender, that tender, as well as any resulting contract, will be:

- (a) signed so as to legally bind all partners, jointly and severally; and
- (b) submitted with a joint venture agreement providing the joint and several liability of all partners in the event the contract is awarded to us.

9. The undersigned declare that the statements made and the information provided in the duly completed application are complete, true, and correct in every detail.

Signed Name	Signed Name
For and on behalf of (name of Applicant or	For and on behalf of (name of partner)

partner incharge of a joint venture)	
--------------------------------------	--

Signed Name	Signed Name
For and on behalf of (name of partner)	For and on behalf of (name of partner)

Signed Name	Signed Name
For and on behalf of (name of partner)	For and on behalf of (name of partner)

For applications by joint ventures, all the information requested in the pre-qualification documents is to be provided for the joint venture, if it already exists, and for each party to the joint venture separately. The partner in charge should be clearly identified. Each partner in the joint venture shall sign the letter.

Applications by joint ventures should provide on a separate sheet equivalent information for each party to the application.

The attention of Applicants is drawn to GITA sub-clause 5.6 regarding Letters of Intent.

INFORMATION FORMS

Supplementary information may be provided by Applicants as deemed necessary.

These basic Information Forms should be finalized by the Employer with appropriate minor changes to suit the particular pre-qualification requirements of the specific contract or contracts.

General Information

All individual firms and each partner of a joint venture applying for pre-qualification are requested to complete the information in this form. Nationality information should be provided for all owners or Applicants that are partnerships or individually owned firms.

Where the Applicant proposes to use named subcontractor (for more than 10% of contract value) as also for highly specialized components of the Works (reference Sub-Clause 4.3, 4.4 of the GITA), the following information should also be supplied for the subcontractor(s), together with the information in Forms 2, 3, 3A, 4, 5, and 7.

1.	Name of firm	
2.	Head office address	
3.	Telephone	Contact
4.	Fax	Telex
5.	Place of incorporation / registration	Year of incorporation / registration

Nationality of owners ¹		
Name		Nationality
1.		
2.		
3.		
4.		
5.		

1. To be completed by all owners of partnerships or individually owned firms.

APPLICATION FORM (1A)

Structure and Organization

- I. The applicant is
 - a. An Individual
 - b. A proprietary firm
 - c. a firm in partnership
 - d. a Limited Company or Corporation
 - e. a group of firms/joint venture
(if yes, give completion information in respect of each partner)
2. Attach the organization Chart showing the structure of the organization including the names of the directors and position of officers.
3. Number of years of experience:
 - (a) as a Prime Contractor (contractor shouldering major responsibility)
 - (b) as a Management Contractor
 - (c) in a Joint Venture
 - (d) as sub-contractor (specify main contractor)
4. For how many years has your organization been in business of similar work under its present name? What were your fields when your organization was Established? Whether any new fields were added in Your organization? And if so, when?
5. Were you ever required to suspend construction for a period of more than six months continuously after you started? If so, give the name of project and give reasons therefor.
6. Have you ever left the work awarded to you incomplete? (If so, give name of project and reasons for not completing work.)

7. In which fields of civil engineering construction do you claim specialization and interest?
8. Give details of your experience in mechanized cement concrete lining and in modern concrete technology for manufacture and quality control@.
9. Give details of your experience in using heavy earthmoving equipment and quality control in compaction of soils@.
10. Give details of your soil and material testing laboratory, if any@.
11. Give details of your experience in mechanized granular pavement construction@.
12. Give details of your experience in Laying of Prime coat along with spreading of dry stone chipping@.
13. Give details of your experience in construction of asphaltic Overlays@
14. Give details of your experience in construction of Bridge Works in Reinforced Cement Concrete@.
15. Give details of your experience in construction of Bridge Works in plain Cement Concrete@.
16. Give details of your experience in construction of bridge Works in Well Foundations of a depth not less than 12 metres@.

@ *Modify there as appropriate for the works for which pre-qualification applications are invited.*

General Construction Experience Record

(ref. GITA Sub-Clause 4.7)

Name of Applicant or partner of a joint venture

All individual firms and all partners of a joint venture are requested to complete the information in this form with regard to the management of Works contracts generally. The information supplied should be the annual turnover of the Applicant (or each member of a joint venture), in terms of the amounts billed to clients (in Rs. Lakhs) for each year for work in progress or completed. The annual periods should be the completed financial years.

A brief note on each contract should be appended, describing the nature of the work, duration and amount of contract, managerial arrangements, Employer, and other relevant details.

Use a separate sheet for each partner of a joint venture.

Applicants should not enclose testimonials, certificates, and publicity material with their applications; they will not be taken into account in the evaluation of qualifications.

Year*	Turnover (Rs. Lakhs)
1.	
2.	
3.	
4.	
5.	

Joint Venture Summary

Names of all partners of a joint venture
1. Partner in charge
2. Partner
3. Partner
4. Partner
5. Partner
6. etc.

Total value of annual construction turnover, in terms of work billed to clients, in Rs. Lakhs

Annual turnover data (construction only in Rs. Lakhs)						
Partner	Form 2 page no	Year 1	Year 2	Year 3	Year 4	Year 5
1. Partner in charge						
2. Partner						
3. Partner						
Totals						

Name and address of Bankers to the Joint Venture:

Details regarding financial responsibility and participation (percentage share in the total) of each firm in the Joint Venture. Attach a Memorandum of Understanding for the Proposed Agreement of Joint Venture which should laydown responsibility regarding work and financial arrangements in respect of each of the firms in the Joint Venture (Refer Clause 5.00).

**DETAILS OF PARTICIPATION IN THE JOINT
VENTURE**

**(Indicate responsibility and extent of participation in respect of finance planning,
construction equipment, key personnel and execution of the work of the partner in
charge of the joint venture and of each of the joint venture partners)**

PARTICIPATION DETAILS	FIRM A [Partner-in-Charge]	FIRM B	FIRM C
Financial			
Planning			
Construction Equipment			
Key Personnel			
Execution of Work (Give details on contribution of each)			

Particular Construction Experience Record

(ref. GITA Sub-Clause 4.8)

Name of partner of a Joint Venture

To pre-qualify, the Applicant shall be required to pass the specified requirements applicable to this form, as set out in the PITA.

On separate pages, using the format of Form (3A), the Applicant is requested to list contracts of a similar nature, complexity, and requiring similar construction technology to the contract or contracts for which the Applicant wishes to qualify, and which the Applicant has undertaken during the period, and of the number, stated in 4.8 of the PITA. Each partner of a joint venture should provide details of similar contracts on which they have experienced. The contract value should be based on the payment, at the date of substantial completion, or for ongoing contracts at the time of award. The information is to be summarized, using Form (3A), for each contract completed or under execution, by the Applicant or by each partner of a joint venture.

Where the Applicant proposes to use named subcontractors for highly specialized elements of the Works (reference Sub-Clause 4.4 of the GITA), the information in the following forms should also be supplied for each subcontractor (or alternate, if any).

Details of Contracts of Similar Nature and Complexity

Name of partner of a Joint Venture

Use a separate sheet for each contract.

1.	Number of contract	
	Name of contract	
	Country	
2.	Name of Employer	
3.	Employer address	
4.	Nature of works and special features relevant to the contract for which the Applicant wishes to prequalify	
5.	Contract role (check one) <input type="checkbox"/> Prime contractor <input type="checkbox"/> Management contractor <input type="checkbox"/> Subcontractor <input type="checkbox"/> Partner in a joint venture	
6.	Amount of the total contract/subcontract/partner share (at completion, or at date of award for current contracts) Rs.	
7.	Total contract: Rs. Lakhs____; Subcontract: Rs. Lakhs____; Partner share: Rs. Lakhs____	
8.	Date of award/completion	
9.	Contract was completed____months ahead/behind original schedule (if behind, provide explanation).	
10.	Contract was completed Rs. Lakhs under/over original contract amount (if over, provide explanation).	
11.*	Special contractual/constructional requirements, including monthly/annual production rate of the key construction activities described in PITA 4.8	
12.	Indicate the approximate percent of total contract value of work undertaken by subcontract, if any, and the nature of such work.	

* *Attach specific formats for the information required.*

Details of Production Levels in Key Construction Activities

(Sl. No. 11 of Information Form 3A)

	Name of Contract	Employer Contact Address, Agreement No. and Date	Value (Rs. Lakhs)	Year ⁵	Quantities Executed			
1								
2.								
3.								

Summary Sheet: Current Contract Commitments / Works in Progress

Name of partner of a Joint Venture

Each partner to an application should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Name of contract	Employer, contact address/ tel/fax	Value of outstanding work (Rs. Lakhs)	Estimated completion date	Average monthly invoicing over last six months (Rs. Lakhs)
1.				
2.				
3.				
4.				
5.				
etc.				

In accordance with GITA Sub-Clause 4.10, the Applicant shall provide evidence (in a similar manner to the requirements of Sub-Clause 4.9) to substantiate the adequacy of the sources of finance to meet the Applicant's cash flow requirements on the above contracts.

INFORMATION FORM (4A)

**FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF
OVERDRAFT/CREDIT FACILITIES**

BANK CERTIFICATE

This is to certify that M/s _____ is a reputed company with a good financial standing.

If the contract for the work, namely _____ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. _____ to meet their working capital requirements for executing the above contract.

--sd--

Name of the bank

Senior Bank manager

Address of the bank

Note: this certificate has to be obtained from the banker and uploaded on the e-procurement portal.

Financial Capabilities

Name of partner of a Joint Venture

Each partner of a joint venture, shall provide financial information to demonstrate that they meet the requirements stated in the GITA. Each applicant or partner of a joint venture shall complete this form. If necessary, separate sheets shall be used to provide complete banker information. A copy of the audited balance sheets shall be attached.

Autonomous construction subdivisions of parent conglomerate businesses shall submit financial information related only to the particular activities of the subdivision.

Banker	Name of banker	
	Address of banker	
	Telephone	Contact name and title
	Fax	Telex

Summarize actual assets and liabilities in Rs. Lakhs for the previous five calendar years, or such period as stated in PITA 4.11. Based upon known commitments, summarize projected assets and liabilities in Rs. Lakhs for the next two calendar years, unless the withholding of such information by stock market listed public companies can be substantiated by the Applicant.

Financial information in Rs. Lakhs	Actual: Previous five years					Projected: Next two years	
	5.	4.	3.	2.	1. 0	1	2
1. Total assets							
2. Current assets							
3. Total liabilities							
4. Current liabilities							
5. Profits before taxes							
6. Profits after							

taxes							
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Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as indicated in GITA 4.9.

Source of financing	Amount (Rs. Lakhs)
1.	
2.	
3.	
4.	

Attach audited financial statements—including, as a minimum, profit and loss account, balance sheet, and explanatory notes—for the period stated in PITA 4.11 (for each partner of a joint venture).

Personnel Capabilities

Name of Applicant

For specific positions **essential** to contract management and implementation, Applicants should provide the names of at least two candidates qualified to meet the specified requirements stated for each position. The data on their experience should be supplied on separate sheets using one Form (6A) for each candidate.

Applicants may propose alternative management and implementation arrangements requiring different key personnel, whose experience records should be provided.

1.	Title of position*
	Name of prime candidate
	Name of alternate candidate
2.	Title of position*
	Name of prime candidate
	Name of alternate candidate
3.	Title of position*
	Name of prime candidate
	Name of alternate candidate
4.	Title of position*
	Name of prime candidate
	Name of alternate candidate

**As listed in PITA 4.12.*

Name of Applicant

Summarize professional experience over the last twenty years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

[illegible]

Equipment Capabilities

(ref. GITA Sub-Clause 4.13)

Name of Applicant

The Applicant shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for each and all items of equipment listed in the PITA 4.13. A separate Form (7) shall be prepared for each item of equipment listed in the PITA, or for alternative equipment proposed by the Applicant.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Applicant or partner.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

(ref. GITA Sub-Clause 4.14)

Name of partner of a Joint Venture

[illegible]

DIESEL GENERATOR - Supplying, installing, testing and commissioning of 160 kVA/120 kW Diesel Generator set with following specifications. Power rating as per standard reference condition as per-BS 5514/ISO 3046/ ISO 8528 & IS 1002/ISO 3046 Generator set specification.

Engine: Diesel generating set are rated at 1500RPM and conform to ISO 8528 specifications. The engines are radiator cooled, four stroke and multi cylinder, conforming to ISO 3046. The scope of supply includes: Electrical starter motor 12V DC Battery charging alternator, Bosch fuel system with mechanical governor, A1 Class. Spin-on lube oil filter, Spin-on dual fuel filter with water separator, Turbocharger, Charge air cooler, Silencer (Hospital grade), Dry type air cleaner, Shutoff coil, Flywheel and flywheel housing, First fill of lube oil and coolant, Safety for low lube oil pressure, Safety for high water temperature, Permissible overload of 10% for one hour in 12 hours of operation.

Capacity of Fuel Tank: Fuel tank suitable for 8 hours of operation.

Alternator: Alternator is suitable for operation at 1500 RPM, 415 V, 0.8 pf (lag) suitable for 50 Hz, 3 phase, 4 wire systems, conforming to IS/IEC 60034-1. The Alternator is brush less type, screen protected, revolving field, self excited, self regulated through an AVR. The alternator shall have $\pm 1.0\%$ Voltage regulation (max) in static conditions- IP: 23 protections with insulation class F&H.

Mounting arrangement: Engine and alternator are mounted on a common MS fabricated base frame with AVM pads.

Control Panel: The control panel is manufactured with 14/16 gauge CRCA sheet and is powder coated for weather-proof and long lasting finish. The control panel consists of the following parts:- PS0500 Controller, Aluminium bus bars with suitable capacity within/outgoing terminals, Indicating IA for 'Load On' and 'Set Running', Instrument fuses duly wired and ferruled, MCCB of suitable rating with overload and short circuit protections.

Genset Controller: microprocessor based generator set monitoring and control system. The control provides a simple operator interface to the generator set, manual and remote start/ stop control, shutdown fault indication, and an LCD hour counter. The integration of all functions into a single control system provides enhanced reliability and performance compared to conventional generator set control systems. This control has been designed and tested to meet harsh environment in which gensets are typically applied. Features, Functions, protections 16 character x 2 line alphanumeric LCD display with LED Backlight.

Operator interface, Provide a record of most recent fault conditions. Fault history stored in the control non volatile memory, Provide Alternator Data. Voltage (1 ph or 3 ph line to line and line to neutral voltage, Current (1 ph or 3 ph), kVA (3 ph and total), Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine Temp, Engine oil pressure, Control includes provision for Service adjustment and calibration of DG control functions, Voltage, frequency selection, Configurable input and output set up, Meter calibration, Engine controls, Power Start operates on 12 VDC batteries, -Auto start mode accepts a ground signal from remote devices to automatically start the DG set The remote start will also wake up the control system from sleep mode.

Engine Starting -The control system supports automatic engine starting, Primary and back up start disconnects are achieved by battery charging alternator feedback or main alternator output frequency. Controller provide configurable time delay of 0-300 secs to start after remote start signal and time delay

of 0- 600secs prior to shut down after stop signal. Sleep mode increase battery life. Configurable current settings from low to minimize current draw when genset is not working. Engine Protective functions include, Configurable alarm output, Emergency stop: Annunciated whenever an emergency stop signal is received by the control. Low lube oil pressure warning and Shutdown, High engine water temp warning / Shutdown, Low coolant temp warning, Sensor failure indication, Low and high battery voltage warning, Weak battery warning, Fail to start shut down, Cracking lockout: Control will not allow the starter to engage or to crank the running engine Cyclic cranking: Configurable for the number of starting cycle, (1 to 7) and duration of crank and rest periods. Alternator Protective functions includes, - High and Low AC voltage shut down, Under and Over frequency shutdown / warning, Loss of sensing voltage input shut down.

Acoustic enclosure: The acoustic enclosure shall be made of 1.6 mm thick CRCA sheets in suitable approved shade and a structural/ sheet metal base frame painted in black. The walls of the enclosure are insulated with fire retardant foam so as to comply with the 75dBA at 1 m sound levels specified by Ministry of Environment & Forest The enclosure has the following features: Specially designed to meet stringent MOEF/CPCB norms of 75dBA @ 1 m at 75% load under free field conditions, Two point lifting for easy handling at customer site, Designed to have optimum serviceability, Air inlet louvers specially designed to operate at rated load made on special purpose CNC machines for consistency in quality and workmanship, Powder coated for long lasting service life and superior finish, With UV resistant powder coating, can withstand extreme environment.

Use of special hardware for longer life, Insulation material meets exacting IS 8183 specifications for better sound attenuation, Flush styling - no projections, Fluid drains for lube oil and fuel, Fuel filling point inside the enclosure. The complete set shall have sufficient safety and adhere to NEC, NBC 2016, IEC, CPWD specifications, PCB norms and KSGEI Acts and Rules.

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
1	1.14.1	COLD STORAGE - Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work In all kinds of soils Depth upto 3 m								
		Footing								
		Footing F-1	1	x	14	1.85	1.85	1.00	47.92	
		Footing F-2	1	x	6	2.05	2.05	1.00	25.22	
		Footing F-3	1	x	2	2.15	2.15	1.00	9.25	
		Footing F-4	1	x	9	2.65	2.65	1.00	63.20	
		Footing F-5	1	x	9	2.80	2.80	1.00	70.56	
		Combined Footing -CF1	1	x	1	7.55	7.75	1.00	58.51	
						Total Quantity =			274.65	Cum
2		Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) In ordinary/soft rock without blasting upto 1.5 m depth.								
		Footing								
		Footing F-1	1	x	14	1.85	1.85	0.50	23.96	
		Footing F-2	1	x	6	2.05	2.05	0.50	12.61	
		Footing F-3	1	x	2	2.15	2.15	0.50	4.62	
		Footing F-4	1	x	9	2.65	2.65	0.50	31.60	
		Footing F-5	1	x	9	2.80	2.80	0.50	35.28	
		Combined Footing -CF1	1	x	1	7.55	7.75	0.50	29.26	
		Plinth Beam								
		Grid B1-G1	1	x	1	13.67	0.50	0.65	4.44	
		Grid B2-G2,B3-G3,B4-G4,B5-G5	1	x	4	10.17	0.50	0.65	13.22	
		Grid A6-B6	1	x	1	8.81	0.50	0.65	2.86	
		Grid A7-B7	1	x	1	10.16	0.50	0.65	3.30	
		Grid A6-A7	1	x	1	2.99	0.50	0.65	0.97	
		Grid B1-B7,G1-G7	1	x	2	19.44	0.50	0.65	12.64	
		Grid C1-C7	1	x	1	12.07	0.50	0.65	3.92	
		Grid D1-D7	1	x	1	12.67	0.50	0.65	4.12	
		Grid E1-E7	1	x	1	15.64	0.50	0.65	5.08	
		Grid F1-F7	1	x	1	14.89	0.50	0.65	4.84	
						Total Quantity =			192.73	Cum
3		Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications,including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) In ordinary/soft rock without blasting Depth exceeding 1.5 m but not exceeding 3 m								
		1.5 to 3m Depth								
		Footing								
		Footing F-1	1	x	14	1.85	1.85	0.70	33.54	
		Footing F-2	1	x	6	2.05	2.05	0.70	17.65	
		Footing F-3	1	x	2	2.15	2.15	0.70	6.47	
		Footing F-4	1	x	9	2.65	2.65	0.70	44.24	
		Footing F-5	1	x	9	2.80	2.80	0.70	49.39	
		Combined Footing -CF1	1	x	1	7.55	7.75	1.40	81.92	
						Total Quantity =			233.21	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
4	1.16.1	Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work In Hard Rock (requiring blasting) Denth upto 1.50m								
									10.00	
						Total Quantity =			10.00	Cum
5	1.16.2	Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work. Depth exceeding 1.5 m, but not exceeding 3 m								
									10.00	
						Total Quantity =			10.00	Cum
6		Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.								
		Earthwork Excavation (Item No:1+2a+2b)	1	x	1	425.94			425.94	
		Deductions								
		Sand Filling (Item No:5)	-1	x	1	27.47			-27.47	
		P.C.C 1:4:8 (Item No:6)	-1	x	1	27.47			-27.47	
		Footing Concrete (Item No:13)	-1	x	1	135.56			-135.56	
						Total Quantity =			235.45	Cum
7	1.8	Filling available approved Gravel/Murrum deposited at a place or borrow pits during or prior excavation with all lifts and lead, transportation to site, spreading, grading to required slope and compacting to meet the requirement complete as per specifications, including cost of labour, rolling,water,all materials,usage& all other appurtenaces required to complete the work.								
		Basement Filling								
		Floor Area	1	x	1	30.84	22.90	0.45	317.81	
		Stair Area	1	x	1	5.40	3.19	0.45	7.74	
		Loading Area	1	x	1	26.11	1.00	0.45	11.75	
		Deductions								
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	-1	x	5	19.92	0.23	0.45	-10.31	
		Grid A6-G6, A7-G7	-1	x	2	22.43	0.23	0.45	-4.64	
		Grid A6-A7	-1	x	1	4.76	0.23	0.45	-0.49	
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	-1	x	6	27.24	0.23	0.45	-16.92	
		Column Junction								
		Column C1	-1	x	42	0.60	0.60	0.45	-6.80	
		Column C2	-1	x	2	0.38	0.38	0.45	-0.13	
						Total Quantity =			298.01	Cum
8		Providing and injecting chemical emulsion for Pre-constructional Anti-Termite Treatment, creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits with Chlorpyriphos 20% E.C. / Lindane 20% E.C. @ 3.19 l/m2 including cost of chemical, diluting in water to one percent concentration, labour, usage charges of machinery, complete as per specifications.								
		Plinth Area								
		Floor Area	1	x	1	30.84	22.90		706.24	
		Stair Area	1	x	1	5.40	3.19		17.21	
		Loading Area	1	x	1	26.11	1.00		26.11	
						Total Quantity =			749.56	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT									
DETAIL ESTIMATE									
SI No.		Description	Nos			L	B	D	Quantity
									Unit
9	1.23	Providing and Filling in foundation with granite / trap broken metal 100mm. And down size & with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift complete as per specifications.							
		Footing							
		Footing F-1	1	x	14	1.85	1.85	0.10	4.79
		Footing F-2	1	x	6	2.05	2.05	0.10	2.52
		Footing F-3	1	x	2	2.15	2.15	0.10	0.92
		Footing F-4	1	x	9	2.65	2.65	0.10	6.32
		Footing F-5	1	x	9	2.80	2.80	0.10	7.06
		Combined Footing -CF1	1	x	1	7.55	7.75	0.10	5.85
									27.47
		Plinth Beam							
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	1	x	5	19.92	0.50	0.10	4.98
		Grid A6-G6, A7-G7	1	x	2	22.43	0.50	0.10	2.24
		Grid A6-A7	1	x	1	4.76	0.50	0.10	0.24
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	1	x	6	27.24	0.50	0.10	8.17
		Flooring							
		Floor Area	1	x	1	30.84	22.90	0.10	70.62
		Stair Area	1	x	1	5.40	3.19	0.10	1.72
		Loading Area	1	x	1	26.11	1.00	0.10	2.61
		Deductions							
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	-1	x	5	19.92	0.23	0.10	-2.29
		Grid A6-G6, A7-G7	-1	x	2	22.43	0.23	0.10	-1.03
		Grid A6-A7	-1	x	1	4.76	0.23	0.10	-0.11
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	-1	x	6	27.24	0.23	0.10	-3.76
		Column Junction							
		Column C1	-1	x	42	0.60	0.60	0.10	-1.51
		Column C2	-1	x	2	0.38	0.38	0.10	-0.03
		Deduction Lift Portion	-1	x	1	4.80	4.34	0.10	-2.08
						Total Quantity =			107.24
									Cum
10	2.1.1	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:5:10 Using 40 mm nominal size graded crushed coarse aggregates							
									10.00
						Total Quantity =			10.00
									Cum
11		Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:4:8(M5) Using 40 mm nominal size graded crushed coarse aggregates							
		Footing							
		Footing F-1	1	x	14	1.85	1.85	0.10	4.79
		Footing F-2	1	x	6	2.05	2.05	0.10	2.52
		Footing F-3	1	x	2	2.15	2.15	0.10	0.92
		Footing F-4	1	x	9	2.65	2.65	0.10	6.32
		Footing F-5	1	x	9	2.80	2.80	0.10	7.06
		Combined Footing -CF1	1	x	1	7.55	7.75	0.10	5.85
									27.47
		Plinth Beam							
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	1	x	5	19.92	0.50	0.10	4.98
		Grid A6-G6, A7-G7	1	x	2	22.43	0.50	0.10	2.24
		Grid A6-A7	1	x	1	4.76	0.50	0.10	0.24
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	1	x	6	27.24	0.50	0.10	8.17

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Flooring								
		Floor Area	1	x	1	30.84	22.90	0.10	70.62	
		Stair Area	1	x	1	5.40	3.19	0.10	1.72	
		Loading Area	1	x	1	26.11	1.00	0.10	2.61	
		Deductions								
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	-1	x	5	19.92	0.23	0.10	-2.29	
		Grid A6-G6, A7-G7	-1	x	2	22.43	0.23	0.10	-1.03	
		Grid A6-A7	-1	x	1	4.76	0.23	0.10	-0.11	
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	-1	x	6	27.24	0.23	0.10	-3.76	
		Column Junction								
		Column C1	-1	x	42	0.60	0.60	0.10	-1.51	
		Column C2	-1	x	2	0.38	0.38	0.10	-0.03	
		Deduction Lift Portion	-1	x	1	4.80	4.34	0.10	-2.08	
						Total Quantity =			107.24	Cum
12	2.1.4	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications.(The cost including Centering and shuttering but excluding steel reinforcement)Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates								
									10.00	
						Total Quantity =			10.00	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
13	2.3.2	Providing and laying in Reinforced cement concrete for all Basement & surface level works, return walls, retaining walls, sunken floors etc. The granite/trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.(The cost including Centering and shuttering but excluding steel reinforcement) M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for Flooring Works								
		Ground floor Flooring								
		Flooring								
		Floor Area	1	x	1	30.84	22.90	0.10	70.62	
		Stair Area	1	x	1	5.40	3.19	0.10	1.72	
		Loading Area	1	x	1	26.11	1.00	0.10	2.61	
		Deductions								
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	-1	x	5	19.92	0.23	0.10	-2.29	
		Grid A6-G6, A7-G7	-1	x	2	22.43	0.23	0.10	-1.03	
		Grid A6-A7	-1	x	1	4.76	0.23	0.10	-0.11	
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	-1	x	6	27.24	0.23	0.10	-3.76	
		Column Junction								
		Column C1	-1	x	42	0.60	0.60	0.10	-1.51	
		Column C2	-1	x	2	0.38	0.38	0.10	-0.03	
		Deduction Lift Portion	-1	x	1	4.80	4.34	0.10	-2.08	
						Total Quantity =			64.14	Cum
14		Providing and laying in Reinforced cement concrete for all Basement & surface level works, return walls, retaining walls, sunken floors etc. The granite/trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Flooring								
									10.00	
						Total Quantity =			10.00	Cum
15		The concrete finished with shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately).								
		Ground Floor Flooring								
		Floor Area	1	x	1	30.84	22.90		706.24	
		Stair Area	1	x	1	5.40	3.19		17.21	
		Loading Area	1	x	1	26.11	1.00		26.11	
		Deduction Lift Portion	-1	x	1	4.80	4.34		-20.80	
						Total Quantity =			728.76	Sqm
16		Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Footing.								
A		All works upto plinth level								
a		Footing								
		Footing F-1	1	x	14	1.65	1.65	0.38	14.29	
		Footing F-2	1	x	6	1.85	1.85	0.45	9.24	
		Footing F-3	1	x	2	1.95	1.95	0.53	3.99	
		Footing F-4	1	x	9	2.45	2.45	0.60	32.41	

[illegible]

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
20		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Roof Beam								
		Roof Beam								
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	1	x	5	19.92	0.45	0.60	26.89	
		Grid A6-G6, A7-G7	1	x	2	22.43	0.45	0.60	12.11	
		Middle Beam	1	x	11	8.86	0.38	0.38	14.07	
		Middle Beam	1	x	1	4.45	0.38	0.38	0.64	
		Grid A6-A7	1	x	1	4.76	0.45	0.60	1.28	
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	1	x	6	27.24	0.45	0.60	44.13	
		Middle Beam	1	x	3	25.71	0.38	0.38	11.14	
		Middle Beam	1	x	1	21.37	0.38	0.38	3.09	
		Loading Dock Beam	1	x	1	1.07	0.38	0.26	0.10	
		Loading Dock Beam	1	x	4	0.85	0.38	0.26	0.33	
		Add Column Junctions								
		Column C-1	1	x	42	0.60	0.60	0.60	9.07	
		Column C-2	1	x	2	0.38	0.38	0.38	0.11	
										122.97
21		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Roof Slab, Staircase Slab								
		Slab								
		Corridor Slab	1	x	1	16.65	1.00	0.13	2.08	
		Ante Cold Room	1	x	1	31.40	3.10	0.13	12.17	
										14.25
		Staircase								
		Flight Slab 1	1	x	1	1.35	1.50	0.20	0.41	
		Flight Slab 2	1	x	1	5.26	1.50	0.20	1.58	
		Landing Slab	1	x	1	3.15	1.50	0.20	0.95	
		Mid landing Beam	1	x	1	3.15	0.30	0.18	0.17	
		Flight Slab-3	1	x	1	4.75	1.50	0.20	1.43	
										4.52
						Total Quantity =			225.01	Cum
22		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Sunshade								
		Window	1	x	10	1.96	0.60	0.10	1.18	
						Total Quantity =			1.18	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
23		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates First Floor Column								
		Column								
		Column C-1	1	x	42	0.60	0.60	4.65	70.31	
		Column C-2	1	x	2	0.38	0.38	4.87	1.41	
										71.71
24		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates First Floor Roof Beam								
		Roof Beam								
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	1	x	5	19.92	0.45	0.60	26.89	
		Grid A6-G6, A7-G7	1	x	2	22.43	0.45	0.60	12.11	
		Middle Beam	1	x	11	8.86	0.38	0.38	14.07	
		Middle Beam	1	x	1	4.45	0.38	0.38	0.64	
		Grid A6-A7	1	x	1	4.76	0.45	0.60	1.28	
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	1	x	6	27.24	0.45	0.60	44.13	
		Middle Beam	1	x	3	25.71	0.38	0.38	11.14	
		Middle Beam	1	x	1	21.37	0.38	0.38	3.09	
		Loading Dock Beam	1	x	1	1.07	0.38	0.26	0.10	
		Loading Dock Beam	1	x	4	0.85	0.38	0.26	0.33	
		Add Column Junctions								
		Column C-1	1	x	42	0.60	0.60	0.60	9.07	
		Column C-2	1	x	2	0.38	0.38	0.38	0.11	
										122.97
25		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates First Floor Roof Slab and Staircase								
		Slab								
		Corridor Slab	1	x	1	16.65	1.00	0.13	2.08	
		Ante Cold Room	1	x	1	31.40	3.10	0.13	12.17	
										14.25
		Staircase								
		Flight Slab 4	1	x	1	5.32	1.50	0.20	1.60	
		Landing Slab	1	x	1	3.15	2.07	0.20	1.30	
		Mid landing Beam	1	x	1	3.15	0.30	0.18	0.17	
		Flight Slab 5	1	x	1	5.14	1.50	0.20	1.54	4.61
						Total Quantity =			213.55	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
26	2.5	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates First Floor Sunshade								
		Window	1	x	14	1.96	0.60	0.10	1.65	
			Total Quantity =					1.65	Cum	
27		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Second Floor Column								
		Second floor								
		Column								
		Column C-1	1	x	42	0.60	0.60	4.80	72.58	
		Column C-2	1	x	2	0.38	0.38	4.80	1.39	
			Total Quantity =						73.96	
28		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Second Floor Roof Beam								
		Roof Beam								
		Grid B1-G1,	1	x	1	19.92	0.45	0.60	5.38	
		Grid A7-G7	1	x	1	22.43	0.45	0.60	6.06	
		Grid A6-B6	1	x	1	2.52	0.45	0.60	0.68	
		Grid C6-D6	1	x	1	4.19	0.45	0.60	1.13	
		Grid A6-A7	1	x	1	4.76	0.45	0.60	1.28	
		Grid B1-B7, D1-D7, E1-E7, G1-G7	1	x	4	27.24	0.45	0.60	29.42	
		Grid C6-C7	1	x	1	4.65	0.45	0.60	1.25	
		Add Column Junctions								
		Column C-1	1	x	42	0.60	0.60	0.60	9.07	
		Column C-2	1	x	2	0.38	0.38	0.60	0.17	
			Total Quantity =					54.45		
29		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Second Floor Roof Slab								

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Roof Slab								
		Staircase Slab	1	x	1	5.52	3.05	0.13	2.10	
		Corridor Slab	1	x	1	16.65	1.00	0.13	2.08	
										4.18
						Total Quantity =			187.04	Cum
30	2.5	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Second Floor Sunshade								
		Window	1	x	1	1.96	0.60	0.10	0.12	
							Total Quantity =		0.12	Cum
31		Providing and placing in position precast reinforced cement concrete waffle units, square or rectangular, as per design and shape for floors and roofs in M30 Grade Concrete, including flush or deep ruled pointing at joints in Cement mortar 1:2 (1 Cement : 2 Fine sand), making necessary holes of required sizes for carrying through service lines etc., providing steel hooks for lifting etc, form work in precasting, handling, hoisting, centering and erection complete for all floor levels but, excluding the cost of reinforcement.								
		Ground Floor Roof Slab	1	x	2	31.14	10.06	0.13	78.32	
		Deductions								
		Lift Opening	-1	x	1	4.72	4.26	0.13	-2.52	
		Slab Opening	-0.33	x	2	31.14	10.06	0.13	-26.11	
		First Floor Roof Slab	1	x	2	31.14	10.06	0.13	78.32	
		Deductions								
		Lift Opening	-1	x	1	4.72	4.26	0.13	-2.52	
		Slab Opening	-0.33	x	2	31.14	10.06	0.13	-26.11	
						Total Quantity =			99.39	Cum
32		Providing Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members wherever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)								
		Foundation								
		Footing	1	x	1	135.56	100.00	Kg/ Cum	13555.61	
		Column Pedestal	1	x	1	23.75	300.00	Kg/ Cum	7126.19	
		Plinth Beam	1	x	1	49.14	200.00	Kg/ Cum	9828.61	
		RCC Wall	1	x	1	8.21	120.00	Kg/ Cum	985.76	
		Ground Floor								
		Column	1	x	1	83.27	300.00	Kg/ Cum	24981.32	
		Beam	1	x	1	122.97	275.00	Kg/ Cum	33816.93	
		Roof Slab	1	x	1	14.25	100.00	Kg/ Cum	1424.88	
		Floor Slab	1	x	1	10.00	40.00	Kg/ Cum	400.00	
		Staircase	1	x	1	4.52	120.00	Kg/ Cum	542.77	
		First Floor								
		Column	1	x	1	71.71	300.00	Kg/ Cum	21514.34	
		Beam	1	x	1	122.97	275.00	Kg/ Cum	33816.93	
		Roof Slab	1	x	1	14.25	100.00	Kg/ Cum	1424.88	
		Staircase	1	x	1	4.61	120.00	Kg/ Cum	553.46	
		Second Floor								
		Column	1	x	1	73.96	300.00	Kg/ Cum	22188.67	
		Beam	1	x	1	54.45	275.00	Kg/ Cum	14973.24	
		Roof Slab	1	x	1	4.18	100.00	Kg/ Cum	418.04	
		Precast Slab	1	x	1	99.39	120.00	Kg/ Cum	11927.10	
						Total Quantity =			199478.72	Kg

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
33		Providing Brick work with common burnt clay Non Modular bricks of class designation 3.5 in foundation and plinth in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
		Basement Brickwork								
		Grid B1-G1, B2-G2, B3-G3, B4-G4, B5-G5	1	x	5	19.92	0.23	0.65	14.89	
		Grid A6-G6, A7-G7	1	x	2	22.43	0.23	0.65	6.71	
		Grid A6-A7	1	x	1	4.76	0.23	0.65	0.71	
		Grid B1-B7, C1-C7, D1-D7, E1-E7, F1-F7, G1-G7	1	x	6	27.24	0.23	0.65	24.43	
		Loading Dock wall	1	x	2	1.26	0.23	0.65	0.38	
		" "	1	x	5	0.67	0.23	0.65	0.50	
		Front wall	1	x	1	25.80	0.23	0.65	3.86	
		Steps	1	x	1	1.50	0.30	0.15	0.07	
		" "	1	x	1	1.50	0.30	0.30	0.14	
		" "	1	x	1	1.50	0.30	0.45	0.20	
		" "	1	x	1	1.50	0.30	0.60	0.27	
						Total Quantity =			52.15	Cum
34		Providing Brick work with common burnt clay Non Modular bricks of class designation 3.5 in superstructure above plinth level in all shapes and sizes in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
		Ground floor								
		Grid B1-G1, B7-G7	1	x	2	19.92	0.23	4.65	42.61	
		Grid B1-B7, G1-G7	1	x	2	27.24	0.23	4.65	58.27	
		Deductions								
		Door	-1	x	1	2.00	0.23	2.10	-0.97	
		First floor								
		Grid B1-G1, B7-G7	1	x	2	19.92	0.23	4.65	42.61	
		Grid B1-B7, G1-G7	1	x	2	27.24	0.23	4.65	58.27	
		Deductions								
		Door	-1	x	1	2.00	0.23	2.10	-0.97	
		Second floor								
		Grid B1-G1, B7-G7	1	x	2	19.92	0.23	4.80	43.98	
		Grid B1-B7, G1-G7	1	x	2	27.24	0.23	4.80	60.15	
		Deductions								
		Door	-1	x	1	2.00	0.23	2.10	-0.97	
						Total Quantity =			302.98	Cum
35	6.25	Providing Brick work with Non Modular fly ash bricks conforming to IS:12894, class designation 5.0 average compressive strength in super structure above plinth level up to floor I level in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
									10.00	
						Total Quantity =			10.00	Cum
36		Providing Half brick masonry with common burnt clay Non Modular bricks of class designation 3.5 in superstructure above plinth level up to floor 1 level cement mortar 1:3 (1 cement :3 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work								
		Puff Wall Side								
		Ground Floor								
		Grid B1-G1, B7-G7	1	x	2	22.32		0.45	20.09	
		Grid B1-B7, G1-G7	1	x	2	30.24		0.45	27.22	
		Grid D1-D7, E1-E7	2	x	2	30.24		0.45	54.43	
		Center Puff Wall	2	x	2	9.00		0.45	16.20	
		Deduction Door	-1	x	9	1.50		0.45	-6.08	
		First Floor								
		Grid B1-G1, B7-G7	1	x	2	22.32		0.45	20.09	
		Grid B1-B7, G1-G7	1	x	2	30.24		0.45	27.22	
		Grid D1-D7, E1-E7	2	x	2	30.24		0.45	54.43	
		Center Puff Wall	2	x	2	9.00		0.45	16.20	
		Deduction Door	-1	x	9	1.50		0.45	-6.08	
		Second Floor								

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Grid B1-G1, B7-G7	1	x	2	22.32		0.45	20.09	
		Grid B1-B7, G1-G7	1	x	3	30.24		0.45	40.82	
		Grid D1-D7, E1-E7	2	x	2	30.24		0.45	54.43	
		Center Puff Wall	2	x	2	9.00		0.45	16.20	
		Deduction Door	-1	x	9	1.50		0.45	-6.08	
						Total Quantity =			349.19	Sqm
37		Providing 12 mm cement plaster with cement mortar 1:4 (1 cement: 4 fine sand) to brick masonry including rounding off corners wherever required smooth,rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Inner Plastering								
		Ground Floor								
		Grid B1-G1, B7-G7	1	x	2	22.32		5.25	234.36	
		Grid B1-B7, G1-G7	1	x	2	30.24		5.25	317.52	
		Puff Wall Side								
		Grid B1-G1, B7-G7	1	x	2	22.32		0.45	20.09	
		Grid B1-B7, G1-G7	1	x	2	30.24		0.45	27.22	
		Grid D1-D7, E1-E7	2	x	2	30.24		0.45	54.43	
		Center Puff Wall	2	x	2	9.00		0.45	16.20	
		Deduction Door	-1	x	8	1.50		0.45	-5.40	
		" "	-1	x	1	1.50		2.10	-3.15	
		First Floor								
		Grid B1-G1, B7-G7	1	x	2	22.32		5.25	234.36	
		Grid B1-B7, G1-G7	1	x	2	30.24		5.25	317.52	
		Puff Wall Side								
		Grid B1-G1, B7-G7	1	x	2	22.32		0.45	20.09	
		Grid B1-B7, G1-G7	1	x	2	30.24		0.45	27.22	
		Grid D1-D7, E1-E7	2	x	2	30.24		0.45	54.43	
		Center Puff Wall	2	x	2	9.00		0.45	16.20	
		Deduction Door	-1	x	8	1.50		0.45	-5.40	
		" "	-1	x	1	1.50		2.10	-3.15	
		Second Floor								
		Grid B1-G1, B7-G7	1	x	2	22.32		5.25	234.36	
		Grid B1-B7, G1-G7	1	x	2	30.24		5.25	317.52	
		Puff Wall Side								
		Grid B1-G1, B7-G7	1	x	2	22.32		0.45	20.09	
		Grid B1-B7, G1-G7	1	x	2	30.24		0.45	27.22	
		Grid D1-D7, E1-E7	2	x	2	30.24		0.45	54.43	
		Center Puff Wall	2	x	2	9.00		0.45	16.20	
		Deduction Door	-1	x	8	1.50		0.45	-5.40	
		" "	-1	x	1	1.50		2.10	-3.15	
						Total Quantity =			1983.80	Sqm
38		Providing 20 mm cement plaster of mix :1:4 (1 cement: 4 fine sand) to brick/stone masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Outer Plastering								
		Ground floor								
		Outer Wall	1	x	1	105.12		16.50	1734.48	
		Door	-1	x	3	1.65		3.00	-14.85	
						Total Quantity =			1719.63	Sqm
39	8.13	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof including cost of material, labour, scaffolding etc as per specifications and as per directions of the Engineer-in-Charge.								
		Headroom Outer	1	x	1	13.5		2.40	32.4	
		Parapet wall	1	x	2	85.31		0.90	153.558	
		Parapet wall(Top area)	1	x	1	85.31		0.23	19.6213	
						Total Quantity =			205.58	Sqm
40	8.16.2	Providing and fixing suitable plaster mesh 150mm wide manufactured out of hot dipped galvanised iron of nominal thickness 0.35mm with a zinc coating of 120g/m2 width, along route of walls chipped for services, junction between RCC and brick walls including cost of materials, labour for fixing complete as per specifications. (length of mesh only be measured for paymnet								

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Mesh							150.00	
						Total Quantity =			150.00	Rmt
41	8.79	Forming groove of uniform size in the top layer of plaster as per approved pattern including repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge: 10mm to 15 mm wide and 8 mm deep groove.								
		Goove Line							50.00	
						Total Quantity =			50.00	m
42		Providing and laying Cement concrete flooring 40 mm thick with 20 mm nominal size stone aggregate using 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry complete.								
		First Floor								
		Corridor Slab	1	x	1	16.65	1.00		16.650	
		Ante Cold Room	1	x	1	31.40	3.10		97.340	
		Second Floor								
		Corridor Slab	1	x	1	16.65	1.00		16.650	
		Ante Cold Room	1	x	1	31.40	3.10		97.340	
						Total Quantity =			227.980	Sqm
43		Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two coat applied @ 1.67 ltr/10 m ² over and including priming coat of exterior primer applied @ 2.20 kg/10 m ²) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge								
		Outer Plastering								
		As per Item No: 20	1	x	1	1719.63			1719.63	
						Total Quantity =			1719.63	Sqm
44		Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications: Two coats applied on walls @ 1.25 L/10 m ² over and including one coat of Special primer applied @ 0.75 L/10 m ² with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge. (The gloss should be 50% @ 60 degree angle with 10 years life)								
		Inner Plastering								
		As per Item No: 19	1	x	1	1983.80			1983.80	
						Total Quantity =			1983.80	Sqm
46	11.5.2	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer. Using flats 30x6mm for diagonal braces and central cross piece including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge								
		M.S. sheet door							1.00	
						Total Quantity =			1.00	Sqm
47	11.6.1	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.25 mm M.S. laths with 1.25 mm thick top cover including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
		Rolling Shutter	1	x	1	1.00	1.00		1.00	
						Total Quantity =			1.00	Sqm
48	11.8.1	Extra for providing mechanical device chain and crank operation for operating rolling shutters: including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineerin- Charge.								
		Rolling Shutter	1	x	1	1.00	1.00	1.00	1.00	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
						Total Quantity =			1.00	Sqm
49	11.8.4	Extra for providing 2 HP Mild Steel Auto Reverse Shutter Gearbox for operating rolling shutters including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
		Rolling Shutter	1	x	1				1.00	
						Total Quantity =			1.00	Nos
50	11.1	Providing and fixing Structural Steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
									1000.00	
									1000.00	Kg
45		Providing and fixing Structural Steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in Charge.								
									1000	
						Total Quantity =			1000.00	KG
51	11.25.2	Providing and fixing Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in Charge								
		Staircase Handrail							1500.000	
		Corridor Hand Rail							1000.000	
						Total Quantity =			2500.000	Kg
52	8.33.2	Painting wood work with Deluxe Multi Surface Paint of required shade. Two coat applied @ 0.90 ltr/10 m ² over an under coat of primer applied @0.75 ltr/10 m ² of approved brand and manufacture to give an even shade including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, sand papering and knotting , cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge								
									20	
						Total Quantity =			20.00	Sqm
53	8.33.3	Providing, fabricating, transporting and erecting at all heights, depths and locations steel structures such as columns, beams, trusses, portals, bracings, purlins, gantry girders, ladders, stair cases , steps, castellated girders, latticed girders, monorails, platforms, brackets, rails, walkways, cleats, gutters, separators, pipes, anchor bolt and sleeves, plate girders etc. using joists, angles, channels, flats, rounds, plates etc. cutting to required size, bending, riveting, bolting and/or welding of joints, fixing in line and level with temporary staging, including one coat of red oxide primer and two coats of synthetic enamel paint The rate should also include supply of labour, all consumables and etc. required for proper completion of the work. PEB Structure								
						Total Length	Unit	Unit Weight	Total Weight	
								Kg/Sqm		
		Truss Area								
		Truss Area	1	x	1	721.45		25.00	18036.25	
		Sides	1	x	1	141.13		18.00	2540.34	
		Canopy Area	1	x	1	10.13		25.00	253.13	
						Total Quantity =			20829.72	Kg
									20.83	MT

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
54	7.1	Providing and fixing colour coated galvalume profile sheets with the depth of 30 mm and pitch of corrugation 200 mm (Colour and shape of profile as approved by the Engineerin-charge), 0.60mm(TCT) total coated thickness(tolerance as per relevant IS code), material yield strength 550 MPa, galvalume AZ-150 (zinc aluminium alloy coating nominal composition : 55% aluminium, 43.5% zinc & 1.5% silicon mass total of both sides) with regular modified polyester paint and coating of 20-25 micron RMP on exposed surface including primer and 7-10 micron epoxy coating on unexposed surface including primer. The sheet should be supplied in single length as desired by Engineer-in-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5X55mm) with EPDM seal excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. All screw should be sealed with silicon sealant.								
		Roof Area	1	x	2	30.70	11.75		721.45	
		Sides	1	x	2	30.70		1.00	61.40	
		Sides	1	x	2	22.78		1.00	45.56	
		" "	0.5	x	2	22.78		1.50	34.17	
		Roof & Canopy Area	1	x	1	4.50	2.25		10.13	
						Total Quantity =			872.71	Sqm
55	7.33.1	Providing & fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch, including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified. 2 mm thick corrugated (2.5"" or 4.2"" or 6"") or step-down (2"" or 3"" or 6"") as specified.								
									20.00	
						Total Quantity =			20.00	Sqm
56	7.4.1	Providing & fixing ridges or hips of width 60 cm overall width plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia G.I. limpet and bitumen washers complete as per design drawings. 0.63 mm thick with zinc coating not less than 275 g/m²								
		Ridge	1	x	1	30.70			30.70	
						Total Quantity =			30.70	RM
57		Providing and fixing 15 cm wide, 45 cm overall semi-circular plain G.S. sheet gutter with iron brackets 40x3mm size, bolts, nuts and washers etc., including making necessary connections with rain water pipes complete. (0.63 mm thick with zinc coating not less than 275 g/m²)								
		Gutter two sides	1	x	2	30.70			61.40	
						Total Quantity =			61.40	RM
58		Supply and installation of wind driven turbine ventilators (mill finish) throat width 600mm, the turbine head and variable angle elbow is manufactured out of aluminum alloy having 0.71mm thick vanes, the shaft is made out of stainless steel, and the installation using stainless steel hardware and EPDM rubber washers and with double row ball-bearing system. SPEC: Rotation: Twin Sealed 6203ZZ/Twin Sealed 6201ZZ bearings with self lubricating to ensure frictionless rotation even at lowest wind velocity, 42 Vanes, Base Ring MOC (Mounting Ring): SS, Top plate MOC : SS 0.8mm thk, Bearing Type: SKF – 6001 ZZ & 6003 ZZ Permanently Lubricated & Sealed, Rivets: Aluminum Alloy with Washer, FRP base: 2 mm thick clear 1.020 mtr wide and 1.65 mtr long matching your sheet profile, Size: Turbine dia- 28" , Throat dia- 24" , Height18". (Make: Hurricane, SVS ventilators, Horne)								
		Turbine Ventilator	1	x	10				10.00	
						Total Quantity =			10.00	Nos

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
59		Supplying PVC Ringute pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for: PVC pipes 110mm dia., 6 kg/sqcm & class 2								
		Rain Water Pipe	1	x	8	15.00			120.00	
						Total Quantity =			120.00	Rmt
60		Supply and delivery at site special moulded variety PVC bend as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 110mm dia PVC Bend								
		110 mm dia PVC BEND	1	x	8				8.00	
						Total Quantity =			8.00	Nos
61		Supply and delivery at site special moulded variety PVC elbows as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 110mm dia PVC Elbows								
		110 mm dia PVC Elbows	1	x	8				8.00	
						Total Quantity =			8.00	Nos
62		TECHNICIAN SHED - Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) In all kinds of soils Depth upto 3 m								
		Footing F-1	1	x	12	1.20	1.20	1.00	17.28	
						Total Quantity =			17.28	Cum
63		Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work In ordinary/soft rock without blasting upto 1.5 m depth								
		Footing								
		Footing F-1	1	x	12	1.20	1.20	0.50	8.64	
		Plinth Beam								
		Grid A1-D1	1	x	1	10.14	0.50	0.58	2.94	
		Grid A2-C2	1	x	1	6.39	0.50	0.58	1.85	
		Grid A'3-D3	1	x	1	9.62	0.50	0.58	2.79	
		Grid A1- A2	1	x	1	2.93	0.50	0.58	0.85	
		Grid A'2-A'3	1	x	1	3.65	0.50	0.58	1.06	
		Grid C1-C3,D1-D3,B1-B3	1	x	3	6.28	0.50	0.58	5.46	
		Toilet inner Wall	1	x	1	3.60	0.50	0.58	1.04	
		Toilet inner Wall	1	x	2	1.36	0.50	0.58	0.79	
						Total Quantity =			25.43	Cum
64		Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work Depth exceeding 1.5 m, but not exceeding 3 m								
		Footing								
		Footing F-1	1	x	12	1.20	1.20	0.20	3.46	
						Total Quantity =			3.46	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
65		Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) In Hard Rock (requiring blasting) Depth upto 1.50m								
			1	x	1	10.00			10.00	
						Total Quantity =			10.00	Cum
66		Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) Depth exceeding 1.5 m, but not exceeding 3 m								
			1	x	1	10.00			10.00	
						Total Quantity =			10.00	Cum
67		Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.								
		Earthwork Excavation (Item No:1+2a+2b)	1	x	1	66.16			66.16	
		Deductions								
		Sand Filling (Item No:5)	-1	x	1	13.27			-13.27	
		P.C.C 1:4:8 (Item No:6)	-1	x	1	13.27			-13.27	
		Footing Concrete (Item No:13)	-1	x	1	3.60			-3.60	
						Total Quantity =			36.03	Cum
68		Filling available approved Gravel/Murrum deposited at a place or borrow pits during or prior excavation with all lifts and lead, transportation to site, spreading, grading to required slope and compacting to meet the requirement complete as per specifications, including cost of labour, rolling,water,all materials,usage& all other appurtenaces required to complete the work								
		Plinth Area								
		Area 1	1	x	1	11.06	3.53	0.45	17.57	
		Area 2	1	x	1	10.54	3.95	0.45	18.73	
		Deduct Basement Wall								
		Grid A1-D1	-1	x	1	10.14	0.23	0.45	-1.05	
		Grid A2-C2	-1	x	1	6.39	0.23	0.45	-0.66	
		Grid A'3-D3	-1	x	1	9.62	0.23	0.45	-1.00	
		Grid A1- A2	-1	x	1	2.93	0.23	0.45	-0.30	
		Grid A'2-A'3	-1	x	1	3.65	0.23	0.45	-0.38	
		Grid C1-C3,D1-D3,B1-B3	-1	x	3	6.28	0.23	0.45	-1.95	
		Toilet inner Wall	-1	x	1	3.60	0.23	0.45	-0.37	
		Toilet inner Wall	-1	x	2	1.36	0.23	0.45	-0.28	
						Total Quantity =			30.31	Cum
69		Providing and injecting chemical emulsion for Pre constructional Anti-Termite Treatment, creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits with Chlorpyriphos 20% E.C. / Lindane 20% E.C. @ 3.19 l/m2 including cost of chemical, diluting in water to one percent concentration, labour, usage charges of machinery, complete as per specifications.								
		Plinth Area								
		Area 1	1	x	1	11.06	3.53		39.04	
		Area 2	1	x	1	10.54	3.95		41.63	
						Total Quantity =			80.67	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
70		Providing and Filling in foundation with granite / trap broken metal 100mm. And down size & with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift complete as per specifications.								
		Footing								
		Footing F-1	1	x	12	1.20	1.20	0.10	1.73	
		Plinth Beam								
		Grid A1-D1	1	x	1	10.14	0.50	0.10	0.51	
		Grid A2-C2	1	x	1	6.39	0.50	0.10	0.32	
		Grid A'3-D3	1	x	1	9.62	0.50	0.10	0.48	
		Grid A1- A2	1	x	1	2.93	0.50	0.10	0.15	
		Grid A'2-A'3	1	x	1	3.65	0.50	0.10	0.18	
		Grid C1-C3,D1-D3,B1-B3	1	x	3	6.28	0.50	0.10	0.94	
		Toilet inner Wall	1	x	1	3.60	0.50	0.10	0.18	
		Toilet inner Wall	1	x	2	1.36	0.50	0.10	0.14	
		Flooring								
		Area 1	1	x	1	11.06	3.53	0.10	3.90	
		Area 2	1	x	1	10.54	3.95	0.10	4.16	
		Deduction basement Wall								
		Grid A1-D1	-1	x	1	10.14	0.50	0.10	-0.51	
		Grid A2-C2	-1	x	1	6.39	0.50	0.10	-0.32	
		Grid A'3-D3	-1	x	1	9.62	0.50	0.10	-0.48	
		Grid A1- A2	-1	x	1	2.93	0.50	0.10	-0.15	
		Grid A'2-A'3	-1	x	1	3.65	0.50	0.10	-0.18	
		Grid C1-C3,D1-D3,B1-B3	-1	x	3	6.28	0.50	0.10	-0.94	
		Toilet inner Wall	-1	x	1	3.60	0.50	0.10	-0.18	
		Toilet inner Wall	-1	x	2	1.36	0.50	0.10	-0.14	
						Total Quantity =			9.80	Cum
71		Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:5:10 Using 40 mm nominal size graded crushed coarse aggregates								
			1	x	1	1.00			1.00	
						Total Quantity =			1.00	Cum
72		Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:4:8(M5) Using 40 mm nominal size graded crushed coarse aggregates								
		Footing								
		Footing F-1	1	x	12	1.20	1.20	0.10	1.73	
		Plinth Beam								
		Grid A1-D1	1	x	1	10.14	0.50	0.10	0.51	
		Grid A2-C2	1	x	1	6.39	0.50	0.10	0.32	
		Grid A'3-D3	1	x	1	9.62	0.50	0.10	0.48	
		Grid A1- A2	1	x	1	2.93	0.50	0.10	0.15	
		Grid A'2-A'3	1	x	1	3.65	0.50	0.10	0.18	
		Grid C1-C3,D1-D3,B1-B3	1	x	3	6.28	0.50	0.10	0.94	
		Toilet inner Wall	1	x	1	3.60	0.50	0.10	0.18	
		Toilet inner Wall	1	x	2	1.36	0.50	0.10	0.14	
		Flooring								

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Quality Test Lab	1	x	1	3.00	3.00	0.10	0.90	
		Supervisor	1	x	1	3.50	3.00	0.10	1.05	
		Dormitory	1	x	1	3.50	3.60	0.10	1.26	
		Toilet Area	1	x	1	2.48	3.60	0.10	0.89	
		Waiting Area	1	x	1	3.75	6.72	0.10	2.52	
		Passage Area	1	x	1	9.35	1.00	0.10	0.94	
		Step 1	1	x	1	3.35	1.80	0.10	0.60	
		Step 2	1	x	1	2.70	1.80	0.10	0.49	
						Total Quantity =			13.27	Cum
73		Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications.(The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates								
			1	x	1	1.00			1.00	
						Total Quantity =			1.00	Cum
74		Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Footing								
		Footing								
		Footing F-1	1	x	12	1.00	1.00	0.30	3.60	
						Total Quantity =			3.60	Cum
75		Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Column/Pedastrals Basement to ground floor								
		Footing F-1 - C1	1	x	12	0.30	0.30	1.32	1.43	
						Total Quantity =			1.43	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
76		Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Plinth Beam								
		Grid A1-D1	1	x	1	10.14	0.30	0.38	1.16	
		Grid A2-C2	1	x	1	6.39	0.30	0.38	0.73	
		Grid A'3-D3	1	x	1	9.62	0.30	0.38	1.10	
		Grid A1- A2	1	x	1	2.93	0.30	0.38	0.33	
		Grid A'2-A'3	1	x	1	3.65	0.30	0.38	0.42	
		Grid C1-C3,D1-D3,B1-B3	1	x	3	6.28	0.30	0.38	2.15	
		Toilet inner Wall	1	x	1	3.60	0.30	0.38	0.41	
		Toilet inner Wall	1	x	2	1.36	0.30	0.38	0.31	
		Add Column Junctions								
		Column C-1	1	x	12	0.30	0.23	0.38	0.31	0.31
						Total Quantity =			6.91	Cum
77		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Column								
		Column								
		Column C-1	1	x	12	0.30	0.30	3.15	3.40	
										3.40
						Total Quantity =			3.40	Cum
78		Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Roof Beam & Lintel Beam								
		Lintel Beam								
		Grid A1-C1	1	x	1	6.39	0.30	0.15	0.29	
		Grid A'3-C3	1	x	1	5.87	0.30	0.15	0.26	
		Grid A1- A2	1	x	1	2.93	0.30	0.15	0.13	
		Grid A'2-A'3	1	x	1	3.65	0.30	0.15	0.16	
		Grid C1-C3	1	x	1	6.28	0.30	0.15	0.28	
		Grid A'2-C2	1	x	1	5.87	0.12	0.15	0.10	
		Grid B1-B1'	1	x	1	2.03	0.12	0.15	0.04	
		Grid B2-B3	1	x	1	3.35	0.12	0.15	0.06	
		Toilet inner Wall	1	x	1	3.60	0.12	0.15	0.06	
		Toilet inner Wall	1	x	2	1.36	0.12	0.15	0.05	1.43
		Roof Beam								
		Grid A1-C1	1	x	1	6.39	0.30	0.30	0.58	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT									
DETAIL ESTIMATE									
SI No.	Description	Nos			L	B	D	Quantity	Unit
	Grid A2-C2	1	x	1	6.39	0.30	0.30	0.58	
	Grid A'3-C3	1	x	1	5.87	0.30	0.30	0.53	
	Grid A1- A2	1	x	1	2.93	0.30	0.30	0.26	
	Grid A'2-A'3	1	x	1	3.65	0.30	0.30	0.33	
	Grid C1-C3,B1-B3	1	x	2	6.28	0.30	0.30	1.13	
	Toilet inner Wall	1	x	1	3.60	0.30	0.30	0.32	
	Toilet inner Wall	1	x	2	1.36	0.30	0.30	0.24	
	Add Column Junctions								
	Column C-1	1	x	12	0.30	0.30	0.30	0.32	4.29
					Total Quantity =			5.73	Cum
79	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Roof Slab								
	Roof Slab								
	Slab 1	1	x	1	7.08	3.53	0.15	3.75	
	Slab 2	1	x	1	6.56	3.72	0.15	3.66	
					Total Quantity =			7.41	Cum
80	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Sunshade								
	Sunshade RS	1	x	1	2.70	0.60	0.12	0.19	
	Sunshade window	1	x	5	1.50	0.60	0.12	0.52	
					Total Quantity =			0.70	Cum
81	Providing TheProviding Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members wherever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)								
	Foundation								
	Footing	1	x	1	3.60	90	Kg/ Cum	324.00	
	Column Pedestal	1	x	1	1.43	275	Kg/ Cum	392.04	
	Plinth Beam	1	x	1	6.91	200	Kg/ Cum	1382.82	
	Ground Floor								
	Column	1	x	1	3.40	275	Kg/ Cum	935.55	
	Beam @ 6.5m LVL	1	x	1	4.29	280	Kg/ Cum	1202.29	
	Slab & Sunshade	1	x	1	8.11	120	Kg/ Cum	973.58	
	Lintel Beam	1	x	1	1.43	120	Kg/ Cum	172.02	
					Total Quantity =			5382.30	Kg
82	Providing Brick work with common burnt clay modular bricks of class designation 3.5 in foundation and plinth in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
	Basement To GF								
	Grid A1-D1	1	x	1	10.14	0.23	0.45	1.05	
	Grid A2-C2	1	x	1	6.39	0.23	0.45	0.66	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Grid A'3-D3	1	x	1	9.62	0.23	0.45	1.00	
		Grid A1- A2	1	x	1	2.93	0.23	0.45	0.30	
		Grid A'2-A'3	1	x	1	3.65	0.23	0.45	0.38	
		Grid C1-C3,D1-D3,B1-B3	1	x	3	6.28	0.23	0.45	1.95	
		Toilet inner Wall	1	x	1	3.60	0.23	0.45	0.37	
		Toilet inner Wall	1	x	2	1.36	0.23	0.45	0.28	
						Total Quantity =			5.99	Cum
83		Providing Brick work with common burnt clay machine moulded perforated bricks of class designation 5.0 conforming to IS: 2222 in superstructure above plinth level in cement mortar 1:6 (1 cement : 6 coarse sand) With Modular bricks including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
		Ground floor								
		Step 1								
		Area 1	1	x	1	1.80	3.35	0.15	0.90	
		Area 2	1	x	1	1.50	3.35	0.15	0.75	
		Area 3	1	x	1	1.20	3.35	0.15	0.60	
		Step 2								
		Area 1	1	x	1	1.80	2.70	0.15	0.73	
		Area 2	1	x	1	1.50	2.70	0.15	0.61	
		Area 3	1	x	1	1.20	2.70	0.15	0.49	
		Passage Area	1	x	1	11.35	0.23	0.45	1.17	
		Lab Slab	1	x	6	0.75	0.23	0.75	0.78	
		Waiting Area							0.00	
		Slab 1	1	x	4	0.60	0.23	0.75	0.41	
		Slab 2	1	x	4	0.60	0.23	0.48	0.26	
		Slab 3	1	x	4	0.60	0.23	0.48	0.26	
		Slab 4	1	x	6	0.60	0.23	0.48	0.40	
		Grid A1-C1	1	x	1	6.39	0.23	2.70	3.97	
		Grid A2-A'2	1	x	1	0.29	0.23	2.70	0.18	
		Grid A'3-C3	1	x	1	5.87	0.23	2.70	3.65	
		Grid A1- A2	1	x	1	2.93	0.23	2.70	1.82	
		Grid A'2-A'3	1	x	1	3.65	0.23	2.70	2.27	
		Grid C1-C3	1	x	1	6.28	0.23	2.70	3.90	
		Grid C1-D1,C3-D3	1	x	2	3.75	0.23	1.20	2.07	
		Grid D1-D3	1	x	1	6.28	0.23	1.20	1.73	
		Deductions								
		RS	-1	x	1	2.40	0.23	2.52	-1.39	
		Opening 1	-1	x	1	0.90	0.23	1.20	-0.25	
		Opening 2	-1	x	1	0.90	0.23	2.10	-0.43	
		D1	-1	x	2	0.90	0.23	1.20	-0.50	
		D2	-1	x	1	0.70	0.23	2.10	-0.34	
		Window	-1	x	5	1.20	0.23	1.10	-1.52	
		Toilet Ventilator	-1	x	1	0.60	0.23	0.60	-0.08	
		Terrace Floor								
		Grid A1-C1	1	x	1	6.39	0.23	0.90	1.32	
		Grid A2-A'2	1	x	1	0.29	0.23	0.90	0.06	
		Grid A'3-C3	1	x	1	5.87	0.23	0.90	1.22	
		Grid A1- A2	1	x	1	2.93	0.23	0.90	0.61	
		Grid D1-D3	1	x	1	6.28	0.23	0.90	1.30	
						Total Quantity =			26.95	Cum
84		Providing Brick work with Non Modular fly ash bricks conforming to IS:12894, class designation 5.0 average compressive strength in super structure above plinth level up to floor I level in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
			1	x	1	1.00			1.00	
						Total Quantity =			1.00	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
85		Providing Half brick masonry with common burnt clay Non Modular bricks of class designation 3.5 in superstructure above plinth level up to floor 1 level cement mortar 1:3 (1 cement :3 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work								
		Ground floor								
		Grid A'2-C2	1	x	1	5.87		2.70	15.85	
		Grid C2-C3	1	x	1	3.35		2.70	9.05	
		Toilet inner Wall	1	x	1	3.60		2.70	9.72	
		Toilet inner Wall	1	x	2	1.36		2.70	7.34	
		Deductions								
		D1	-1	x	1	0.90		2.10	-1.89	
		D2	-1	x	3	0.70		2.10	-4.41	
						Total Quantity =			35.66	Sqm
86		Half brick masonry with Non Modular fly ash bricks of class designation 5.0, conforming to IS :12894, in super structure above plinth and upto floor I level cement mortar 1 : 3 (1 cement : 3 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work								
			1	x	1	1.00			1.00	
						Total Quantity =			1.00	Sqm
87		Providing 12 mm cement plaster finished with a floating coat of neat cement of mix :1:3 (1 cement: 3 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Ceiling Plastering								
		Quality Test Lab	1	x	1	3.00	3.00		9.00	
		Supervisor	1	x	1	3.50	3.00		10.50	
		Dormitory	1	x	1	3.50	3.60		12.60	
		Toilet Area	1	x	1	2.48	3.75		9.30	
						Total Quantity =			41.40	Sqm
88		Providing 12 mm cement plaster with cement mortar 1:4 (1 cement: 4 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Inner Plastering								
		Ground Floor								
		Quality Test Lab	1	x	1	12.00		3.00	36.00	
		Supervisor	1	x	1	13.00		3.00	39.00	
		Dormitory	1	x	1	14.20		3.00	42.60	
		Toilet Corridor	1	x	1	9.20		3.00	27.60	
		WC	1	x	2	4.56		2.15	19.61	
		WC/Bath	1	x	1	5.80		2.15	12.47	
		Deduction								
		RS	-1	x	1	2.40		2.52	-6.05	
		Opening	-1	x	3	0.90		2.10	-5.67	
		D1	-1	x	2	0.90		2.10	-3.78	
		D2	-1	x	7	0.70		2.10	-10.29	
		Window	-1	x	5	1.20		1.00	-6.00	
		Toilet Ventilator	-1	x	1	0.60		0.60	-0.36	
						Total Quantity =			145.13	Sqm
89		Providing 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix: 1:4 (1 cement: 4 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Toilet	1	x	1	1.00		1.00	1.00	
						Total Quantity =			1.00	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
90		Providing 20 mm cement plaster of mix :1:4 (1 cement: 4 fine sand) to brick/stone masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Outer Plastering								
		Ground floor								
		Outer Wall	1	x	1	28.59		3.60	102.92	
		Waiting Area	1	x	2	15.14		1.65	49.96	
		Deductions								
		Rolling Shutter	-1	x	1	2.40		2.52	-6.05	
		Window	-1	x	5	1.20		1.00	-10.80	
		Toilet Ventilator	-1	x	1	0.60		0.60	-2.16	
		Opening 1	-1	x	1	0.90		2.10	-1.89	
		D1	-1	x	2	0.90		1.65	-2.97	
		D2	-1	x	1	0.70		2.10	-1.47	
		Terrace floor								
		Outer Wall	1	x	2	28.59		0.90	51.46	
		Outer Wall top	1	x	1	28.59	0.23		6.58	
						Total Quantity =			185.59	Sqm
91		Providing and fixing suitable plaster mesh 150mm wide manufactured out of hot dipped galvanised iron of nominal thickness 0.35mm with a zinc coating of 120g/m2 width, along route of walls chipped for services, junction between RCC and brick walls including cost of materials, labour for fixing complete as per specifications. (length of mesh only be measured for payment								
		Outer Wall top	1	x	1	100.00			100.00	
						Total Quantity =			100.00	Rmt
92		Forming groove of uniform size in the top layer of plaster as per approved pattern including repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge: 10mm to 15 mm wide and 8 mm deep groove.								
			1	x	1	50.00			50.00	
						Total Quantity =			50.00	Meter
93		Providing and laying Cement concrete flooring 40 mm thick with 20 mm nominal size stone aggregate using 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry complete.								
			1	x	1	10.00			10.00	
						Total Quantity =			10.00	Sqm
94		Providing White washing with lime to give an even shade :New work (three coats) with lime of approved quality, including cost of materials, labour complete as per specifications and as per directions of Engineer- in-charge.								
		Ceiling Plastering								
		As per Item No: 14	1	x	1	41.40			41.40	
						Total Quantity =			41.40	Sqm
95		Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two coat applied @ 1.67 ltr/10 m² over and including priming coat of exterior primer applied @ 2.20 kg/10 m²) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge								
		Outer Plastering								
		As per Item No: 20	1	x	1	185.59			185.59	
						Total Quantity =			185.59	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
96		Finishing walls with 100% Premium acrylic emulsion paint having VOC less than 50 gm/litre and UV resistance as per IS 15489:2004, Alkali & fungal resistance, dirt resistance exterior paint of required shade (Company Depot Tinted) with silicon additives, New work (Two coats applied @ 1.43 litre/ 10 m ² . Over and including priming coat of exterior primer applied @ 0.90 litre/10 m ² with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
		Inner Plastering								
		As per Item No: 19	1	x	1	138.53			138.53	
						Total Quantity =			138.53	Sqm
97		Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete as per specifications and as per directions of Engineer-in-charge.								
		Inner Plastering								
		As per Item No: 19	1	x	1	138.53			138.53	
						Total Quantity =			138.53	Sqm
98		Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ m2 including grouting the joints with white cement and matching pigments etc., complete.Size of Tile 600x600 mm								
		Floor Tiles								
		Quality Test Lab	1	x	1	3.00	3.00		9.00	
		Supervisor	1	x	1	3.50	3.00		10.50	
		Dormitory	1	x	1	3.50	3.60		12.60	
		Skirting								
		Quality Test Lab	1	x	1	12.00		0.10	1.20	
		Supervisor	1	x	1	13.00		0.10	1.30	
		Dormitory	1	x	1	14.20		0.10	1.42	
		Deduction								
		RS	-1	x	1	2.40		0.10	-0.24	
		Opening	-1	x	3	0.90		0.10	-0.27	
		D1	-1	x	2	0.90		0.10	-0.18	
		D2	-1	x	1	0.70		0.10	-0.07	
						Total Quantity =			35.26	Sqm
99		Grouting the joints of flooring tiles having joints of 3 mm width, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete as per direction of Engineer-in-charge. Size of Tile 600x600 mm								
			1	x	1	35.26			35.26	
						Total Quantity =			35.26	Sqm
100		Providing and laying flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge :** Flamed finish granite stone slab Black, Cherry Red, Brown, Cat Eye, River Pink or equivalent								
		Flooring								
		Waiting Area	1	x	1	3.75	6.72		25.20	
		Passage Area	1	x	1	9.35	1.00		9.35	
		Skirting								
		Waiting Area	1	x	1	20.94		0.10	2.09	
		Deduction								
		Opening	-1	x	1	0.90		0.10	-0.09	
		D1	-1	x	2	0.90		0.10	-0.18	
						Total Quantity =			36.37	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
101		Providing and laying flooring and steps machine cut granite slabs 40 mm thick on cement mortar bed 1:6, 25 mm thick, and pointed with ce- ment mortar 1:3 over existing cement concrete bed , including cost of materials, mortar labour, curing complete as per specifications.								
		Flooring								
		Entrance Steps								
		Tread	1	x	2	3.35	0.30		2.01	
		Riser	1	x	3	3.35		0.10	1.01	
		Midlanding	1	x	1	3.35	1.20		4.02	
		Entrance Step 2							0.00	
		Tread	1	x	2	2.70	0.30		1.62	
		Riser	1	x	3	2.70		0.10	0.81	
		Midlanding	1	x	1	2.70	1.20		3.24	
		Quality lab Slab Area 1	1	x	1	3.00	0.75		2.25	
		Quality lab Slab Area 2	1	x	1	1.50	0.75		1.13	
		Waiting Slab Area 1	1	x	1	2.50	0.60		1.50	
		Waiting Slab Area 2	1	x	1	2.80	0.60		1.68	
		Waiting Slab Area 3	1	x	1	2.80	0.60		1.68	
		Waiting Slab Area 4	1	x	1	1.77	0.60		1.06	
		Waiting Slab Area 5	1	x	1	2.70	0.60		1.62	
						Total Quantity =			23.62	Sqm
102		Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick bed of cement mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ m2 including pointing the joints with white cement and matching pigments etc., complete.								
		Flooring								
		Toilet Corridor	1	x	1	1.00	3.75		3.75	
		WC	1	x	2	1.36	0.92		2.50	
		WC/Bath	1	x	1	1.36	1.54		2.09	
						Total Quantity =			8.35	Sqm
103		Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer- in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per m2, including pointing in white cement mixed with pigment of matching shade complete.								
		Dado								
		Toilet Corridor	1	x	1	9.50		2.15	20.43	
		WC	1	x	2	4.56		2.15	19.61	
		WC/Bath	1	x	1	5.80		2.15	12.47	
		Deduction								
		D2	-1	x	6	0.70		2.15	-9.03	
						Total Quantity =			43.47	Sqm
104		Providing and laying water proofing treatment to the Roof with PU based single component elastomeric pure polyurethane based coating on New terrace/Chajjas/Sunken portion of WC:Bathroom, cold applied PU waterproofing membrane that is highly elastic with elongation greater than 400% and tensile strength greater than 2MPa as per ASTM D412. The waterproofing membrane to be applied in 2coats @ 1.6kg per m2 to achieve final DFT (dry film thickness) of 1mm including prime coat of epoxy primer @150 g per m2 and protection with 120gsm Geo-textile over the waterproofing membrane. The finished cost to include surface preparation, making coving at Junction, Bore Packing, treatment of construction joints completely as per specification & with a 10 years warranty on product & work from certified manufacturers as per the direction of the Engineer In charge.								
		WC	1	x	2	1.36	0.92		2.50	
		WC/Bath	1	x	1	1.36	1.54		2.09	
		Slab 1	1	x	1	7.08	3.53		24.99	
		Slab 2	1	x	1	6.56	3.72		24.40	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
						Total Quantity =			53.99	Sqm
105		Providing & fixing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness of approved size) on roofs jointed with cement mortar 1:4 (1 cement: 4 coarse sand) mixed with 2% integral water proofing compound, laid over a bed of 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete.								
		Roof area 1	1	x	1	7.08	3.53		24.99	
		Roof area 2	1	x	1	6.56	3.72		24.40	
						Total Quantity =			49.40	Sqm
106		Providing and laying cinder concrete in cement 1:15 (1 cement : 15 cinder of 12.5mm nominal gauge) on terraced roof or sunken slabs, laid to slope compacting, including cost of materials, labour, curing complete as per specifications.								
		Roof area 1	1	x	1	7.08	3.53	0.10	2.50	
		Roof area 2	1	x	1	6.56	3.72	0.10	2.44	
						Total Quantity =			4.94	cum
107		Providing Salwood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, usage charges complete as per specifications.								
		D1	1	x	3	5.10	0.10	0.15	0.23	
						Total Quantity =			0.23	cum
108		Fixing of door frame in an existing opening including embedding frame in floor and walls after cutting masonry for holdfasts for embedding holdfast in cement concrete 1:3:6 of 20mm and down size granite metal painting two coats of coal tar to sides of frame, making good the damages to walls and floor as required and disposal of the debris with lead upto 50 m. including cost of materials, labour charges, complete as per specifications								
		D1	1	x	3				3.00	
		D2	1	x	4				4.00	
						Total Quantity =			7.00	Nos
109		Providing and fixing cramps of required size & shape in RCC/ CC / Brick masonry backing with cement mortar 1:2 (1 cement :2 coarse sand), including drilling necessary hole in stones and embedding the cramp in the hole (fastener to be paid separately). Stainless steel cramps					KG/ Nos			
		D1	1	x	6	3	0.20		3.60	
		D2	1	x	6	4	0.20		4.80	
						Total Quantity =			8.40	Kg
110		Providing and fixing expansion hold fasteners on C.C. /R.C.C./Brick masonry surface backing including drilling necessary holes and the cost of bolt etc complete. Fastener with threaded dia 12 mm								
		D1	1	x	6	3			18.00	
		D2	1	x	6	4			24.00	
						Total Quantity =			42.00	Nos
111		Providing and fixing flush door shutter made out of solid core block board type, well seasoned, chemically treated hard wood battens and internal frame with minimum 45 mm wide wooden frame alround door shutters covered with cross bonded wooden sheets (core veneer) hot pressed and fastened on both sides of the door using liquid phenol formaldehyde resin as per IS specifications 2202 (part-I) 1991. from manufacturer complete as per spcification.								
		D1	1	x	3	0.9		2.10	5.67	
						Total Quantity =			5.67	Sqm
112		Providing and fixing flush door shutter made out of solid core block board type, well seasoned, chemically treated hard wood battens and internal frame with minimum 45 mm wide wooden frame alround door shutters covered with cross bonded wooden sheets (core veneer) hot pressed and fastened on both sides of the door using liquid phenol formaldehyde resin as per IS specifications 2202 (part-I) 1991. from manufacturer complete as per spcification. 35 mm thick both side commercial								
		D2	1	x	4	4.9			19.60	
						Total Quantity =			19.60	Rmt

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
113		Providing & fixing to existing door frames, 30mm thick Glass fibre reinforced plastic (FRP) panelled door shutter of required colour and approved brand and manufacture made with fire retardant grade unsaturated polyster resin, moulded to 3mm thick FRP Laminate for forming hollow railsand styles with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings cast monolithically with 5mm thick FRP Laminate for panels conforming to IS 14856 Including fixing to frames								
		D2	1	x	4	0.7		2.10	5.88	
						Total Quantity =			5.88	Sqm
114		Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.								
		D1	1	x	1	3			3.00	
						Total Quantity =			3.00	Nos
115		Providing and fixing chromium plated brass night latch of approved quality including necessary screws etc. complete.								
		D1	1	x	1	3			3.00	
						Total Quantity =			3.00	Nos
116		Providing and fixing chromium plated brass handles of 100/125 mm with necessary screws etc. complete								
		D1	1	x	2	3			6.00	
						Total Quantity =			6.00	Nos
117		Providing and fixing bright finished brass handles with screws etc. complete: Brass handles 125 mm with plate 175x32 mm								
		D1	1	x	2	3			6.00	
						Total Quantity =			6.00	Nos
118		Providing and fixing bright finished brass handles with screws etc. complete: Brass handles 100 mm with plate 150x32 mm								
		D1	1	x	2	3			6.00	
						Total Quantity =			6.00	Nos
119		Providing and fixing aluminium tower bolts, ISI marked, anodised (an- odic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete								
		D1	1	x	2	3			6.00	
		D2	1	x	2	4			8.00	
						Total Quantity =			14.00	Nos
120		Providing and fixing bright finished brass butt hinges with necessary screws etc. complete : 125x70x4 mm (ordinary type)								
		D1	1	x	6	3			18.00	
						Total Quantity =			18.00	Nos
121		Providing and fixing bright finished brass butt hinges with necessary screws etc. complete : 100x70x4 mm (ordinary type)								
		D2	1	x	3	4			12.00	
						Total Quantity =			12.00	Nos
122		Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.								
		D1	1	x	1	3			3.00	
		D2	1	x	1	4			4.00	
						Total Quantity =			7.00	Nos
123		Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.								
		D1	1	x	1	3			3.00	
		D2	1	x	1	4			4.00	
						Total Quantity =			7.00	Nos
124		Providing and fixing chromium plated brass curtain rod with ISI mark having wall thickness of 1.25mm with two chromium plated brass brackets fixed with C.P. brass screws and PVC sleeves etc., wherever necessary complete 20mm dia								
		Window W	1	x	5	1.5			7.50	
						Total Quantity =			7.50	Metre

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT

DETAIL ESTIMATE

SI No.	Description	Nos			L	B	D	Quantity	Unit
125	Providing & fixing of 3-track x 2-panel sliding windows made out of multi chambered UPVC(Matching to RAL-9016) sections and with minimum TiO2(Titanium Dioxide) at 6PHR with TPE(Thermo Plastic Elastomer) and lead free, gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the window frame. The outer frame having an overall size of 108mm width x 45mm height with reinforcement of 1mm thickness and Sash with overall size of 39mm x 75mm with GI reinforcement of 2mm and mesh sash of size 37mm x 58mm. Coextruded Glazing bead for fixing of glass shall be of size 20mm x 24 mm. Windows shall be provided with 6mm plain float glass, standard hardware& Multi point locking system with touch lock. Wall thickness of frame & sash shall be of 2mm-2.5mm. Maximum possible size - 2419mm x 2200mm. (The cost is inclusive of all fixtures and separate charges for minor T&P's shall not be made)								
	Window W	1	x	5	1.5		1.20	9.00	
					Total Quantity =			9.00	Sqm
126	Providing & fixing of louvered ventilator made out of multi chambered UPVC(Matching to RAL-9016) sections and with minimum TiO2(Titanium Dioxide) at 6PHR with TPE(Thermo Plastic Elastomer) and lead free with gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the ventilator frame. The frame having overall size of 39mm x 39mm with GI reinforcement of 1mm thickness. Louver clip in Aluminium (powder coated in white) will be used on the frame along with plastic parts for fixing the 4 mm pin head glass. Wall thickness of frame shall be 2mm.Maximum possible size - 1000mm x 1000mm.(The cost is inclusive of all fixtures and separate charges for minor T&P's shall not be made)								
	Ventilator								
	V	1	x	1	0.60		0.60	0.36	
					Total Quantity =			0.36	Sqm
127	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to openings / wooden frames with rawl plugs screws etc.								
	Ground floor					KG/ Nos			
	Window W-1	1	x	5		40.00		200.00	
	V	1	x	1		10.00		10.00	
					Total Quantity =			210.00	Kg
128	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in- charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.) including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
	1 Meter Height Railing							150.00	
	Entrance railing							50.00	
					Total Quantity =			200.00	Kg
129	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer. Using flats 30x6mm for diagonal braces and central cross piece including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge								
	M.S. sheet door							2.00	
					Total Quantity =			2.00	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
130		Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.25 mm M.S. laths with 1.25 mm thick top cover.								
		Rolling Shutter	1	x	1	2.40		2.52	6.05	
						Total Quantity =			6.05	Sqm
131		Extra for providing mechanical device chain and crank operation for operating rolling shutters: including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineerin- Charge.								
		Rolling Shutter	1	x	1	2.40		2.52	6.05	
						Total Quantity =			6.05	Sqm
132		Extra for providing 2 HP Mild Steel Auto Reverse Shutter Gearbox for operating rolling shutters including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
		Rolling Shutter	1	x	1				1.00	
						Total Quantity =			1.00	Nos
133		Providing and fixing double action hydraulic floor spring of approved brand manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge: With stainless steel cover plate minimum 1.25 mm thickness including cost of materials, labour, usage charges of machinery complete as per specifications.								
		D1	1	x	1	3.00			3.00	
		D2	1	x	1	4.00			4.00	
						Total Quantity =			7.00	Nos
134		Providing and fixing Structural Steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.								
						Total Length	Unit	Unit Weight	Total Weight	
								Kg/Sqm		
		Truss Area								
		Roof Area	1	x	1	30.69		25.00	767.13	
		Sides	1	x	1	20.83		20.00	416.50	
						Total Quantity =			1183.63	Kg
135		Painting wood work with Deluxe Multi Surface Paint of required shade. Two coat applied @ 0.90 ltr/10 m ² over an under coat of primer applied @0.75 ltr/10 m ² of approved brand and manufacture to give an even shade including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, sand papering and knotting , cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
		D1	1	x	3	0.90		2.10	5.67	
						Total Quantity =			5.67	Sqm
136		Applying priming coat: With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, cost of materials, labour complete as per specifications and as per directions of Engineer-in- charge.								
		Ground floor								
		Hand Rail							100.00	
		Window W-1	2	x	5	1.50		1.20	18.00	
		Ventilator	2	x	1	0.60		0.60	0.72	
						Total Quantity =			118.72	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
137		Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :Two coats on new work after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge								
						Total Length	Unit	Unit Area	Total Area	
		Hand Rail							100.00	
		Ground floor								
		Window W-1	2	x	5	1.50		1.20	18.00	
		Ventilator	2	x	1	0.60		0.60	0.72	
						Total Quantity =			118.72	Sqm
138		Providing and fixing colour coated galvalume profile sheets with the depth of 30 mm and pitch of corrugation 200 mm (Colour and shape of profile as approved by the Engineerin-charge), 0.60mm(TCT) total coated thickness(tolerance as per relevant IS code), material yield strength 550 MPa, galvalume AZ-150 (zinc aluminium alloy coating nominal composition : 55% aluminium, 43.5% zinc & 1.5% silicon mass total of both sides) with regular modified polyester paint and coating of 20-25 micron RMP on exposed surface including primer and 7-10 micron epoxy coating on unexposed surface including primer. The sheet should be supplied in single length as desired by Engineer-in-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5X55mm) with EPDM seal excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. All screw should be sealed with silicon sealant.								
		Roof Area	1	x	1	7.22	4.25		30.69	
		Front Side	1	x	1		4.25	1.50	6.38	
		Sides	1	x	2	4.25		1.70	14.45	
						Total Quantity =			51.51	Sqm
139		Providing and fixing 15 cm wide, 45 cm overall semi-circular plain G.S. sheet gutter with iron brackets 40x3mm size, bolts, nuts and washers etc., including making necessary connections with rain water pipes complete. (0.63 mm thick with zinc coating not less than 275 g/m ²)								
		Gutter side	1	x	1	4.25			4.25	
						Total Quantity =			4.25	RM
140		Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes 100 mm diameter								
		Rain Water Pipe	1	x	10	5.00			50.00	
						Total Quantity =			50.00	RM
141		Providing and fixing on wall face unplasticised Rigid PVC rain water pipes of 150mm dia conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.								
		Rain Water Pipe	1	x	20	5.00			100.00	
						Total Quantity =			100.00	RM
		WATER SUPPLY AND SANITARY INSTALLATIONS WORK:-								
142		Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 g.								
		Toilet	1	x	3				3.00	
						Total Quantity =			3.00	nos
143		Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.								
		Toilet & Kitchen	1	x	4				4.00	
						Total Quantity =			4.00	Nos
144		Providing and fixing gun metal non- return valve of approved quality (screwed end) : 32 mm nominal bore - Vertical								
			1	x	1	1.000			1.00	
						Total Quantity =			1.00	Nos

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
145		Providing and fixing gun metal non- return valve of approved quality (screwed end) : 40 mm nominal bore - Vertical	1	x	1	1.00			1.00	
						Total Quantity =			1.00	Nos
		PVC pipes								
146		Supplying PVC ring tite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for: PVC pipes 25mm dia, 10 kg/sqcm & class 5	1	x	1	10.000			10.00	
						Total Quantity =			10.00	Rm
147		Supplying PVC ring tite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for: PVC pipes 32mm dia, 10 kg/sqcm & class 5	1	x	1	10.000			10.00	
						Total Quantity =			10.00	Rm
148		Supplying PVC ring tite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for: PVC pipes 75mm dia., 6 kg/sqcm & class 3	1	x	1	6.000			6.00	
						Total Quantity =			6.00	Rm
149		Supplying PVC ring tite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for: PVC pipes 110mm dia., 6 kg/sqcm & class 3	1	x	1	6.000			6.00	
						Total Quantity =			6.00	Rm
150		Supplying of special moulded variety PVC couplers as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark and with its latest amendments to walk site etc. complete. 25mm dia PVC couplers	1	x	1	4.000			4.00	Nos

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
151		Supplying of special moulded variety PVC couplers as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark and with its latest amendments to walk site etc. complete. 32mm dia PVC couplers	1	x	1	4.000			4.00	Nos
152		Supply and delivery at site special moulded variety PVC elbows as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 25mm dia PVC Elbows	1	x	1	4.000			4.00	Nos
153		Supply and delivery at site special moulded variety PVC elbows as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 32mm dia PVC Elbows	1	x	1	4.000			4.00	Nos
154		Supply and delivery at site special moulded variety PVC bend as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 25mm dia PVC Bend	1	x	1	3.000			3.00	Nos
155		Supply and delivery at site special moulded variety PVC bend as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 32mm dia PVC Bend	1	x	1	3.000			3.00	Nos
156		Supply and delivery at site special moulded variety PVC tee as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 25mm dia PVC Tee	1	x	1	2.000			2.00	Nos
157		Supply and delivery at site special moulded variety PVC tee as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 32mm dia PVC Tee	1	x	1	2.000			2.00	Nos
158		Supply and delivery at site special moulded variety PVC tee as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 110mm dia PVC Tee	1	x	1	2.000			2.00	Nos
159		Supply and delivery at site special moulded variety PVC tee as per IS 7834/ 1987 and fabricated as per IG124/ 1984 with ISI mark with its latest amendments 75mm dia PVC Tee	1	x	1	2.000			2.00	Nos
160		Providing and installing at site of work P.V.C. pipes including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour charges and all lift charges, handling charges including encasing the pipe around to a depth not less than 15 cms with gravel or selected earth available from the excavation etc. complete. 110mm Dia PVC Pipe	1	x	1	10.000			10.00	
						Total Quantity =			10.00	Rm
161		Providing and installing at site of work P.V.C. pipes including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including jointing of approved type with all labour charges and all lift charges, handling charges including encasing the pipe around to a depth not less than 15 cms with gravel or selected earth available from the excavation etc. complete. 75mm Dia PVC Pipe	1	x	1	10.000			10.00	
						Total Quantity =			10.00	Rm
162		Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required : W.C. pan with ISI marked white solid plastic seat and lid								
		Toilet	1	x	3				3.00	
						Total Quantity =			3.00	Nos
163		White Vitreous China Wash basin size 630x450 mm with a <u>single 15 mm C.P. brass pillar tap</u>								
		Toilet - Wash Basin	1	x	2				2.00	
						Total Quantity =			2.00	Nos

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
164		Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required: using White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer								
		Toilet - Wash Basin	1	x	1				1.00	
						Total Quantity =			1.00	Nos
165		Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.								
		Toilet	1	x	2				2.00	
						Total Quantity =			2.00	Nos
166		Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.								
		Toilet - Wash Basin	1	x	2				2.00	
						Total Quantity =			2.00	Nos
167		450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 g.								
		Toilet	1	x	1	3.000			3.00	
						Total Quantity =			3.00	nos
168		Providing and fixing 100 mm sand cast Iron grating for gully trap.								
		Toilet	1	x	2				2.00	
						Total Quantity =			2.00	Nos
169		Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design: Inside dimensions 455x610 mm and 45 cm deep for single pipe line : With common burnt clay (non modular) bricks of class designation 3.5								
		Toilet	1	x	2				2.00	
						Total Quantity =			2.00	Nos
170	1.14.1	SECURITY BLOCK - Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) In all kinds of soils Depth upto 3 m								
		Footing	1	x	4	1.15	1.15	1.00	5.29	
						Total Quantity =			5.29	Cum
171	1.15	Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work In ordinary/soft rock without blasting upto 1.5 m depth\								
		Footing	1	x	4	1.15	1.15	0.50	2.65	
		Plinth Beam								
		Grid A1-A2, Grid B1-B2	1	x	2	2.08	0.43	0.43	0.77	
		Grid 1A-2A, Grid 1B-2B	1	x	2	2.08	0.43	0.43	0.77	
						Total Quantity =			4.18	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
172	1.15.2	Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work Depth exceeding 1.5 m, but not exceeding 3 m								
		Footing	1	x	4	1.15	1.15	0.70	3.70	
						Total Quantity =			3.70	Cum
173	1.16.1	Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) In Hard Rock (requiring blasting) Depth upto 1.50m								
									1.00	
						Total Quantity =			1.00	Cum
174	1.16.2	Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) Depth exceeding 1.5 m, but not exceeding 3 m								
									1.00	
						Total Quantity =			1.00	Cum
175	1.9	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.								
		Earthwork Excavation (Item No:1+2a+2b)	1	x	1	13.18			13.18	
		Deductions								
		Sand Filling (Item No:5)	-1	x	1	1.05			-1.05	
		P.C.C 1:4:8 (Item No:6)	-1	x	1	1.05			-1.05	
		Footing Concrete (Item No:13)	-1	x	1	0.85			-0.85	
						Total Quantity =			10.24	Cum
176	4.1	Providing and injecting chemical emulsion for Pre-constructional Anti-Termite Treatment, creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits with Chlorpyriphos 20% E.C. / Lindane 20% E.C. @ 3.19 l/m2 including cost of chemical, diluting in water to one percent concentration, labour, usage charges of machinery, complete as per specifications.								
		Plinth Area								
		Area 1	1	x	1	3.46	3.46		11.97	
						Total Quantity =			11.97	Sqm
177	1.23	Providing and Filling in foundation with granite / trap broken metal 100mm. And down size & with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift complete as per specifications.								
		Footing								
		Footing	1	x	4	1.15	1.15	0.10	0.53	
		Plinth Beam								

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Grid A1-A2, Grid B1-B2	1	x	2	3.00	0.43	0.10	0.26	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.00	0.43	0.10	0.26	
										1.05
		Ground floor -Flooring P.C.C								
		Security	1	x	1	3.00	3.00	0.10	0.90	
						Total Quantity =			1.95	Cum
178	2.1.1	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:5:10 Using 40 mm nominal size graded crushed coarse aggregates								
									1.00	
						Total Quantity =			1.00	Cum
179	2.1.2	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:4:8(M5) Using 40 mm nominal size graded crushed coarse aggregates								
		Footing								
		Footing	1	x	4	1.15	1.15	0.10	0.53	
		Plinth Beam								
		Grid A1-A2, Grid B1-B2	1	x	2	3.00	0.43	0.10	0.26	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.00	0.43	0.10	0.26	
										1.05
		Ground floor -Flooring P.C.C								
		Security	1	x	1	3.00	3.00	0.10	0.90	
						Total Quantity =			1.95	Cum
180	2.1.4	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications.(The cost including Centering and shuttering but excluding steel reinforcement) Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates								
									1.00	
						Total Quantity =			1.00	Cum
181	2.3.3	Providing and laying in Reinforced cement concrete for all Basement & surface level works, return walls, retaining walls, sunken floors etc. The granite/trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates								
									10.00	
						Total Quantity =			10.00	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
182	2.4.4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Footing								
		All works upto plinth level								
		Footing								
		Footing 1	1	x	4	0.95	0.95	0.15	0.54	
		"	1	x	4	1.32		0.06	0.31	
						Total Quantity =			0.85	
183	2.4.4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Column/Pedastrals								
		Column Pedestal	1	x	4	0.23	0.23	1.45	0.31	
						Total Quantity =			0.31	
184	2.4.4	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Plinth Beam								
		Grid A1-A2, Grid B1-B2	1	x	2	3.46	0.23	0.23	0.37	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.00	0.23	0.23	0.32	
						Total Quantity =			0.68	
185	2.5.3	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Column								
		Column								
		Column 1	1	x	4	0.23	0.23	3.22	0.68	
										0.68
						Total Quantity =			0.68	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
186	2.5.3	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) Ground Floor Roof Beam & Sunshade								
		Window w1	1	x	2	3.46	0.23	0.15	0.24	
		Door D'	1	x	2	3.00	0.23	0.15	0.21	
		Sunshade								
		Window w1 & Door	1	x	1	16.24	0.60	0.10	0.97	
										1.42
		Roof Beam								
		Grid A1-A2, Grid B1-B2	1	x	2	3.46	0.23	0.11	0.17	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.00	0.23	0.11	0.14	
										0.31
						Total Quantity =			1.73	Cum
187	2.5.3	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Roof Slab and Staircase								
		Roof Area 1	1	x	1	4.75	3.46	0.13	2.05	
		Roof Slab Projection	1	x	2	3.46	0.30	0.20	0.42	
										2.47
						Total Quantity =			2.47	Cum
188	2.5.3	Providing and laying in position Reinforced cement concrete for all Super structures of building, Road works, Water works, Super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost including Centering and shuttering but excluding steel reinforcement) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Ground Floor Sunshade								
		Sunshade								
		Window w1 & Door	1	x	1	16.24	0.60	0.10	0.97	
						Total Quantity =			0.97	cum
189	11.32	Providing Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members wherever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)								
		Foundation								
		Footing	1	x	1	0.85	90	Kg/ Cum	76.56	
		Column Pedestal	1	x	1	0.31	250	Kg/ Cum	76.44	
		Plinth Beam	1	x	1	0.68	150	Kg/ Cum	102.52	
		Ground Floor								
		Column	1	x	1	0.68	250	Kg/ Cum	170.34	
		Beam @ 6.5m LVL	1	x	1	0.31	250	Kg/ Cum	78.00	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Slab	1	x	1	2.47	100	Kg/ Cum	246.79	
		Lintel & Sunshade	1	x	1	1.42	120.7	Kg/ Cum	171.41	
						Total Quantity =			922.06	Kg
190	6.2	Providing Brick work with common burnt clay modular bricks of class designation 3.5 in foundation and plinth in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
		Basement To GF								
		Grid A1-A2, Grid B1-B2	1	x	2	3.00	0.23	0.30	0.41	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.00	0.23	0.30	0.41	
						Total Quantity =			0.83	Cum
191	6.8	Providing Brick work with common burnt clay Non Modular bricks of class designation 3.5 in superstructure above plinth level in all shapes and sizes in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.								
		Ground floor								
		Grid A1-A2, Grid B1-B2	1	x	2	3.00	0.23	2.70	3.73	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.00	0.23	2.70	3.73	
		Roof Beam 1A - 1B and 2A - 2B Triangular	1	x	2	3.00	0.23	0.23	0.31	
		Deduction								
		Window w1	-1	x	7	1.50	0.23	1.20	-2.90	
		Door D'	-1	x	1	0.90	0.23	2.10	-0.43	
		Steps 1	1	x	1	0.90	1.20	0.15	0.16	
		Steps 2	1	x	1	0.60	1.20	0.15	0.11	
						Total Quantity =			4.70	Cum
192	8.4.1	Providing 12 mm cement plaster finished with a floating coat of neat cement of mix :1:3 (1 cement: 3 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Ceiling Plastering								
		Security cabin	1	x	1	4.75	3.46		16.44	
		Sunshade	1	x	2	16.24	0.60		19.49	
						Total Quantity =			35.92	Sqm
193	8.4.2	Providing 12 mm cement plaster with cement mortar 1:4 (1 cement: 4 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Inner Plastering								
		Security cabin								
		Grid A1-A2, Grid B1-B2	1	x	2	3.00		3.15	18.90	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.00		3.15	18.90	
		Roof Beam 1A - 1B and 2A - 2B Triangular	1	x	2	3.46		0.23	1.56	
		Deduction								
		Window w1	-1	x	7	1.50		1.20	-12.60	
		Door D'	-1	x	1	0.90		2.10	-1.89	
						Total Quantity =			24.87	Sqm
194	8.3.1	Providing 20 mm cement plaster of mix :1:4 (1 cement: 4 fine sand) to brick/stone masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.								
		Outer Plastering								
		Security cabin								
		Grid A1-A2, Grid B1-B2	1	x	2	3.46		3.45	23.87	
		Grid 1A-2A, Grid 1B-2B	1	x	2	3.46		3.45	23.87	
		Roof Beam 1A - 1B and 2A - 2B Triangular	1	x	2	3.00		0.23	1.35	
		Deduction								
		Window w1	-1	x	7	1.50		1.20	-12.60	
		Door D'	-1	x	1	0.90		2.10	-1.89	
						Total Quantity =			34.61	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
195	8.16.2	Providing and fixing suitable plaster mesh 150mm wide manufactured out of hot dipped galvanised iron of nominal thickness 0.35mm with a zinc coating of 120g/m2 width, along route of walls chipped for services, junction between RCC and brick walls including cost of materials, labour for fixing complete as per specifications. (length of mesh only be measured for nayment								
		Mesh							1000.00	
						Total Quantity =			1000.00	Rmt
196	8.79	Forming groove of uniform size in the top layer of plaster as per approved pattern including repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge: 10mm to 15 mm wide and 8 mm deep groove.								
		Goove Line							250.00	
						Total Quantity =			250.00	Rmt
197	9.1	Providing and laying Cement concrete flooring 40 mm thick with 20 mm nominal size stone aggregate using 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry complete.								
									1.00	
						Total Quantity =			1.00	Sqm
198	8.21	Providing White washing with lime to give an even shade :New work (three coats) with lime of approved quality, including cost of materials, labour complete as per specifications and as per directions of Engineer- in-charge.								
		Ceiling Plastering								
		As per Item No: 14	1	x	1	35.92			35.92	
						Total Quantity =			35.92	Sqm
199	8.30	Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two coat applied @ 1.67 ltr/10 m² over and including priming coat of exterior primer applied @ 2.20 kg/10 m²) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
		Outer Plastering								
		As per Item No: 20	1	x	1	34.61			34.61	
						Total Quantity =			34.61	Sqm
200	8.33.1	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications: Two coats applied on walls @ 1.25 L/10 m² over and including one coat of Special primer applied @ 0.75 L/10 m² with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge. (The gloss should be 50% @ 60 degree angle with 10 years life)								
		Inner Plastering								
		As per Item No: 19	1	x	1	24.87			24.87	
						Total Quantity =			24.87	Sqm
201	9.12	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ m2 including grouting the joints with white cement and matching pigments etc., complete Size of Tile 600x600 mm.								
		Security cabin	1	x	1	3.00	3.00		9.00	
						Total Quantity =			9.00	Sqm
202	7.16	Providing & fixing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness of approved size) on roofs jointed with cement mortar 1:4 (1 cement: 4 coarse sand) mixed with 2% integral water proofing compound, laid over a bed of 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete.								

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Security cabin	1	x	1	4.75	3.46		16.44	
						Total Quantity =			16.44	Sqm
203	7.18	Providing and laying cinder concrete in cement 1:15 (1 cement : 15 cinder of 12.5mm nominal gauge) on terraced roof or sunken slabs, laid to slope compacting, including cost of materials, labour, curing complete as per specifications.								
		Security cabin	1	x	1	4.75	3.46	0.10	1.64	
						Total Quantity =			1.64	cum
204	8.33.2	Painting wood work with Deluxe Multi Surface Paint of required shade. Two coat applied @ 0.90 ltr/10 m ² over an under coat of primer applied @0.75 ltr/10 m ² of approved brand and manufacture to give an even shade including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, sand papering and knotting , cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.								
		D1	1	x	2	0.90		2.10	3.78	
						Total Quantity =			3.78	Sqm
205	9.28	Providing and laying flooring and steps machine cut granite slabs 40 mm thick on cement mortar bed 1:6, 25 mm thick, and pointed with ce- ment mortar 1:3 over existing cement concrete bed , including cost of materials, mortar labour, curing complete as per specifications.								
		Flooring								
		Entrance Step								
		Tread	1	x	2	1.20	0.30		0.72	
		Riser	1	x	2	1.20	0.15		0.36	
						Total Quantity =			1.08	Sqm
206	12.88	Providing & fixing of 2-track x 2-panel sliding windows made out of multi chambered UPVC(Matching to RAL-9016) sections and with minimum TiO2(Titanium Dioxide) at 6PHR with TPE(Thermo Plastic Elastomer) and lead free, gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the window frame. The outer frame having a overall size of 60mm width x 45mmheight with reinforcement of 1mm thickness and Sash with overall size of 39mm X 58mm with GI reinforcement of 1mm for the frame and 1.5 mm for the sash. Coextruded Glazing bead for fixing of glass shall be of size 20mm x 24mm. Windows shall be provided with 5mm plain float glass, standard hardware& single point locking system with touch lock. Wall thickness of frame & sash shall be of 2-2.5 mm. Maximum possible size – 1819mm x 1819mm (The cost is inclusive of all fixtures and separate charges for minor T&P's shall not be made)								
		Security Cabin								
		W 1	1	x	3	3.00		1.20	10.80	
						Total Quantity =			10.80	Sqm
207	12.57.4	Providing and fixing flush door shutter made out of solid core block board type, well seasoned , chemically treated hard wood battens and internal frame with minimum 45 mm wide wooden frame alround door shutters covered with cross bonded wooden sheets (core veneer) hot pressed and fastened on both sides of the door useing liquid phenol formaldehyde resin as per IS specifications 2202 (part-I) 1991. from manufacturer complete as per spcification. -do- 35 mm thick both side Teak								
		D1	1	x	1	0.90		2.10	1.89	
						Total Quantity =			1.89	Sqm
208	12.10	Providing Teak wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, usage charges complete as per specifications.								

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		D1	1	x	1	5.10	0.10	0.15	0.08	
						Total Quantity =			0.08	Cum
209	11.34A	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete. Fixed to steel windows by welding.								
		W 1	1	x	3			20.00	60.00	
						Total Quantity =			60.00	Kg
		WATER SUPPLY AND SANITARY INSTALLATIONS WORK:-								
210	10.1.7	Supplying PVC ring type pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. for: PVC pipes 110mm dia., 6 kg/sqcm & class 2								
		Rain Water pipe	1	x	2	4.000			8.00	
						Total Quantity =			8.00	Rm
211		ROAD WORK - Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction								
		Road	1	x	1	1080.00		0.15	162.00	
						Total Quantity			162.00	Cum
212		Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401- Grading -I Material								
		Road	1	x	1	1080.00		0.15	162.00	
						Total Quantity			162.00	Cum
213		Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/ grader in sub-base / base course onwell prepared surface and compacting with vibratory roller to achieve the desired density.								
		Road	1	x	1	1080.00		0.13	140.40	
						Total Quantity			140.40	Cum
214		Prime Coat over WMM/WBM: Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70 kg per m2 using mechanical means								
		Road	1	x	1	1080.00			1080.00	
						Total Quantity			1080.00	Cum
215		Tack coat on Bituminous surface: Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom								
		Road	1	x	1	1080.00			1080.00	
						Total Quantity			1080.00	Cum
216		Providing and laying Dense Graded Bituminous Macadam with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 4.0 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 505 complete in all respects.								
		Road	1	x	1	1080.00		0.07	75.60	
						Total Quantity			75.60	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
217		Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30 @ 5.2 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects								
		Road	1	x	1	1080.00		0.03	32.40	
						Total Quantity			32.40	Cum
218		Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & including Centering and shuttering) Mix 1:4:8(M5) Using 40 mm nominal size graded crushed coarse aggregates								
		Pipe	1	x	2	6.00	1.90	0.10	2.28	
		Side wall	1	x	2	1.90	0.43	0.10	0.16	
						Total Quantity			2.44	Cum
219		Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/ trap/ basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & including Centering and shuttering) Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates								
		Side wall	1	x	2	1.90	0.23	2.00	1.75	
		Deductions	-1	x	2	1.77		0.23	-0.81	
						Total Quantity			0.94	Cum
220		Laying Reinforced cement concrete 1500 mm dia pipe NP4/ prestressed concrete pipe for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and mananets.								
		Pipe	1	x	2	6.00			12.00	
						Total Quantity			12.00	Rmt
221		PAVER BLOCK - Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401- Grading -I Material								
		Paver Block	1	x	1	25.00		0.15	3.75	
						Total Quantity			3.75	Cum
222		Providing and laying 60mm thick factory made cement concrete paver block of approved shape and colour of M -30 grade made of C&D waste by block making machine with vibratory compaction laid in required pattern and including over 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.								
		Paver Block	1	x	1	25.00			25.00	
						Total Quantity			25.00	Sqm

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
223		SUMP - Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work. (Excavation Payable for Footing Area Only) In all kinds of soils Depth upto 3 m								
		In all kinds of soils Depth upto 3 m								
									10.00	
						Total Quantity =			10.00	Cum
224		Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work In ordinary/soft rock without blasting upto 1.5 m depth								
		Earth work	1	x	1	3.84	2.84	1.50	16.36	
						Total Quantity =			16.36	Cum
225		Earth work excavation for Foundation by mechanical means for all works & depth upto 1.5 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenaces required to complete the work Depth exceeding 1.5 m, but not exceeding 3 m								
		Earth work	1	x	1	3.84	2.84	0.25	2.73	
						Total Quantity =			2.73	Cum
226		Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work In Hard Rock (requiring blasting) Depth upto 1.50m								
									10.00	
						Total Quantity =			10.00	Cum
227		Earth work excavation for FOUNDATION by Mechanical means depth upto 1.50m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including cost of explosives, dressing of excavated surfaces, disposing off or levelling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, blasting materials, tools, usage of Machinery & all other appurtenaces required to complete the work. Depth exceeding 1.5 m, but not exceeding 3 m								
									10.00	
						Total Quantity =			10.00	Cum
228		Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations and other similar works etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.								
		Earthwork Excavation (Item No:1(a)+(b)	1	x	1	19.08			19.08	
		Deductions								
		Sand Filling (Item No:5)	-1	x	1	0.96			-0.96	
		P.C.C 1:4:8 (Item No:6)	-1	x	1	0.96			-0.96	
		Footing Concrete (Item No:13)	-1	x	1	12.65			-12.65	
						Total Quantity =			4.51	Cum

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
229		Providing and Filling in foundation with granite / trap broken metal 100mm. and down size & with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift complete as per specifications.								
			1	x	1	3.64	2.64	0.10	0.96	
						Total Quantity =			0.96	Cum
230		Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & including Centering and shuttering) Mix 1:4:8(M5) Using 40 mm nominal size graded crushed coarse aggregates								
			1	x	1	3.64	2.64	0.10	0.96	
						Total Quantity =			0.96	Cum
231		Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & including Centering and shuttering) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Slab								
		Base slab	1	x	1	3.64	2.64	0.20	1.92	
		Top cover slab	1	x	1	3	2	0.15	0.90	
						Total Quantity =				2.82
232		Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & including Centering and shuttering) M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates Wall								
		Short wall	1	x	1	2.2	0.2	1.35	0.59	
		Long wall	1	x	1	3.2	0.2	1.35	0.86	
		Deductions								
		Manhole cover	-1	x	1	0.75	0.75	0.15	-0.08	1.37
						Total Quantity =			1.37	Cum
233		Providing Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members wherever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately)								
		Slab	1	x	1	2.82	100	Kg/ Cum	282.19	
		RCC Wall	1	x	1	1.37	120	Kg/ Cum	164.84	
						Total Quantity =			447.03	Kg

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
234		Supplying and fixing SFRC frame and cover conforming to IS 12592 (part I)-1988 and IS 12592 (part-II)- 1991 with latest amendment, including cutting slabs to the required size for the opening and fixing the cover in C.C. 1:2:4 and C.M. 1:3 plastering 20 mm thick to all exposed faces, curing for 10 days with all lead and lift with appurtenances. complete								
		Manhole cover	1	x	1	1			1.00	
						Total Quantity =			1.00	Nos
235		ELECTRICAL -PVC CONDUITS & ACCESSORIES -Open Conduit System -,Supplying heavy gauge PVC conduit pipe dia mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc , and fixing using inverted wood plugs in case of RCC ceiling and RCC wall/ stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws 19/20 mm dia 2 mm thick								
		Wherever Necessary	1	x	1	50.00				
						Total Quantity			50.00	Meter
236		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 25 mm dia 2 mm thick								
		Ground Floor								
		DB to Switch Board Line	1	x	8	3.00			24.00	
		Switch Board-1 to Light Point	1	x	5	3.00			15.00	
		Switch Board-2 to Light Point	1	x	5	3.00			15.00	
		Switch Board-3 to Light Point	1	x	10	3.00			30.00	
		Switch Board-4 to Light Point	1	x	10	3.00			30.00	
		Switch Board-5 to Light Point	1	x	4	3.00			12.00	
		Switch Board-6 to Light Point	1	x	10	3.00			30.00	
		Switch Board-7 to Light Point	1	x	10	3.00			30.00	
		Switch Board-8 to Light Point	1	x	5	3.00			15.00	
		First Floor								
		DB to Switch Board Line	1	x	8	3.00			24.00	
		Switch Board-1 to Light Point	1	x	5	3.00			15.00	
		Switch Board-2 to Light Point	1	x	5	3.00			15.00	
		Switch Board-3 to Light Point	1	x	10	3.00			30.00	
		Switch Board-4 to Light Point	1	x	10	3.00			30.00	
		Switch Board-5 to Light Point	1	x	4	3.00			12.00	
		Switch Board-6 to Light Point	1	x	10	3.00			30.00	
		Switch Board-7 to Light Point	1	x	10	3.00			30.00	
		Switch Board-8 to Light Point	1	x	5	3.00			15.00	
		Second Floor								
		DB to Switch Board Line	1	x	8	3.00			24.00	
		Switch Board-1 to Light Point	1	x	5	3.00			15.00	
		Switch Board-2 to Light Point	1	x	5	3.00			15.00	
		Switch Board-3 to Light Point	1	x	10	3.00			30.00	
		Switch Board-4 to Light Point	1	x	10	3.00			30.00	
		Switch Board-5 to Light Point	1	x	4	3.00			12.00	
		Switch Board-6 to Light Point	1	x	10	3.00			30.00	
		Switch Board-7 to Light Point	1	x	10	3.00			30.00	
		Switch Board-8 to Light Point	1	x	5	3.00			15.00	
						Total Quantity			603.00	Meter
237		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 32 mm dia 2.5 mm thick								
		In Ceiling								
		Ground floor								
		DB to Switch Board Line	1	x	1	93.54			93.54	
		Switch Board-1 to Light Point	1	x	1	19.33			19.33	
		Switch Board-2 to Light Point	1	x	1	18.29			18.29	
		Switch Board-3 to Light Point	1	x	1	78.64			78.64	
		Switch Board-4 to Light Point	1	x	1	78.64			78.64	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Switch Board-5 to Light Point	1	x	1	18.57			18.57	
		Switch Board-6 to Light Point	1	x	1	78.64			78.64	
		Switch Board-7 to Light Point	1	x	1	78.64			78.64	
		Switch Board-8 to Light Point	1	x	1	34.70			34.70	
		First floor								
		DB to Switch Board Line	1	x	1	93.54			93.54	
		Switch Board-1 to Light Point	1	x	1	19.33			19.33	
		Switch Board-2 to Light Point	1	x	1	18.29			18.29	
		Switch Board-3 to Light Point	1	x	1	78.64			78.64	
		Switch Board-4 to Light Point	1	x	1	78.64			78.64	
		Switch Board-5 to Light Point	1	x	1	18.57			18.57	
		Switch Board-6 to Light Point	1	x	1	78.64			78.64	
		Switch Board-7 to Light Point	1	x	1	78.64			78.64	
		Switch Board-8 to Light Point	1	x	1	34.70			34.70	
		Second floor								
		DB to Switch Board Line	1	x	1	93.54			93.54	
		Switch Board-1 to Light Point	1	x	1	19.33			19.33	
		Switch Board-2 to Light Point	1	x	1	18.29			18.29	
		Switch Board-3 to Light Point	1	x	1	78.64			78.64	
		Switch Board-4 to Light Point	1	x	1	78.64			78.64	
		Switch Board-5 to Light Point	1	x	1	18.57			18.57	
		Switch Board-6 to Light Point	1	x	1	78.64			78.64	
		Switch Board-7 to Light Point	1	x	1	78.64			78.64	
		Switch Board-8 to Light Point	1	x	1	34.70			34.70	
						Total Quantity			1496.97	Meter
238		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 40 mm dia 2.5 mm thick								
		Wherever Necessary	1	x	1	50.00			50.00	
						Total Quantity			50.00	Meter
239		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 25 mm dia 2 mm thick								
		Wherever Necessary	1	x	1	25.00			25.00	
						Total Quantity			25.00	Meter
240		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 32 mm dia 2.5 mm thick								
		Wherever Necessary	1	x	1	25.00			25.00	
						Total Quantity			25.00	Meter
241		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 40 mm dia 2.5 mm thick								
		Wherever Necessary	1	x	1	25.00			25.00	
						Total Quantity			25.00	Meter
242		Supplying and fixing PVC/metal conduit Deep junction box 25 mm deep junction box								
		For Light Point	3	x	59				177.00	
						Total Quantity			177.00	Nos
243		Supplying and fixing PVC/metal conduit Deep junction box 32 mm deep junction box								
		Wherever Necessary	3	x	5				15.00	
						Total Quantity			15.00	Nos
244		Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete upto 50 mm conduit in brick wall								
		For DB Line	1	x	1	10.00			10.00	
						Total Quantity			10.00	Meter

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
245		Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete upto 50 mm conduit CC Floor								
		Wherever Necessary	1	x	1	5.00			5.00	
						Total Quantity			5.00	Meter
246		WIRES & CABLES - Point wiring using Copper wire without switch - Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5mm2 (Phase & Neutral) & 1x1.0 mm2 (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet Short point upto 3m from tapping point to out let via switch box								
		Light Point	3	x	3				9.00	
						Total Quantity			9.00	Point
247		Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5mm2 (Phase & Neutral) & 1x1.0 mm2 (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet Medium point above 3m upto 6m from tapping point to out let via switch box								
		Light Point	3	x	5				15.00	
						Total Quantity			15.00	Point
248		Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5mm2 (Phase & Neutral) & 1x1.0 mm2 (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet Long point above 6m upto 10m from tapping point to out let via switch box								
		Light Point	3	x	51				153.00	
						Total Quantity			153.00	Point
249		Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 1 mm2								
		Wherever Necessary	1	x	1	50.00			50.00	
						Total Quantity			50.00	Meter
250		Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 1.5 mm2								
		Ground Floor								
		DB to Swiath Board - For Earthing								
		Ceiling	1	x	1	93.54			93.54	
		Wall	1	x	8	3.00			24.00	
		DB to Swiath Board- Plug Point								
		Ceiling	1	x	1	93.54			93.54	
		Wall	1	x	8	3.00			24.00	
		First Floor								
		DB to Swiath Board - For Earthing								
		Ceiling	1	x	1	93.54			93.54	
		Wall	1	x	8	3.00			24.00	
		DB to Swiath Board- Plug Point								
		Ceiling	1	x	1	93.54			93.54	
		Wall	1	x	8	3.00			24.00	
		Second Floor								
		DB to Swiath Board - For Earthing								
		Ceiling	1	x	1	93.54			93.54	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Wall	1	x	8	3.00			24.00	
		DB to Swith Board- Plug Point								
		Ceiling	1	x	1	93.54			93.54	
		Wall	1	x	8	3.00			24.00	
						Total Quantity			705.24	Meter
251		Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 2.5 mm2								
		Ground Floor								
		DB to Swith Board								
		Ceiling	2	x	1	93.54			187.08	
		Wall	2	x	8	3.00			48.00	
		Fisrt Floor								
		DB to Swith Board								
		Ceiling	2	x	1	93.54			187.08	
		Wall	2	x	8	3.00			48.00	
		Second Floor								
		DB to Swith Board								
		Ceiling	2	x	1	93.54			187.08	
		Wall	2	x	8	3.00			48.00	
						Total Quantity			705.24	Meter
252		Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 4 mm2								
		Ground Floor								
		DB to Swith Board- Plug Point								
		Ceiling	2	x	1	93.54			187.08	
		Wall	2	x	8	3.00			48.00	
		Fisrt Floor								
		DB to Swith Board- Plug Point								
		Ceiling	2	x	1	93.54			187.08	
		Wall	2	x	8	3.00			48.00	
		Second Floor								
		DB to Swith Board- Plug Point								
		Ceiling	2	x	1	93.54			187.08	
		Wall	2	x	8	3.00			48.00	
						Total Quantity			705.24	Meter
253		<u>SWITCHES, SOCKETS & ACCESSORIES</u> - Supplying and fixing surface/flush mounting unbreakable PVC modular box suitable for mounting modular switch plates with due groove cutting in Brick/C.C wall, including necessary rawl plugs, Machine/NF screws etc., complete 10-12 Way								
		Ground Floor	2	x	8				16.00	
		First Floor	2	x	8				16.00	
		Second Floor	2	x	8				16.00	
						Total Quantity			48.00	Nos
254		Supplying and fixing surface/flush mounting unbreakable PVC modular box suitable for mounting modular switch plates with due groove cutting in Brick/C.C wall, including necessary rawl plugs, Machine/NF screws etc., complete 16-18 Way								
		Ground Floor	1	x	1				1.00	
		First Floor	1	x	1				1.00	
		Second Floor	1	x	1				1.00	
						Total Quantity			3.00	Nos
255		Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box 10-12 Module								
		Ground Floor	2	x	8				16.00	
		First Floor	2	x	8				16.00	
		Second Floor	2	x	8				16.00	
						Total Quantity			48.00	Nos

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
256		Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box 16-18 Module								
		Ground Floor	1	x	1				1.00	
		First Floor	1	x	1				1.00	
		Second Floor	1	x	1				1.00	
						Total Quantity			3.00	Nos
257		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6A One Way Switch								
		Ground Floor								
		Light Point Switch	1	x	59				59.00	
		6A Socket Switch	3	x	8				24.00	
		First Floor								
		Light Point Switch	1	x	59				59.00	
		6A Socket Switch	3	x	8				24.00	
		Second Floor								
		Light Point Switch	1	x	59				59.00	
		6A Socket Switch	3	x	8				24.00	
						Total Quantity			249.00	Nos
258		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6A Two Wav Switch								
		Light Point	1	x	1				1.00	
						Total Quantity			1.00	Nos
259		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6A Three Wav socket								
		Ground Floor	3	x	8				24.00	
		First Floor	3	x	8				24.00	
		Second Floor	3	x	8				24.00	
						Total Quantity			72.00	Nos
260		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 16A One Way Switch								
		Ground Floor	1	x	8				8.00	
		First Floor	1	x	8				8.00	
		Second Floor	1	x	8				8.00	
						Total Quantity			24.00	Nos
261		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6/16A Universal Socket								
		Ground Floor	1	x	8				8.00	
		First Floor	1	x	8				8.00	
		Second Floor	1	x	8				8.00	
						Total Quantity			24.00	Nos
262		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V PLUG 10A	1	x	12				12.00	Nos
263		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V PLUG 20A	1	x	12				12.00	Nos
264		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V PLUG 20A	1	x	12				12.00	Nos
265		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V PLUG 30A	1	x	12				12.00	Nos
266		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V SOCKET 10A	1	x	12				12.00	Nos
267		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V SOCKET 20A	1	x	12				12.00	Nos
268		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V SOCKET 20A	1	x	12				12.00	Nos
269		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V SOCKET 30A	1	x	12				12.00	Nos

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT

DETAIL ESTIMATE

SI No.	Description	Nos			L	B	D	Quantity	Unit
270	POLES & HIGH MAST Fabricating, supplying and erection of ... ms long hot dip Galvanized Octagonal hot dip Pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/s form Pole in single section and single joint welded as per IS 9595/IS10178AWS having dimensions bottom mm , top.... mm with 3 mm thick, suitable base plate and 4Nos of long J bolts along with template and the Pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended 8 m - Top 70 mm and Bottom 135 mm dia	1	x	16				16.00	
					Total Quantity			16.00	Nos
271	Supplying, and fixing of Hot dip Galvanized M.S.Bracketsuitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete Single Arm Bracket with 1500 mm Standard 40/50 mm dia								
	Street Light	1	x	16				16.00	
					Total Quantity			16.00	Nos
272	LUMINAIRS / LIGHT FIXTURES & ACCESSORIES- LED Street light- Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture withW System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical								
	Street Light	1	x	16				16.00	
					Total Quantity			16.00	Nos
273	Supplying and Fixing of 80W Industrial Range Light with following specifications. System lumen output - 9400 lm, System efficacy of 110 lm/W, Housing : Pressure Die Cast Aluminium with PC lens as Optics with toughened glass, Rated system life of 50,000BH, CCT - 5700K and CRI>70, Protection: IP66, IK 07 & THD<10%, PF>0.95, Opr Temp : -10 °C to +45 °C, Opr Voltage range: 140 V - 270 V etc., complete a) LUMINAIRE MAKE : Phillips / GE-Venture / Crompton / Wipro / Bajaj / Havells / Halonix/Jaquar /HPL/ GM / GreenLites / Gold Medal/Eveready/ FortuneArrt b) LED MAKE : PHILIPS LUMILEDS / CREE / NICHIA / OSRAM / SAMSUNG/Everlight.								
	80W Light	3	x	49				147.00	
					Total Quantity			147.00	Nos
274	Supplying & fixing of Surface mounting type retrofit type -LED tube W comprising of LED linear source with CCT 6500 degree K, CRI> 70%. efficacy >80 lumen per W, life> 25000 burning hours and Compliance to IS 10322/IEC 60598, LM 79 & LM 80. The LED are driven by HF electronic driver integrated in the system, with PF > 0.95, power loss should < 5% of lamp Wage., short circuit & open circuit protection to be integrated in the circuit, THD less than 20%, Life as per LM 79. The operating input voltage should be between 130 to 275 V. BIS Approved and Tested by NABL/CPRI accredited laboratory with 2 years Warranty against any manufacturing defect working under standard electrical condition 18W-20W (T8)								
	Light	3	x	10				30.00	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT									
DETAIL ESTIMATE									
SI No.		Description	Nos			L	B	D	Quantity
									Unit
						Total Quantity			30.00
									Nos
275		FIXING CHARGES - Fixing all types and all capacities of fluorescent /false ceiling / spot light / CFL / LED fittings indoor on the wall/ ceiling / rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and c/a On wall/ ceiling / Rafter / Girders							
		80W Light	3	x	49				147.00
						Total Quantity			147.00
									Nos
276		TECHNICIAN SHED - ELECTRICAL-PVC CONDUITS & ACCESSORIES Concealed Conduit System Supplying heavy gauge PVC conduit pipe mm dia.....mm thick confirming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary 25 mm dia 2 mm thick							
		DB to Switch Board Line	1	x	7	3.00			21.00
		Switch Board-1 to Light Point	1	x	1	3.00			3.00
		Switch Board-2 to Light Point	1	x	3	3.00			9.00
		Switch Board-3 to Light Point	1	x	3	3.00			9.00
		Switch Board-4 to Light Point	1	x	4	3.00			12.00
		Switch Board-5 to Light Point	1	x	5	3.00			15.00
		Switch Board-6 to Light Point	1	x	4	3.00			12.00
		Switch Board-7 to Light Point	1	x	4	3.00			12.00
						Total Quantity			93.00
									Meter
277		Supplying heavy gauge PVC conduit pipe mm dia.....mm thick confirming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary 32 mm dia 2.5 mm thick							
		Switch Board to Light Point	1	x	1	32.69			32.69
		Switch Board-1 to Light Point	1	x	1	0.93			0.93
		Switch Board-2 to Light Point	1	x	1	13.06			13.06
		Switch Board-3 to Light Point	1	x	1	9.60			9.60
		Switch Board-4 to Light Point	1	x	1	5.36			5.36
		Switch Board-5 to Light Point	1	x	1	16.42			16.42
		Switch Board-6 to Light Point	1	x	1	12.31			12.31
		Switch Board-7 to Light Point	1	x	1	11.49			11.49
						Total Quantity			101.86
									Meter
278		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 25 mm dia 2 mm thick							
		Wherever Necessary	1	x	1	5.00			5.00
						Total Quantity			5.00
									Meter
279		Supplying heavy gauge PVC Conduit Pipe dia mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering upto the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary 32 mm dia 2.5 mm thick							
		Switch Board to Light Point	1	x	2	4.00			8.00
						Total Quantity			8.00
									Meter
280		Supplying and fixing PVC/metal conduit Deep junction box 25 mm deep junction box							
		For Light Point	1	x	13				13.00
						Total Quantity			13.00
									Nos
281		Supplying and fixing PVC/metal conduit Deep junction box 32 mm deep junction box							
		Wherever Necessary	1	x	4				4.00
						Total Quantity			4.00
									Nos
282		Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete upto 50 mm conduit in brick wall							

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT									
DETAIL ESTIMATE									
SI No.	Description	Nos			L	B	D	Quantity	Unit
	DB to Switch Board Line	1	x	7	3.00			21.00	
	Switch Board-1 to Light Point	1	x	1	3.00			3.00	
	Switch Board-2 to Light Point	1	x	3	3.00			9.00	
	Switch Board-3 to Light Point	1	x	3	3.00			9.00	
	Switch Board-4 to Light Point	1	x	4	3.00			12.00	
	Switch Board-5 to Light Point	1	x	5	3.00			15.00	
	Switch Board-6 to Light Point	1	x	4	3.00			12.00	
	Switch Board-7 to Light Point	1	x	4	3.00			12.00	
					Total Quantity			93.00	Meter
283	Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete upto 50 mm conduit CC floor								
	Wherever Necessary	1	x	1	5.00			5.00	
					Total Quantity			5.00	Meter
284	WIRES & CABLES - Point wiring using Copper wire without switch - Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5mm2 (Phase & Neutral) & 1x1.0 mm2 (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet Short point upto 3m from tapping point to out let via switch box								
	Light Point & Fan Point	1	x	3				3.00	
					Total Quantity			3.00	Point
285	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5mm2 (Phase & Neutral) & 1x1.0 mm2 (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet Medium point above 3m upto 6m from tapping point to out let via switch box								
	Light Point & Fan Point	1	x	3				3.00	
					Total Quantity			3.00	Point
286	Supplying and wiring adopting loop system in existing PVC Conduit /casing capping casing capping using 2x1.5mm2 (Phase & Neutral) & 1x1.0 mm2 (Earth wire) FRLS multi strand PVC insulated copper wire (confirming to IS-694: and latest amendments) without control switch shall be fixed on the existing plastic sheet/ gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet Long point above 6m upto 10m from tapping point to out let via switch box								
	Light Point & Fan Point	1	x	16				16.00	
					Total Quantity			16.00	Point
287	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 1 mm2								
	Wherever Necessary	1	x	1	5.00			5.00	
					Total Quantity			5.00	Meter
288	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 1.5 mm2								
	DB to Swiath Board - For Earthing								
	Ceiling	1	x	1	32.69			32.69	
	Wall	1	x	7	3.00			21.00	
	DB to Swiath Board- Plug Point								
	Ceiling	1	x	1	32.69			32.69	
	Wall	1	x	7	3.00			21.00	
					Total Quantity			107.38	Meter

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
289		Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 2.5 mm2								
		DB to Swith Board								
		Ceiling	2	x	1	32.69			65.38	
		Wall	2	x	7	3.00			42.00	
						Total Quantity			107.38	Meter
290		Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:2010 4 mm2								
		DB to Swith Board- Plug Point								
		Ceiling	2	x	1	32.69			65.38	
		Wall	2	x	7	3.00			42.00	
						Total Quantity			107.38	Meter
291		SWITCHES, SOCKETS & ACCESSORIES -Supplying and fixing surface/flush mounting unbreakable PVC modular box suitable for mounting modular switch plates with due groove cutting in Brick/C.C wall, including necessary rawl plugs, Machine/NF screws etc., complete 10-12 Way								
a		10-12 Way								
		Swith Board	2	x	7				14.00	
						Total Quantity			14.00	Nos
292		Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box 10-12 Module								
a		10-12 Module								
		Swith Board	1	x	1				1.00	
						Total Quantity			1.00	Nos
293		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6A One Way Switch								
		Light Point Switch	1	x	13				13.00	
		Fan Point Switch	1	x	6				6.00	
		6A Socket Switch	3	x	5				15.00	
						Total Quantity			34.00	Nos
294		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6A Two Wav Switch								
		Light Point	1	x	1				1.00	
						Total Quantity			1.00	Nos
295		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6A Three Wav socket								
		Socket	3	x	5				15.00	
						Total Quantity			15.00	Nos
296		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 16A One Way Switch								
		Switch	1	x	5				5.00	
						Total Quantity			5.00	Nos
297		Supplying and fixing of modular switch & connected accessories on existing modular switch plate as per IS 3854 and IS 1293 6/16A Universal Socket								
		Socket	1	x	5				5.00	
						Total Quantity			5.00	Nos
298		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V PLUG 10A	1	x	2				2.00	
299		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V PLUG 20A	1	x	2				2.00	
300		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V PLUG 20A	1	x	2				2.00	
301		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V PLUG 30A	1	x	2				2.00	
302		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V SOCKET 10A	1	x	2				2.00	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
303		Supplying and fixing of metal clad industrial plugs and sockets 2pole+earth 250V SOCKET 20A	1	x	2				2.00	
304		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V SOCKET 20A	1	x	2				2.00	
305		Supplying and fixing of metal clad industrial plugs and sockets 3pole+earth 440V SOCKET 30A	1	x	2				2.00	
306		POLES & HIGH MAST - Fabricating, supplying and erection of ... ms long hot dip Galvanized Octagonal hot dip Pole with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/s form Pole in single section and single joint welded as per IS 9595/IS10178AWS having dimensions bottom mm , top.... mm with 3 mm thick, suitable base plate and 4Nos of long J bolts along with template and the Pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended 8 m - Top 70 mm and Bottom 135 mm dia								
		Street Light	1	x	1				1.00	
						Total Quantity			1.00	Nos
307		Supplying, and fixing of Hot dip Galvanized M.S.Bracketsuitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete Single Arm Bracket with 1500 mm Standard 40/50 mm dia								
		Street Light	1	x	1				1.00	
						Total Quantity			1.00	Nos
308		FANS & AIR CONDITIONERS - Supplying of Ceiling Fan with Capacitor rating As per guideline of BEE 5 star rating and IS:374/79 and also comply with IS: 1709/1984 with latest amendment, Rated voltage 220 V/50 Hz, Rated power input 48 W +/- 10 %, Rated current As per IS:374/79, Rated power factor 0.9 lagging(min), Rated speed 350 +/- 10% RPM, Rated air delivery 210 +/- 10% Cubic Meter Minimum, Rated service value 4.2 CMM / W, Three Blades of blade leaf 1.05 mm thick Aluminium Alloy sheet, Class B motor insulation, Bearing Two ball bearings, Top 6202, Bottom 6201, as per IS specification, Motor winding. Temp rise Shall not exceed 75 deg C over and ambient of 40 OC by resistance method at 245 V, Insulation resistance Shall not be less than Two Mega Ohms (2M Ohms), Leakage current Should not exceed 210 Micro Amp, Power input, W& current, Air Delivery & Fan Speed as per IS:374/1979 with latest amendment, 2 year manufacturer Warranty 48" Sweep 5 Star (1200 mm)								
		Ceiling Fan	1	x	4				4.00	
						Total Quantity			4.00	Nos
309		Supplying wall mounting fan suitable to operate at single phase 230v AC. supply 400 mm Sweep								
		Ceiling Fan	1	x	3				3.00	
						Total Quantity			3.00	Nos
310		Supplying of 1440rpm heavy duty exhaust fan with bracket blades suitable to operate on 230V 50Hz, AC Supply complete 12" Sweep (300 mm)								
		Exhaust Fan	1	x	2				2.00	
						Total Quantity			2.00	Nos

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT								
DETAIL ESTIMATE								
SI No.	Description	Nos			L	B	D	Quantity
311	LUMINAIRS / LIGHT FIXTURES & ACCESSORIES - LED Street light - Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture withW System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical	1	x	1				1.00
	Street Light							
					Total Quantity			1.00
								Nos
312	Supplying & fixing of Surface mounting type retrofit type -LED tube W comprising of LED linear source with CCT 6500 degree K, CRI> 70%. efficacy >80 lumen per W, life> 25000 burning hours and Compliance to IS 10322/IEC 60598, LM 79 & LM 80. The LED are driven by HF electronic driver integrated in the system, with PF > 0.95, power loss should < 5% of lamp Wage., short circuit & open circuit protection to be integrated in the circuit, THD less than 20%, Life as per LM 79. The operating input voltage should be between 130 to 275 V, BIS Approved and Tested by NABL/CPRI accredited laboratory with 2 years Warranty against any manufacturing defect working under standard electrical condition 18W-20W (T8)							
	20W Light	1	x	13				13.00
					Total Quantity			13.00
								Nos
313	FIXING CHARGES :- Fixing all types and all capacities of fluorescent /false ceiling / spot light / CFL /LED fittings indoor on the wall/ ceiling / rafters / girders using 23/0.0076" twin twisted PVC insulated wires, required Nos of round blocks and c/a On wall/ ceiling / Rafter / Girders							
	20W Light	1	x	13				13.00
					Total Quantity			13.00
								Nos
314	OUTER ELECTRICAL WORKS - Supply, Transportation unloading, installation, testing and commissioning of Main MV Panel comprising of the followings and including all other accessories etc., EB Incomer : 1 No 250A 4 Pole Draw out type ACB with O/C, S/C, U/V and E/F Relays DG Incomer : 1 No 250A 4 Pole Draw out type ACB with O/C, S/C, U/V and E/F Relays Busbar : 250A TPN Aluminium Busbars 35KA per 1 Sec. All the neutral busbars shall have half the capacity of phase busbars Outgoing : 3 Nos 100 A TPN MCCB with releases 2 No 160 A TPN MCCB with releases 1 No 200 A TPN MCCB with releases 1 No 250 A TPN MCCB with releases Interlocks : Mechanical type interlocking with 2 locks and 1 key provided in the both incomers only one supply source can be operated at a time. Wall mounting type fabricated with 16 SWG CRCA sheet enclosure. Door and partition 18 SWG CRCA Sheet. The Panel shall be complete with suitable interconnections and earthing etc. All doors should have proper locking/ sealing arrangements	1	x	1				1.00
								Set
315	Supply, Transportation unloading, installation, testing and commissioning of Refrigeration Panel-1 comprising of the followings and including all other accessories etc. Incomer : 1 No 250A TPN MCCB Outgoing : 13 No 40A TPN MCCB							

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
		Bus bars: 250A TPN Aluminium Busbars 35KA per 1 Sec. All the neutral busbars shall have half the capacity of phase busbars Wall mounting type fabricated with 16 SWG CRCA sheet enclosure, Door and partition 18 SWG CRCA sheet. The Panel shall be complete with interconnections and earthing etc. All door should have proper locking/ sealing arrangements.	1	x	1				1.00	Set
316		Supply, Transportation unloading, installation, testing and commissioning of Lift Panel comprising of the followings and including all other accessories etc. Incomer : 1 No 160A TPN MCCB Outgoing : 4 No 63A TPN MCCB Bus bars: 160A TPN Aluminium Busbars 35KA per 1 Sec. All the neutral busbars shall have half the capacity of phase busbars Wall mounting type fabricated with 16 SWG CRCA sheet enclosure, Door and partition 18 SWG CRCA sheet. The Panel shall be complete with interconnections and earthing etc. All door should have proper locking/ sealing arrangements.	1	x	1				1.00	Set
317		Supply, Transportation unloading, installation, testing and commissioning of Vertical DB 8 Way comprising of the followings and including all other accessories etc. Incomer: 1 No 63A TPN MCCB Outgoing: 2 Nos 16/32A TPN MCB, 18 Nos 6/16A SP MCB The Panel shall be complete with interconnections and earthing etc.	1	x	1				1.00	Set
318		30 KVAR APFCR PANEL Supply, unloading, installation, testing and commissioning of floor mounting cubicle type APFC panel switch board fabricated out of 16 Swg CRCA and powder coated to Siemens gray shade. Make - Kabil Enterprises / CPRI Approved Panels / Equivalent approved by Engineer Incharge	1	x	1				1.00	Set
319		Supplying and Fixing of 63A MCCB Isolator in a Metal enclosure for isolation of Refrigerant unit near the HVAC Unit	1	x	12				12.00	Set
320		Earthing with G.I. earth pipe 4.5 meter long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal / coke and salt as required. (Electrical SOR: Item No-5.2)	1	x	8				8.00	Set
321		Earthing with G.I.earth plate 600 mm x 600 mm x 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc.but with charcoal / coke and salt as required. (Electrical SOR: Item No-5.4)	1	x	4				4.00	Set
322		Supplying and laying 25 mm x 5 mm copper strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc.as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm) (Electrical DSR: Item No-5.9)	1	x	1	50.00			50.00	Meter
323		Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required (Electrical DSR: Item No-5.17)	1	x	1	200.00			200.00	Meter
324		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel								
325		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 3.5 core 185Samm								
		DG Set to Main MV Panel	1	x	1	3.00			3.00	
		Transformer to Main MV Panel	1	x	1	4.50			4.50	
						Total Quantity			7.50	Meter
326		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 31/2 x 95 Samm								
		Main MV Panel to Refrigeration Panel	1	x	1	89.00			89.00	
						Total Quantity			89.00	Meter
327		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 31/2 x 70 Samm								
		Main MV Panel to Capacitor Panel	1	x	1	5.00			5.00	
						Total Quantity			5.00	Meter
328		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 31/2 x 35 Samm								
		Main MV Panel to Lift Panel	1	x	1	2.50			2.50	

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
						Total Quantity			2.50	Meter
329		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 4 x 16 Smm								
		Street Light	1	x	1	126.00			126.00	
						Total Quantity			126.00	Meter
330		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 4 x 10 Smm								
		Main MV Panel to Lighting and Refrigerant Panel	1	x	1	470.00			470.00	
						Total Quantity			470.00	Meter
331		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 4 x 6 Smm								
		Ground Floor Panel to DB	1	x	1	10.00			10.00	
						Total Quantity			10.00	Meter
332		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 2 x 10 Smm								
		First Floor Panel to LSB	1	x	1	10.00			10.00	
						Total Quantity			10.00	Meter
333		Supply and transportation of following XLPE insulated, 1100V grade armoured alluminium cable as per specification confirming to IS:7098 (Part - I)/1554-I Makes: Torent / Universal / Unicab / Havells / KEI / Gloster / Polycab /RR Kabel 2 x 6 Smm								
		First Floor Panel to LSB	1	x	1	10.00			10.00	
						Total Quantity			10.00	Meter
334		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size direct in ground including excavation , sand cushioning, protective covering and refilling the trench etc.as required - Upto 35 sq.mm.	1	x	1	126.00			126.00	Meter
335		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size direct in ground including excavation , sand cushioning, protective covering and refilling the trench etc.as required - above 35 sq.mm and upto 95 sq.mm	1	x	1	7.50			7.50	Meter
336		Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size direct in ground including excavation , sand cushioning, protective covering and refilling the trench etc.as required - above 95 sq.mm and upto 185 sq.mm (Electrical SOR: Item No:7.1.3)	1	x	1	96.50			96.50	Meter
337		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on wall surface as required - upto 35 sq.mm (clamped with 1mm thick saddle)	1	x	1	470.00			470.00	Meter
338		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on wall surface as required - above 35 sq.mm and upto 95 sq.mm (clamped with 25 x3mm MS flat clamp)	1	x	1	5.00			5.00	Meter
339		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on wall surface as required - above 95 sq.mm and upto 185 sq.mm (clamped with 25 / 40 x 3mm MS flat clamp)	1	x	1	25.00			25.00	Meter
340		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on cable tray as required - upto 35 sq.mm (clamped with 1 mm thick saddle)	1	x	1	25.00			25.00	Meter
341		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on cable tray as required - above 35 sq.mm and upto 95 sq.mm (clamped with 1 mm thick saddle)	1	x	1	25.00			25.00	Meter
342		Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on cable tray as required - above 95 sq.mm and upto 185 sq.mm (clamped with 25 / 40 x 3mm MS flat clamp)	1	x	1	25.00			25.00	Meter
343		Supplying and making cable route marker with cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 60 cm x 60 cm at the bottom and 50 cm x 50 cm at the top with a thickness of 10 cm including inscription duly engraved as required.	1	x	1	5.00			5.00	Meter

2000 MT COLD STORAGE(G+2) AT MURUKANAHALLI HOTRICULTURE FARM, KR PETE TALUK, MANDYA DISTRICT										
DETAIL ESTIMATE										
SI No.		Description	Nos			L	B	D	Quantity	Unit
344		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required - 2 X 6 sq.mm (19mm)	2	x	2				4.00	Nos
345		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required - 2 X 10 sq.mm (19mm)	2	x	2				4.00	Nos
346		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required - 4 X10 sq.mm (25 mm)	2	x	2				4.00	Nos
347		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required - 4 X16 sq.mm (28 mm)	2	x	9				18.00	Nos
348		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required - 31/2 X25 sq.mm (28 mm)	2	x	2				4.00	Nos
349		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required - 31/2 X50 sq.mm (28 mm)	2	x	2				4.00	Nos
350		Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 kV grade as required - 31/2 X120 sq.mm (45 mm)	2	x	2				4.00	Nos

PLANT AND MACHINERY - REFRIGERATION EQUIPMENTS (FREON) - Air Cooled Condensing units with Ceiling suspended Evaporators - AIR COOLED CONDENSING UNITS FOR COLD ROOM Air Cooled Scroll Condensing Unit with Energy Efficient Refrigeration Compressor with copper coils with aluminium fins, axial flow fans, HP/LP switch, liquid line filter drier and canopy. Supply of High Efficiency Evaporators, Refrigeration Accessories Comprising of Thermostatic Expansion Valve, Liquid Line Sight Glass, First Charge of gas, Copper Pipes and pipe fittings for suction line and liquid line (considering 12 RMT distance between condensing unit and evaporator), suction line insulation, Temperature Controller, Electricals comprising of Single Phase Preventer with under and over voltage protection, MCB, Electrical contactors, Electrical Cables from CDU to Evaporator Fans (Total - 12 Units) as Per Enclosed Specifications.

Design Ambient temperature - 45 Deg C

Design Inside Temperature - +4 Deg C

High Efficiency Air Cooled Refrigeration Scroll Condensing Units-

Air cooled Condensing Units with Refrigeration Compressor for the above application with suction and discharge isolation valves, HP/LP Switch, suction line accumulator, Liquid receiver and Canopy. Cooling Capacity of each Condensing Unit: 6.4 TR each -4 deg.C SST / +50 deg.C SDT with R404a refrigerant. Number of Condensing Units : Twelve Nos (Two Nos for Each Chamber).

Evaporators- Evaporators High Efficiency Ceiling Suspended Evaporators Powder Coated Casing, Copper Coil with Aluminium Fins, High Efficiency Axial Flow Fans and Drain Pan with min 7mm Fin Spacing. Number of Evaporators : Twelve Nos (Two Nos for Each Chamber).

Refrigeration Controls-Refrigeration Controls for the above units comprising of Danfoss Thermostatic Expansion Valves, Hand shut off Valves, etc

Refrigerant Piping-Refrigeration Pipes and Pipe Fittings comprising of Heavy Duty Seamless Copper Pipes, Pipe Fittings, Nitrile Rubber Insulation for Suction Lines (considering 12 RMT distance between CDU and Evaporators) with first charge of R404A Refrigerant.

Electrical Panel for Individual Refrigeration Units-Weather Proof Electrical Panels for Individual Refrigeration Units with Siemens MCBs, Contactors, OLRs for Compressors, Condenser Fans and Evaporator Fans to be positioned next to the condensing units along with Digital Temperature Indicator cum Controller with real time auto air defrost.

Electrical Cabling-Electrical Cabling from the individual Control panels to the respective compressors, condenser fans, evaporators.

Supports for Cables and Piping-Ladder type GI Cable Tray Supports for Electrical Cables, MS Angle and Channel Supports with painting for Refrigerant Piping.

Temperature display-Individual temperature display with Weather Proof PVC boxes in front of each room.

Power Consumption-Power Consumption for each units will be 11.7 Kw x 12 Nos.

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ARCHITECTURAL DRAWINGS			
1	MASTER PLAN	SIPL/KA/KRPETE/ARC/01	01
2	2000MT COLD STORAGE - GROUND FLOOR PLAN	SIPL/KA/KRPETE/ARC/02	02
3	2000 MT COLD STORAGE - FIRST & SECOND FLOOR PLAN	SIPL/KA/KRPETE/ARC/03	03
3A	2000 MT COLD STORAGE - SECTION	SIPL/KA/KRPETE/ARC/3A	3A
4	2000 MT COLD STORAGE - STAIRCASE AND LIFT DETAILS	SIPL/KA/KRPETE/ARC/04	04
5	TECHNICIAN SHED - FLOOR PLAN	SIPL/KA/KRPETE/ARC/05	05
5A	TECHNICIAN SHED - SECTION	SIPL/KA/KRPETE/ARC/5A	5A
6	SECURITY BLOCK	SIPL/KA/KRPETE/ARC/06	06
STRUCTURAL DRAWINGS			
7	GENERAL ARRANGEMENT OF FLOOR PLANS & COLUMN LAYOUT	SIPL-CS-22-474-ST-07	07
8	FOOTING LAYOUT	SIPL-CS-22-474-ST-08	08
9	TECHNICIAN SHED- GA OF FLOOR PLAN & COLUMN LAYOUT	SIPL-PDY-22-473-ST-09	09
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ORIENTATION:

LEGEND :

ROAD

LANDSCAPE

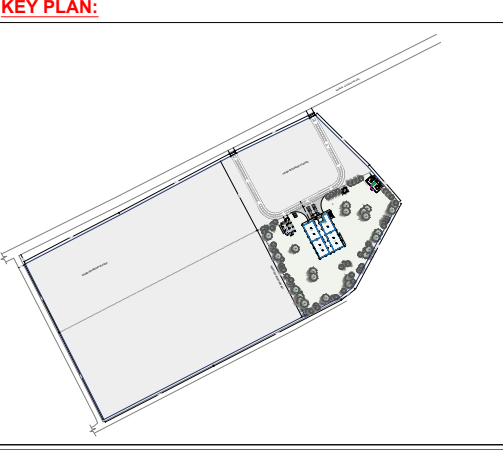
PAVEMENT

SITE DETAILS:

TOTAL AREA OF SITE (Acres)	9.75 Acres / 1.97 Acres
TOTAL AREA OF SITE/ USED SITE	39,438 Sq.m / 8000Sq.m

AREA DETAILS:

ROAD AREA	1080 Sq.m
ROAD LENGTH	184 R.m
PAVEMENT AREA	25 Sq.m
LANDSCAPE AREA	5,951 Sq.m
COLD STORAGE 2000 MT (G +2)	2,015 Sq.m
COLD STORAGE (GF)	655 Sq.m
COLD STORAGE (FF)	675 Sq.m
COLD STORAGE (SF)	675 Sq.m
TECHNICIAN SHED	78 Sq.m
SECURITY OFFICE	12 Sq.m
TRANSFORMER YARD	160 Kv
DG SET (01No)	160 Kva
UG SUMP	6,000 Litres
CULVERT 1500mmØ RCC PIPE	02 Nos



FOR TENDER PURPOSE ONLY

NOTES:

1. ALL THE DIMENSIONS & LEVELS ARE IN METER.

2. DRAWING SHALL NOT TO BE SCALED .

3. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

4. ANY ERROR OR DISCREPANCIES IN THE DRAWING ARE TO BE BROUGHT TO THE NOTICE OF ARCHITECT/ ENGINEER.

5. THIS DRAWING SHALL NOT TO BE USED OTHER THAN THE PURPOSES MARKED/ISSUED.

6. THE LEVELS ARE MENTIONED ON THE RESPECTIVE DRAWINGS.

7. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL SERVICES DRAWING.

CLIENT:

DEPARTMENT OF HORTICULTURE, KARNATAKA

CONSULTANT:

M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:

SONNE INFRASTRUCTURE PVT. LTD
S-1 A, 2nd FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 944-28552445

PROJECT :

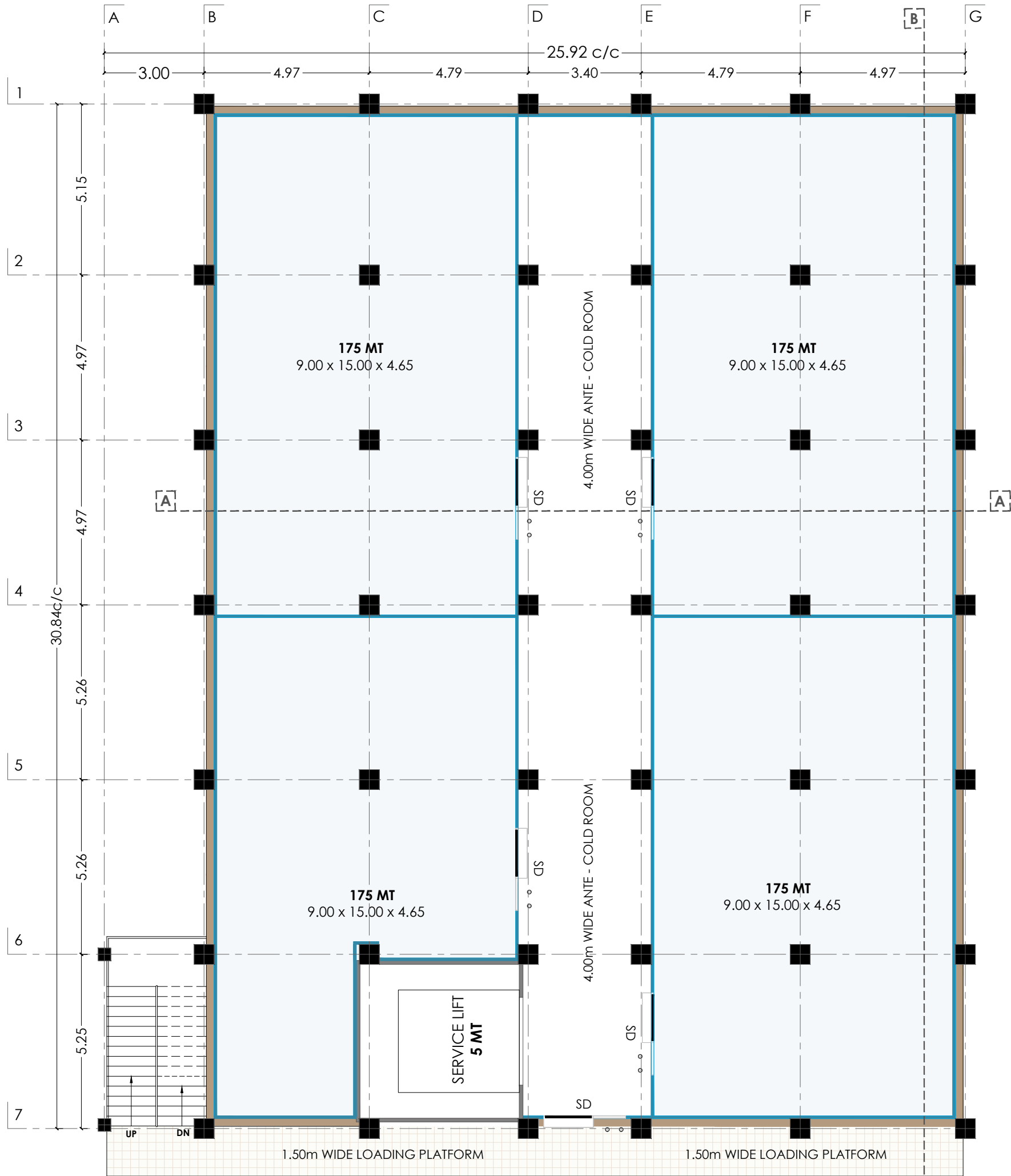
2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

TITLE :

SITE PLAN

Drawn by : KR	Approved by : MSLP	SHEET A3
Date : 26.02.2024	Designed by : BLESSY	
SCALE : 1:400	DWG NO :SIPL/KA/KRPETE/ARC/01	SHT NO 01

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GROUND FLOOR PLAN
2144 MT COLD STORAGE (536 MT X4 Nos)

AREA STATEMENT:

S.NO	DESCRIPTION	SIZE
01	COLD CHAMBER	2144MT (4 CHAMBERS)
02	STORAGE - 2000 MT	(536 MT x 4Nos)
03	COLD STORAGE - G + 2	2015 Sq.m
04	COLD STORAGE - G + 2	655 Sq.m/Floor
05	MS LIFT CABIN	01 No

MECHANICAL SPECIFICATIONS: FREON REFRIGERATION

CDU DESIGNATION	TYPE & DETAILS
SIZE	9.00m x 15.00m x 4.65m(h)x 4Nos
REFRIGERANT	R- 404a
PRODUCT TO BE STORED	Red Chillies, Pulses, Tamarind
OPERATING CONDITIONS	11.5TR Cooling capacity @ -4°C SST & 50°C SDT.
STORAGE CAPACITY IN MT	2000 MT (536 MT x 4 Nos)
DESIGN AMBIENT TEMPERATURE	45°C
DESIGN INSIDE TEMPERATURE	+4°C
REFRIGERATION SYSTEM	
HIGH EFFICIENCY AIR COOLED REFRIGERATION SCROLL CONDENSING UNITS	Air cooled condensing units with refrigeration compressor for the above application with suction & discharge Isolation Valves,HP/LP Switch,Suction line accumulator, Liquid Receiver, and canopy. Cooling Capacity of each Condensing Unit: 6 TR each -4°C SST/+50°C SDT With R404a Refrigerant. No. of Condensing unit : Eight Nos (Two Nos for each Chamber)
EVAPORATORS	Evaporators High Efficiency Ceiling Suspended Evaporators Powder Coated casing, Cooper coil with Aluminum fins, High efficiency Axial flow fans and Drain pan with min 7mm fin spacing. No. of Evaporators : Eight Nos (Two nos for each Chamber)
REFRIGERATION CONTROLS	Refrigeration Controls for the above units comprising of Danfoss Thermostatic Expansion valves, Hand Shut off valves, etc.
REFRIGERANT PIPING	Refrigeration pipes and pipe fittings comprising of heavy duty seamless copper pipes, pipe fittings, nitrile rubber insulation for suction lines (considering 13 RNT distance between CDU and Evaporators) with first charge of R404A Refrigerant.
POWER CONSUMPTION	Power Consumption for each units will be 11.7 Kw each x 8 units.

JOINERY DETAILS : (G+2)

S.NO	DESCRIPTION	WIDTH	HEIGHT	NOS
01	SLIDING DOOR - SD	1.50	2.10	15

FOR TENDER PURPOSE ONLY


NOTES:

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- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL SERVICES DRAWING.

CLIENT:

DEPARTMENT OF HORTICULTURE, KARNATAKA

CONSULTANT:

 M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:

 SONNE INFRASTRUCTURE PVT. LTD
S-1, A, 2ND FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 984-2852445

PROJECT : 2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

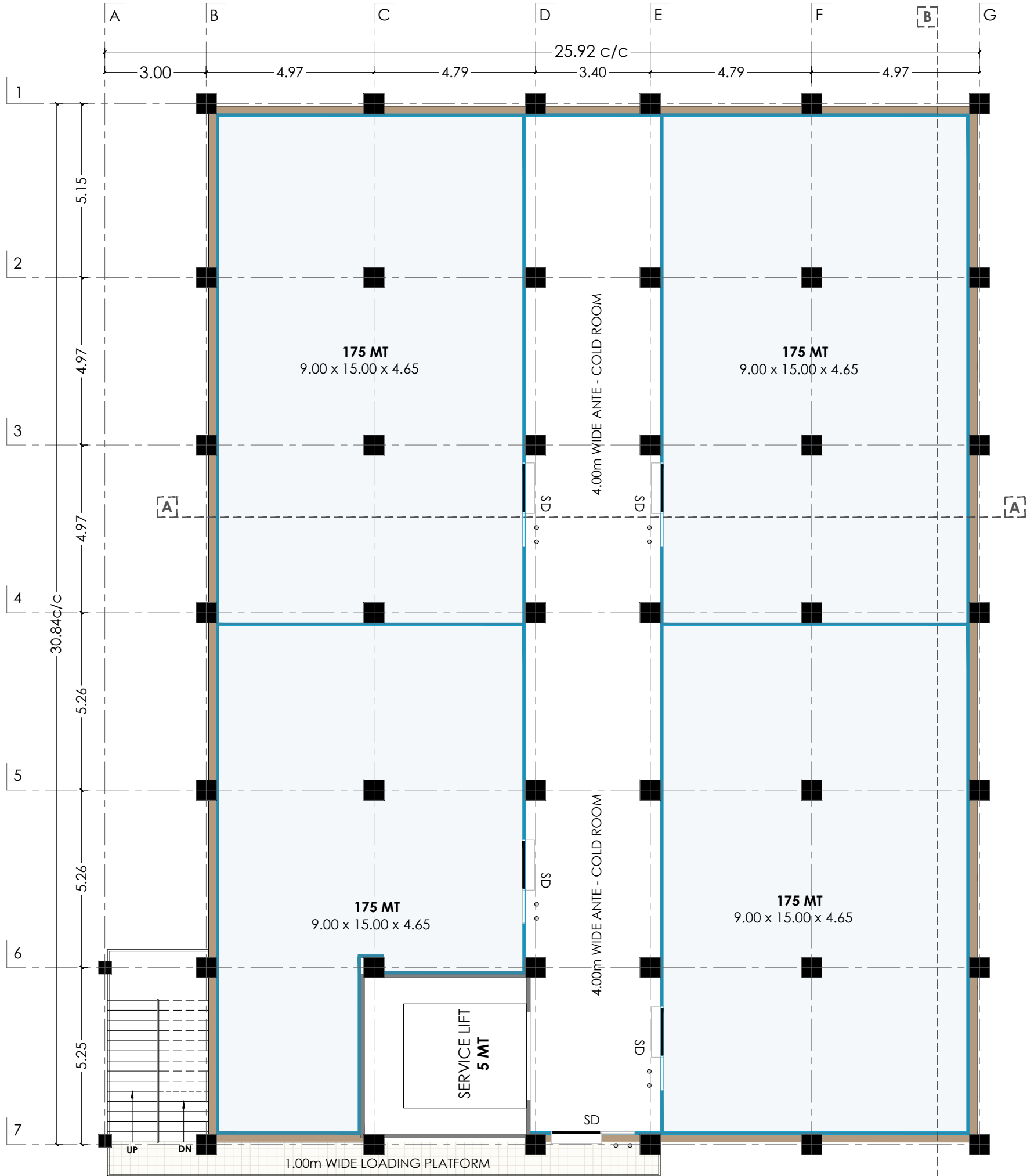
TITLE : 2000 MT COLD STORAGE - GROUND FLOOR PLAN

Drawn by : PUSHAKK Approved by : MSLP SHEET A3

Date : 27.02.2024 Designed by : BLESSY

SCALE : 1:130 DWG NO :SIPL/KA/KRPETE/ARC/02 SHT NO 02

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TYPICAL FLOOR PLAN (FIRST & SECOND)

AREA STATEMENT:

S.NO	DESCRIPTION	SIZE
01	COLD CHAMBER	21.44MT (4 CHAMBERS)
02	STORAGE - 2000 MT	(536 MT x 4Nos)
03	COLD STORAGE - G + 2	2015 Sq.m
04	COLD STORAGE - G + 2	655 Sq.m/Floor
05	MS LIFT CABIN	01 No

MECHANICAL SPECIFICATIONS: FREON REFRIGERATION

CDU DESIGNATION	TYPE & DETAILS
SIZE	9.00m x 15.00m x 4.65m(h)x 4Nos
REFRIGERANT	R- 404a
PRODUCT TO BE STORED	Red Chillies, Pulses, Tamarind
OPERATING CONDITIONS	11.5TR Cooling capacity @ -4°C SST & 50°C SDT.
STORAGE CAPACITY IN MT	2000 MT (536 MT x 4 Nos)
DESIGN AMBIENT TEMPERATURE	45°C
DESIGN INSIDE TEMPERATURE	+4°C
REFRIGERATION SYSTEM	
HIGH EFFICIENCY AIR COOLED REFRIGERATION SCROLL CONDENSING UNITS	Air cooled condensing units with refrigeration compressor for the above application with suction & discharge Isolation Valves,HP/LP Switch,Suction line accumulator, Liquid Receiver, and canopy. Cooling Capacity of each Condensing Unit: 6 TR each -4°C SST/+50°C SDT With R404a Refrigerant. No. of Condensing unit : Eight Nos (Two Nos for each Chamber)
EVAPORATORS	Evaporators High Efficiency Ceiling Suspended Evaporators Powder Coated casing, Cooper coil with Aluminum fins, High efficiency Axial flow fans and Drain pan with min 7mm fin spacing. No. of Evaporators : Eight Nos (Two nos for each Chamber)
REFRIGERATION CONTROLS	Refrigeration Controls for the above units comprising of Danfoss Thermostatic Expansion valves, Hand Shut off valves, etc.
REFRIGERANT PIPING	Refrigeration pipes and pipe fittings comprising of heavy duty seamless copper pipes, pipe fittings, nitrile rubber insulation for suction lines (considering 13 RNT distance between CDU and Evaporators) with first charge of R404A Refrigerant.
POWER CONSUMPTION	Power Consumption for each units will be 11.7 Kw each x 8 units.

JOINERY DETAILS : (G+2)

S.NO	DESCRIPTION	WIDTH	HEIGHT	NOS
01	SLIDING DOOR - SD	1.50	2.10	15

FOR TENDER PURPOSE ONLY


NOTES:

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- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL SERVICES DRAWING.


CLIENT:

DEPARTMENT OF HORTICULTURE, KARNATAKA

CONSULTANT:

 M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:

 SONNE INFRASTRUCTURE PVT. LTD
S-1, A, 2ND FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact: 044-28552445

PROJECT : 2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

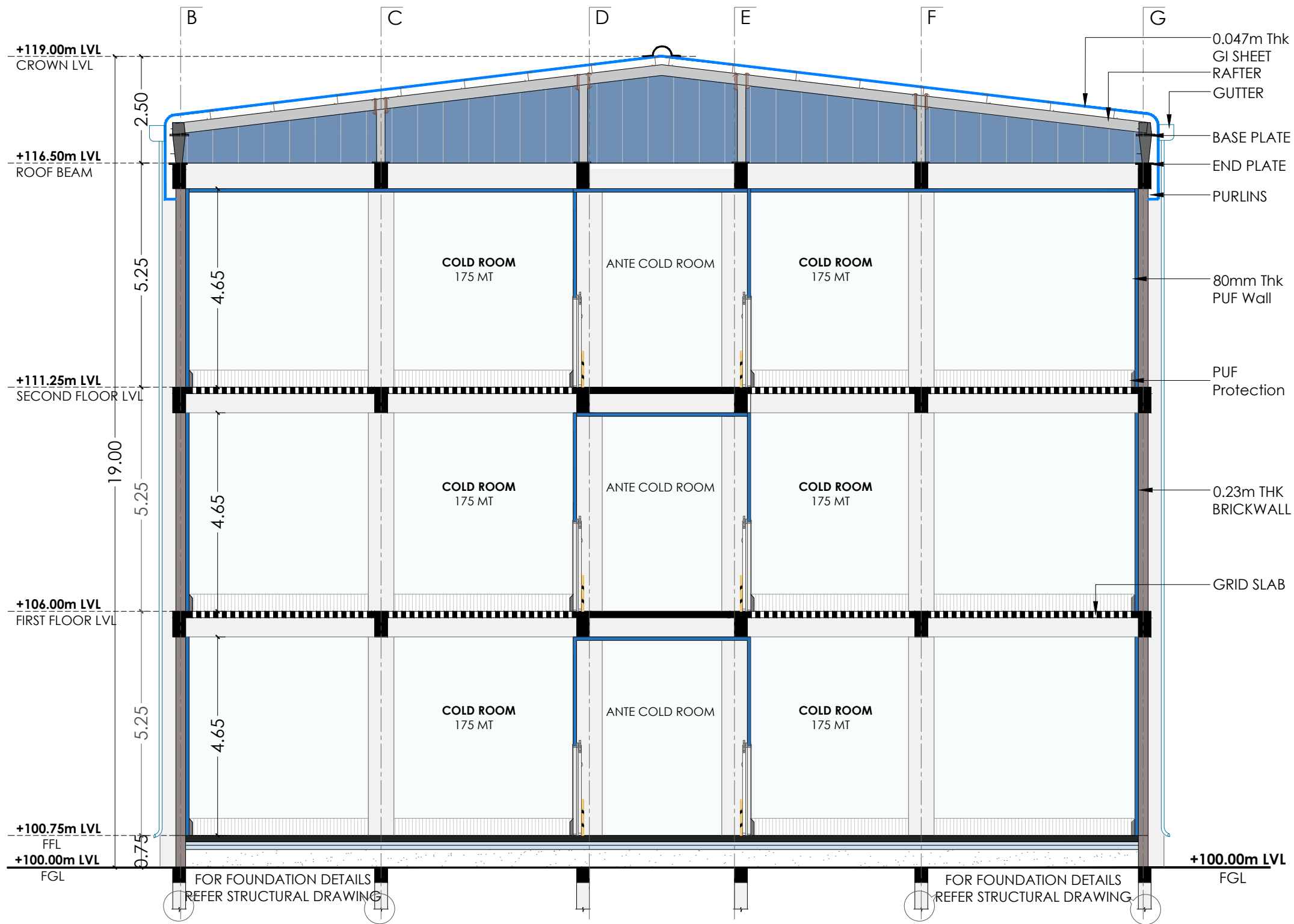
TITLE : 2000 MT COLD STORAGE - FIRST & SECOND FLOOR PLAN

Drawn by : PUSHAKK Approved by : MSLP SHEET A3

Date : 26.02.2024 Designed by : BLESSY

SCALE : 1:130 DWG NO :SIPL/KA/KRPETE/ARC/03 SHT NO 03

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SECTION A-A
2000 MT CAPACITY

GENERAL SPECIFICATIONS:

FOUNDATION	Sand filling - 100mm PCC - 100mm (1:4:8) RCC - Column footing grade of concrete M30
RCC WORK	For Plinth Beam, Lintel Beams, Sunshade, Roof etc., with required thickness cement concrete used M30 grade.
SUPER STRUCTURE	0.23m Thk External Wall [B.W in C.M 1:8] 0.15m Thk Internal Wall [B.W in C.M 1:4] PEB Structure above +15.15 m Lvl 0.5mm Thk GI sheet above PEB Structure.
LIFT (S.S. CABIN) 01 Nos	ELEVATOR DETAILS: 3915mm x 3950mm Well size (2000mm Depth Lift Pit) Capacity 5000 Kg. Speed 1.0 m/s. Stops & Openings 2 Stops & 2 Openings.Single Entrance car Travel Height 10.85m Elevator Grouping Simplex Full Collective Control Well Dimension 3915mm width & 3950mm depth Pit Height 2000mm MAP Floor position Topmost Floor (TOP) Car Dimensions 2800 (w) x 3300(D) x 2400mm (h) Door Dimensions 2400 (w) x 2200mm(h) Door Type [TYP _ CDO _ A(SC)] Panel 4 FINISHES Car Panel finish Walls: Stainless Steel Single Ceiling Tile (CT002) Ceiling & Lighting Stainless Steel Flooring 6mm ST - Checkered , Steel Car Skirting Material : Stainless Steel Hairline AISI44I Car Door Finish Stainless Steel Hairline AISI44I Car Operating Panel1 Partial Height Stainless Steel Face Plate Silver Brushed. FEATURES Standard Existing Light Fireman Drive Automatic, Closed Door.

JOINERY DETAILS : (G+2)

S.NO	DESCRIPTION	WIDTH	HEIGHT	NOS
01	SLIDING DOOR - SD	1.50	2.10	15

FOR TENDER PURPOSE ONLY

NOTES:

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- THE LEVELS ARE MENTIONED ON THE RESPECTIVE DRAWINGS.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL SERVICES DRAWING.


CLIENT:

DEPARTMENT OF HORTICULTURE, KARNATAKA

CONSULTANT:

 M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:

 SONNE INFRASTRUCTURE PVT. LTD
S-1, A, 2ND FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 944-2852445

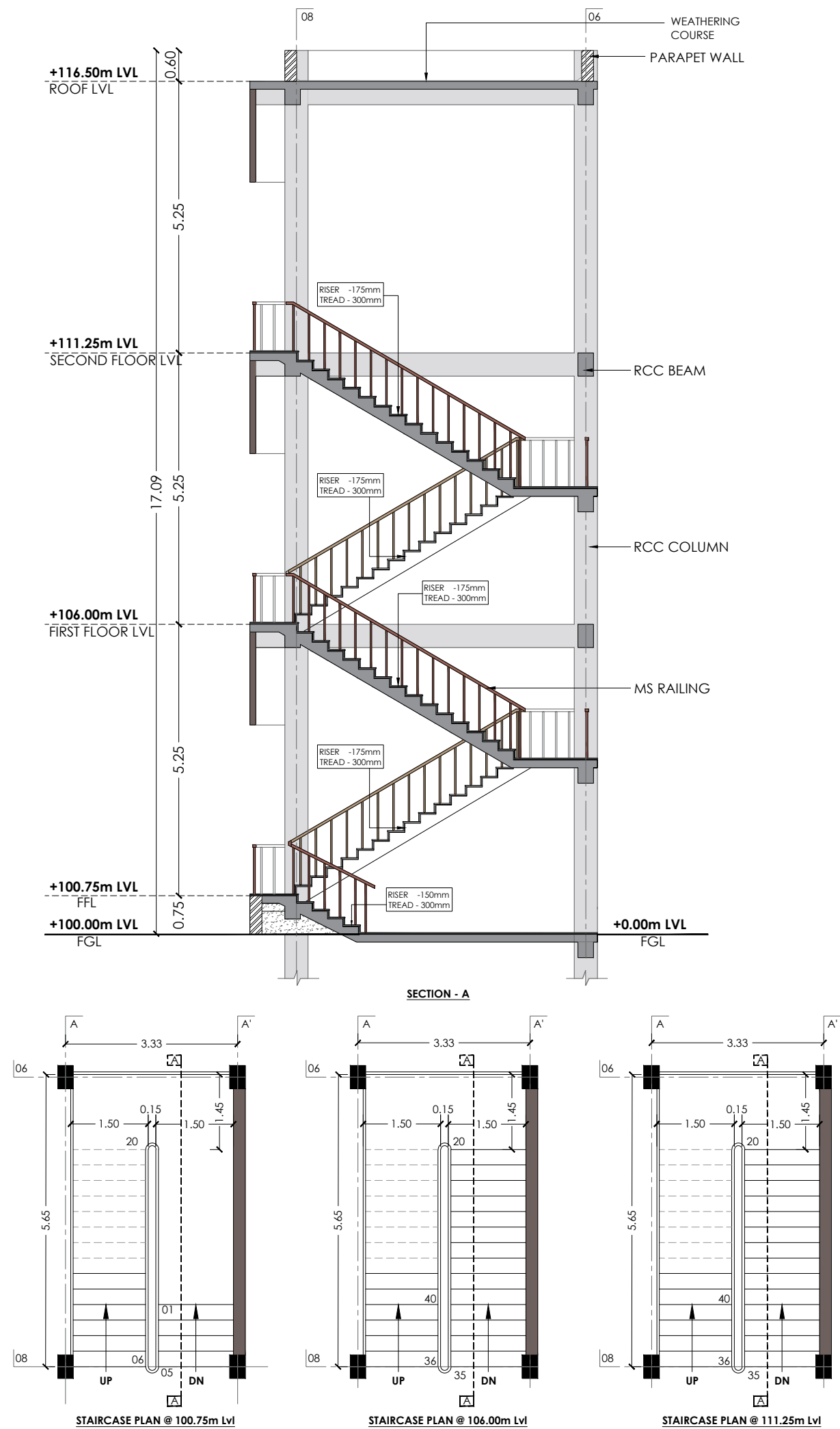
PROJECT : 2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

TITLE : 2000 MT COLD STORAGE - SECTIONS (G+2)

Drawn by : PUSHAKK	Approved by : MSLP	SHEET A3
Date : 27.02.2024	Designed by : BLESSY	

SCALE : 1:150	DWG NO :SIPL/KA/KRPETE/ARC/3A	SHT NO 3A
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GENERAL SPECIFICATIONS:

FOUNDATION	Sand filling - 100mm PCC - 100mm (1:4:8) RCC - Column footing grade of concrete M30
RCC WORK	For Plinth Beam, Lintel Beams, Sunshade, Roof etc., with required thickness cement concrete used M30 grade.
SUPER STRUCTURE	0.23m Thk External Wall (B.W in C.M 1:8) 0.15m Thk Internal Wall (B.W in C.M 1:4) PEB Structure above +15.15 m Lvl 0.5mm Thk GI sheet above PEB Structure.
LIFT (S.S CABIN) 01 Nos	ELEVATOR DETAILS: 3915mm x 3950mm Well size (2000mm Depth Lift Pit) Capacity 5000 Kg. Speed 1.0 m/s. Stops & Openings 2 Stops & 2 Openings.Single Entrance car Travel Height 10.85m Elevator Grouping Simplex Full Collective Control Well Dimension 3915mm width & 3950mm depth Pit Height 2000mm MAP Floor position Topmost Floor (TOP) Car Dimensions 2800 (w) x 3300(D) x 2400mm (h) Door Dimensions 2400 (w) x 2200mm(h) Door Type [TYP _CDO _A(SC)] Panel 4 FINISHES Car Panel finish Walls: Stainless Steel Ceiling & Lighting Single Ceiling Tile (CT002) Stainless Steel Flooring 6mm ST - Checkered , Steel Car Skirting Material : Stainless Steel Hairline AISI44I Car Door Finish Stainless Steel Hairline AISI44I Car Operating Panel Partial Height Stainless Steel Face Plate Silver Brushed. FEATURES Standard Existing Light Fireman Drive Automatic, Closed Door.

FOR TENDER PURPOSE ONLY

NOTES:

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- THE LEVELS ARE MENTIONED ON THE RESPECTIVE DRAWINGS.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL SERVICES DRAWING.

CLIENT: DEPARTMENT OF HORTICULTURE, KARNATAKA

CONSULTANT:

NABCONS M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:

SONNE INFRASTRUCTURE PVT. LTD
8-1, A, 2ND FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact: 984-2852445

PROJECT : 2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

TITLE : 2000 MT COLD STORAGE - STAIRCASE & LIFT(G+2)

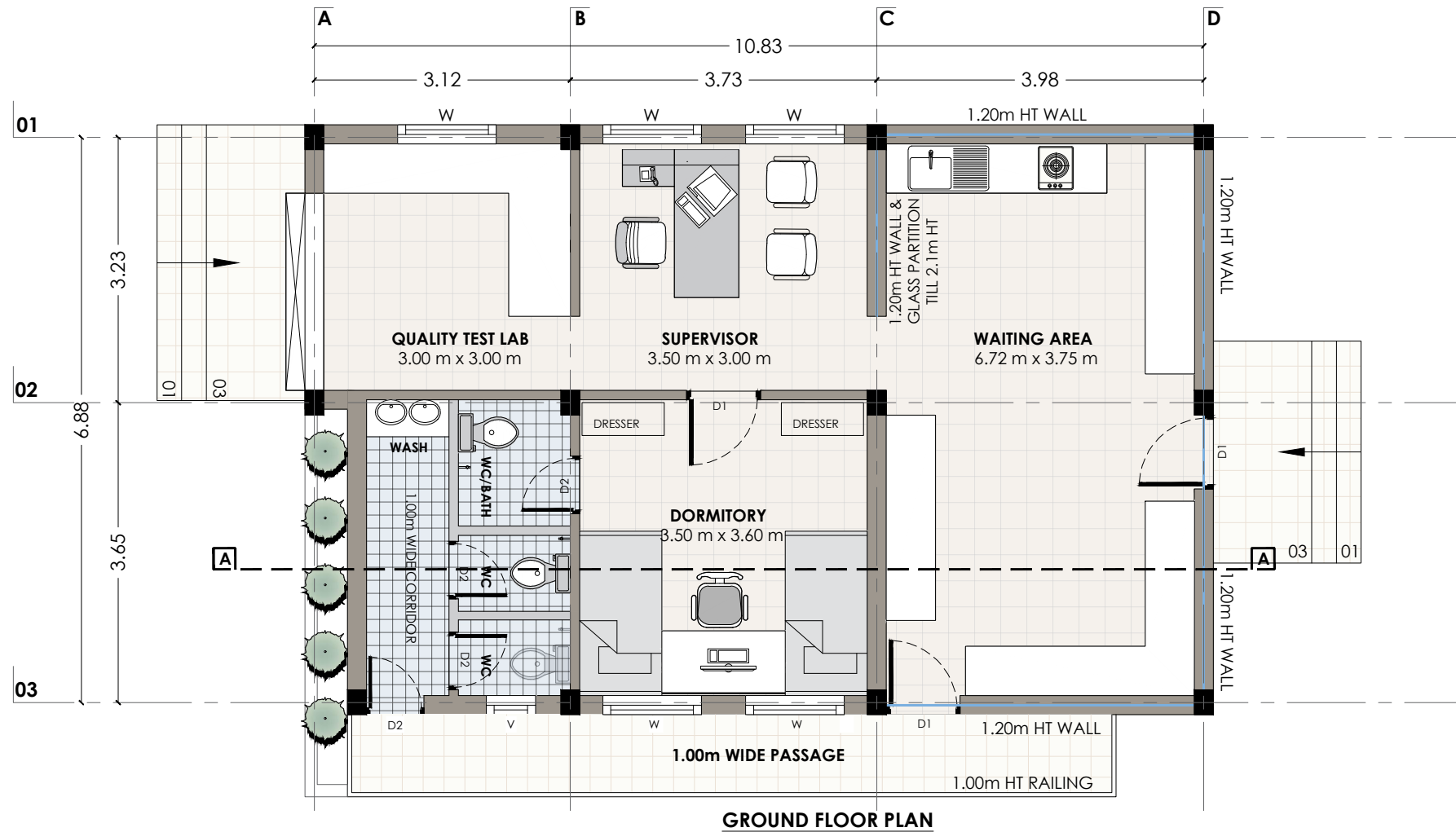
Drawn by : Ar. ROSHNI KS Approved by : MSLP SHEET

Date : 26.02.2024 Designed by : BLESSY A3

SCALE : 1:100 DWG NO :SIPL/KA/KRPETE/ARC/04 SHT NO

04

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AREA STATEMENT:

S.NO	DESCRIPTION	SQ.M
01	TOTAL BUILT UP AREA	90.00 Sq.m
02	WAITING AREA	25.00 Sq.m
03	SUPERVISOR	10.50 Sq.m
04	QUALITY TEST LAB	9.00 Sq.m
05	DORMITORY	12.60 Sq.m
06	TOILET	9.00 Sq.m

SPECIFICATIONS:

FOUNDATION	Sand filling - 100mm PCC - 100mm RCC - Column footing grade of concrete M30
RCC WORK	For Plinth Beam, Lintel Beams, Sunshade, Roof etc., with required thickness cement concrete used M30 grade.
SUPER STRUCTURE	B.W in Cement Mortar External Wall - 230mm Thk with C.M 1:8 Internal Wall - 100mm Thk flyash brick partition wall with C.M 1:4 & GI Sheet above Kitchen area.
FLOORING	18mm Thk Granite flooring in Corridors and stone seats in kitchen area, 10mm Thk Vitrified Tiles over P.C.C 1:4:8 for other areas. 8mm Thk Antiskid Ceramic tiles over P.C.C 1:4:8 for toilet. Daddooing in toilet wall till 2.10m Lvl from FFL with 300mm x 300mm Vitrified Tiles.
DOOR	2nd class teak wood frame work enamel painted flush door - Outside laminated & inside enamel painted. PVC Doors for Toilet .
WINDOW	Upvc glazed windows (Sliding) Grill - 10mm square MS rod
VENTILATOR	Upvc glazed ventilators
WALL FINISHES	Exterior & Interior painted with two coats of emulsion paint over one coat of primer
WEATHERING COURSE	Impervious coat RCC Roof with C.M 1:3 of 20mm thick

JOINERY DETAILS:

S.NO	DESCRIPTION	WIDTH	HEIGHT	NOS
01	ROLLING SHUTTER - RS	2.00	3.00	01
02	DOOR 1 - D1	0.90	2.10	03
03	DOOR 2 - D2	0.75	2.10	04
04	WINDOW - W	1.50	1.20	05
05	VENTILATOR - V	0.60	0.60	01

FOR TENDER PURPOSE ONLY

NOTES:

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- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL SERVICES DRAWING.

CONSULTANT:

M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:

SONNE INFRASTRUCTURE PVT. LTD
S-1, A, 2nd FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 044-26552445

CLIENT:

DEPARTMENT OF HORTICULTURE, KARNATAKA

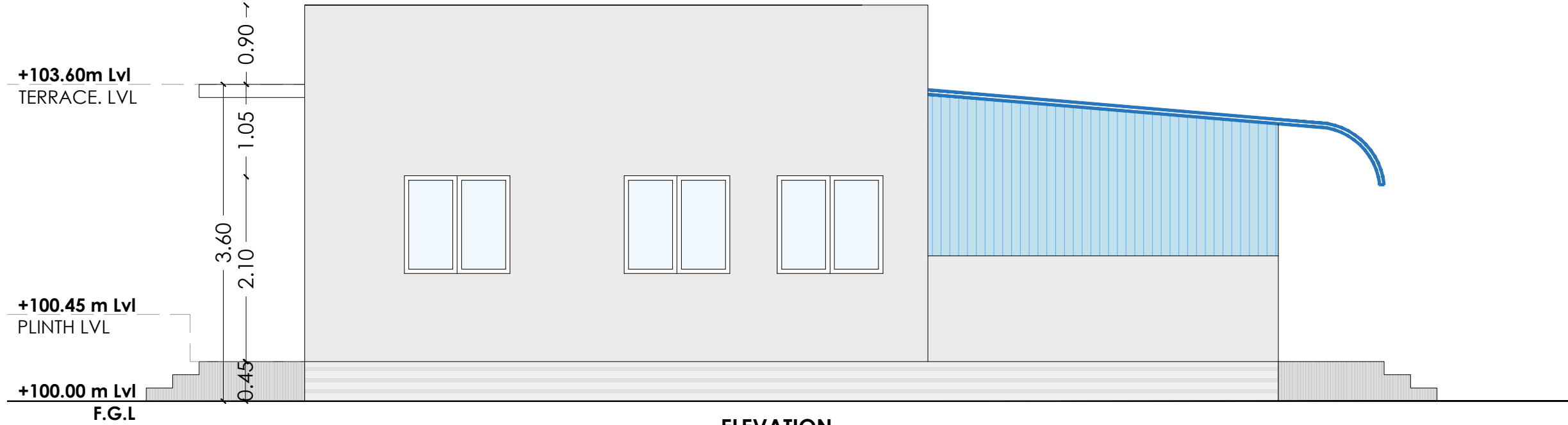
PROJECT :

2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

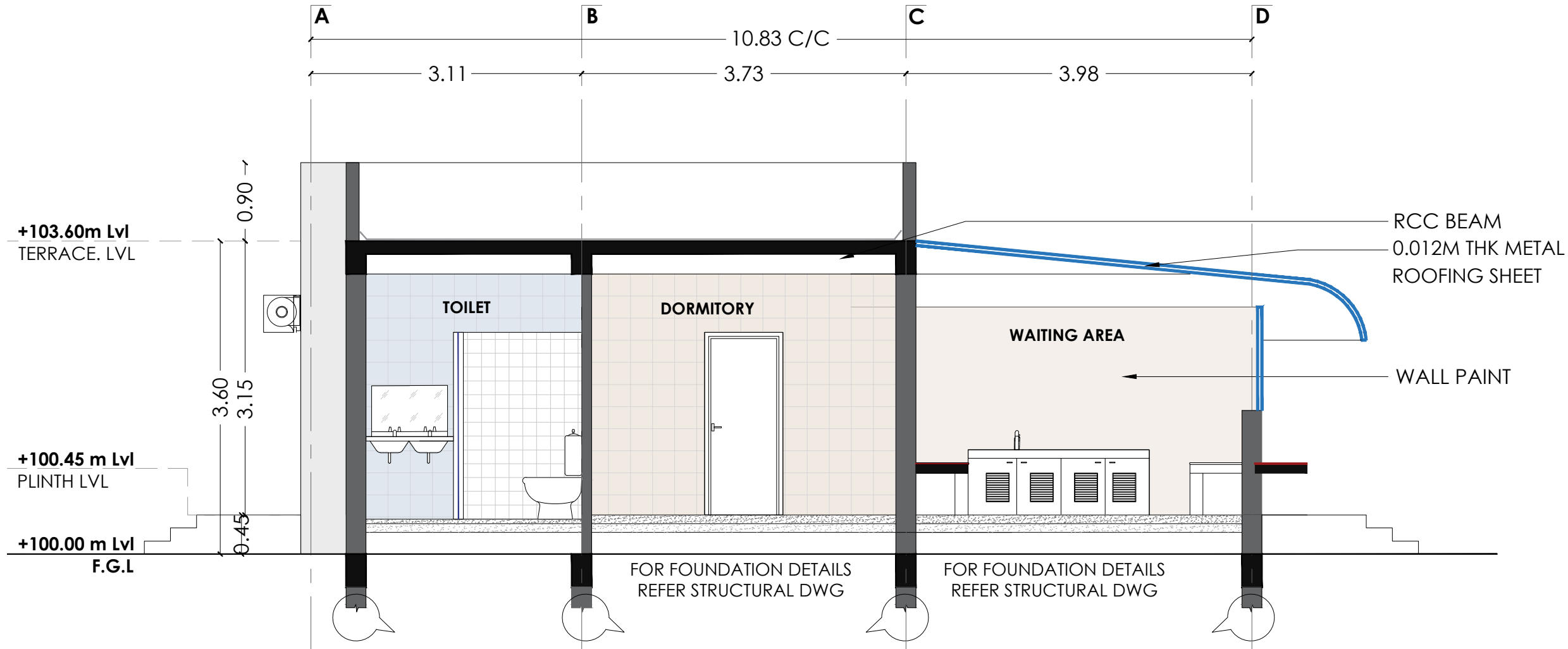
TITLE : TECHNICIAN SHED - FLOOR PLAN

Drawn by : THANUSH	Approved by : MSLP	SHEET A3
Date : 27.02.2024	Designed by : BLESSY	
SCALE : 1:60	DWG NO : SIPL/KA/KRPETE/ARC/05	SHT NO 05

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ELEVATION



SECTION - AA'

AREA STATEMENT:		
S.NO	DESCRIPTION	AREA
01	TOTAL BUILT UP AREA	90.00 Sq.m
02	WAITING AREA	25.00 Sq.m
03	SUPERVISOR	10.50 Sq.m
04	QUALITY TEST LAB	9.00 Sq.m
05	DORMITORY	12.60 Sq.m
06	TOILET	9.00 Sq.m

SPECIFICATIONS:	
FOUNDATION	Sand filling - 100mm PCC - 100mm RCC - Column footing grade of concrete M30
RCC WORK	For Plinth Beam, Lintel Beams, Sunshade, Roof etc., with required thickness cement concrete used M30 grade.
SUPER STRUCTURE	B.W in Cement Mortar External Wall - 230mm Thk with C.M 1:8 Internal Wall - 100mm Thk flyash brick partition wall with C.M 1:4 with GI Sheet above Kitchen area.
FLOORING	18mm Thk Granite flooring in Corridors and stone seats in kitchen area, 10mm Thk Vitrified Tiles over P.C.C 1:4:8 for other areas. 8mm Thk Antiskid Ceramic tiles over P.C.C 1:4:8 for toilet. Daddooing in toilet wall till 2.10m Lvl from FFL with 300mm x 300mm Vitrified Tiles.
DOOR	2nd class teak wood frame work enamel painted flush door - Outside laminated & inside enamel painted. PVC Doors for Toilet .
WINDOW	Upvc glazed windows (Sliding) Grill - 10mm square MS rod
VENTILATOR	Upvc glazed ventilators
WALL FINISHES	Exterior & Interior painted with two coats of emulsion paint over one coat of primer
WEATHERING COURSE	Impervious coat RCC Roof with C.M 1:3 of 20mm thick

FOR TENDER PURPOSE ONLY

- NOTES:
- ALL THE DIMENSIONS & LEVELS ARE IN METER.
 - DRAWING SHALL NOT TO BE SCALED . ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - ANY ERROR OR DISCREPANCIES IN THE DRAWING ARE TO BE BROUGHT TO THE NOTICE OF ARCHITECT/ ENGINEER.
 - THIS DRAWING SHALL NOT TO BE USED OTHER THAN THE PURPOSES MARKED/ISSUED.
 - THE LEVELS ARE MENTIONED ON THE RESPECTIVE DRAWINGS.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL SERVICES DRAWING.

CONSULTANT:
NABCONS M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:
SONNE INFRASTRUCTURE PVT. LTD.
S-1, A, 2nd FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 044-26552445

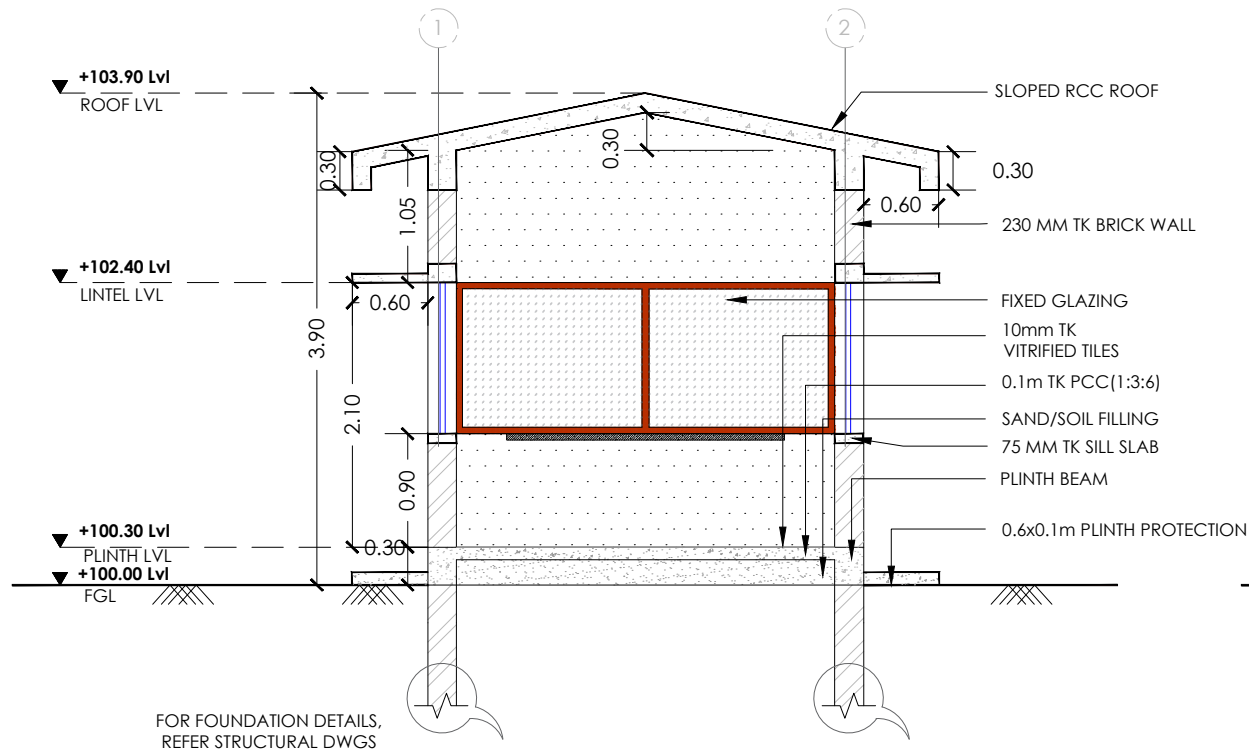
CLIENT: DEPARTMENT OF HORTICULTURE, KARNATAKA

PROJECT : 2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

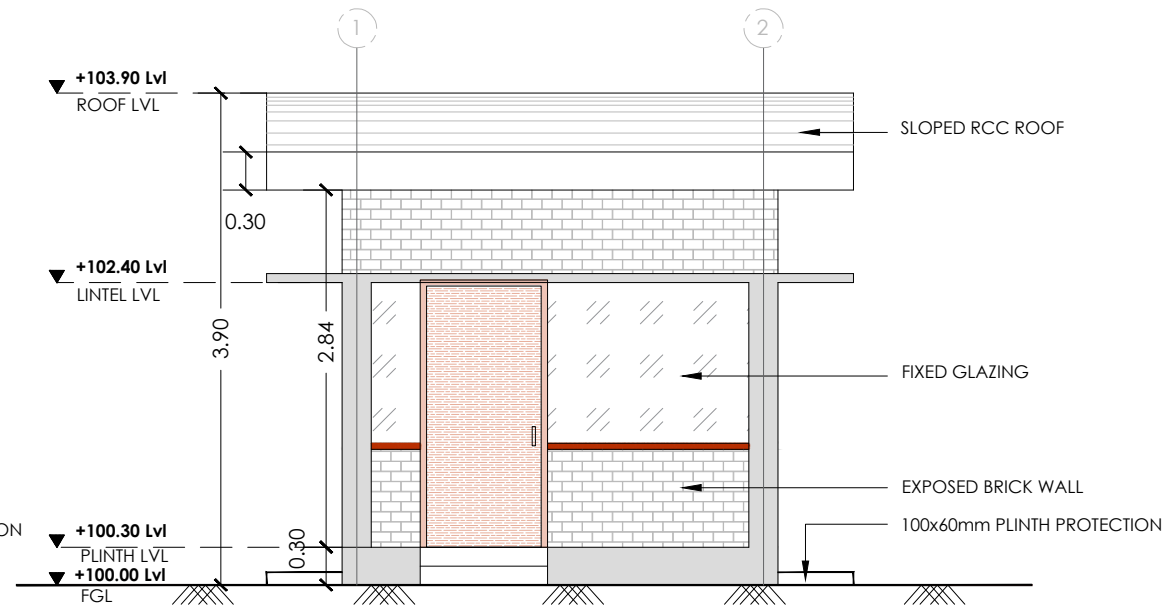
TITLE : TECHNICIAN SHED - SECTION & ELEVATION

Drawn by : THANUSH Approved by : MSLP SHEET
Date : 26.02.2024 Designed by : BLESSY A3

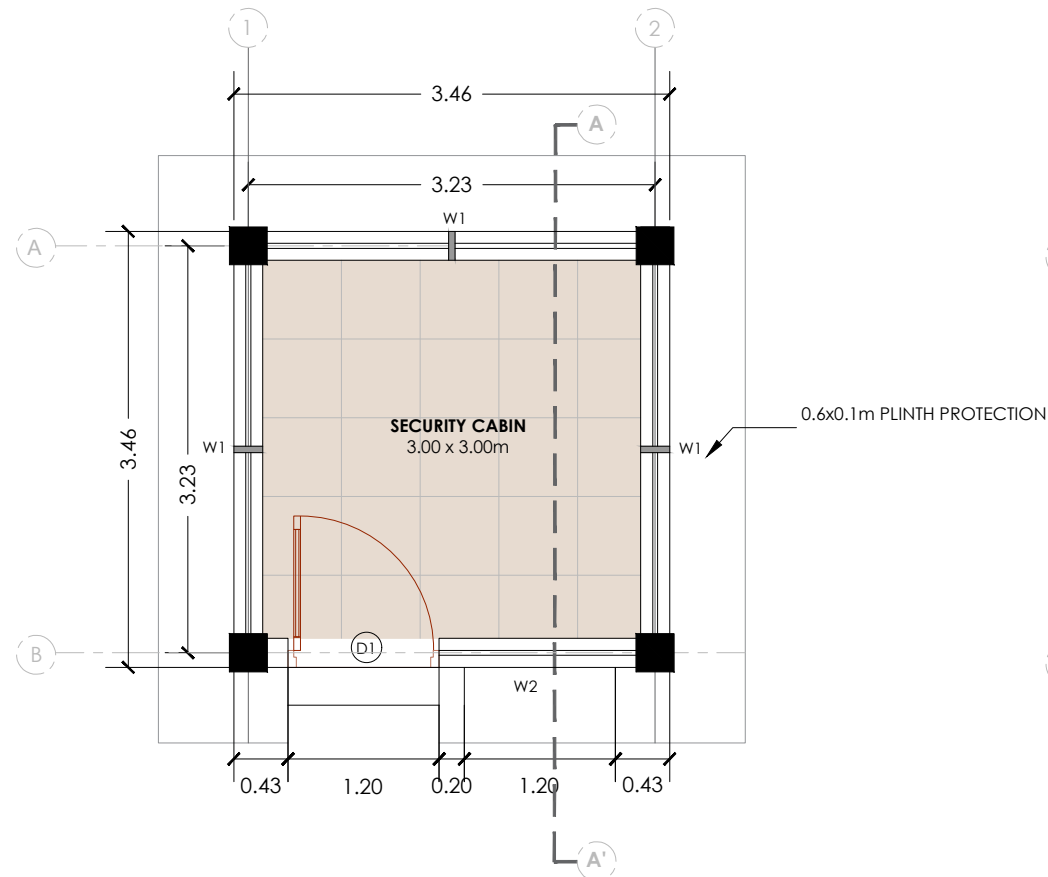
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5A



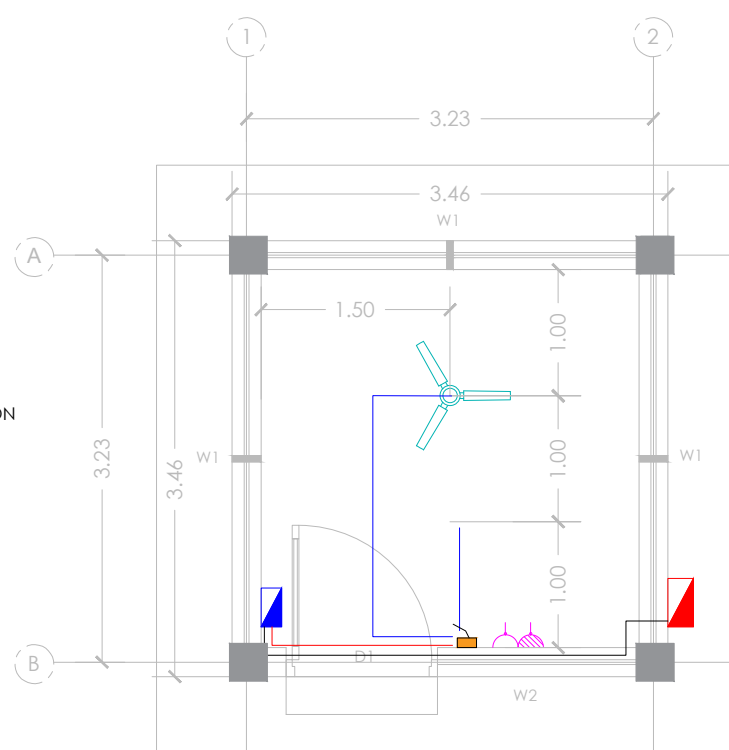
SECTION AT AA'



ELEVATION



SECURITY CABIN - PLAN



SECURITY CABIN
ELECTRICAL PLAN

DESCRIPTION	LENGTH
GROUND FLOOR	
DB TO SB	1.48 R.m

DESCRIPTION	LENGTH
GROUND FLOOR	
DB TO TL	0.8 R.m
DB TO F1	1.9R.m
TOTAL LENGTH	2.7R.m

AREA STATEMENT :

TOTAL BUILT UP AREA (SECURITY)	12 Sq.m
--------------------------------	---------

JOINERY DETAILS :

S.NO	DESCRIPTION	WIDTH	HEIGHT	NOS
01.	DOOR - D1	1.20	2.10	01
02.	WINDOW - W1	3.00	1.20	03
03.	WINDOW - W2	1.60	1.20	01

SPECIFICATIONS:

FOUNDATION	Sand filling - 100m PCC - 100m (1:4:8) RCC - Raft footing grade of concrete M30
RCC WORK	For Plinth Beam, Lintel Beams, Sunshade, Roof etc., with required thickness cement concrete used M30 grade.
BRICK WORK	Basement : 230 mm Thk Common Burnt Clay brick designation 7.5 over CM 1:4 Super Structure : 230 mm Thk Common Burnt Clay brick (designation 7.5) over CM 1:6 Partition Wall : 115mm Thk Common Burnt Clay brick (designation 7.5) over CM 1:4
PLASTERING	Ceiling : 12mm Thk plaster of CM 1:4 Interior Wall : 12mm Thk plaster of CM 1:4 Exterior Wall : 18mm Thk 6mm Thk Outer layer of CM 1:3 over 12mm Thk layer of CM 1:5
WALL FINISHES	Ceiling : White Washing with Lime Interior Wall : Layer 1 : 2mm Thk Putty coat Layer 2 : One coat of Primer Layer 3 : Two coat of Plastic Emulsion Paint Exterior Wall : Two Coat of Textured Paint over One coat of Primer
FLOORING	Refer Flooring Layout
JOINERY	DOOR: Door Frame : Padak Wood Door Shutter : 35mm Thk Decorative type Flush Doors , Toilet Doors : PVC Doors Window : UPVC Glazed windows with Safety Grill Ventilator : UPVC Glazed Ventilator
WEATHERING COURSE	20mm Thk Pressed Clay tiles over 20mm Thk CM 1:4

FOR TENDER PURPOSE ONLY.

NOTES:

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- DRAWING SHALL NOT TO BE SCALED .
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- ANY ERROR OR DISCREPANCIES IN THE DRAWING ARE TO BE
BROUGHT TO THE NOTICE OF ARCHITECT/ ENGINEER.
- THIS DRAWING SHALL NOT TO BE USED OTHER THAN THE
PURPOSES MARKED/ISSUED.
- THE LEVELS ARE MENTIONED ON THE RESPECTIVE DRAWINGS.
- TBM +100.00 LVL IS TAKEN ON RTO OFFICE ROAD TOP.

CLIENT:

DEPARTMENT OF HORTICULTURE, KARNATAKA

CONSULTANT:

M/S. NABARD Consultancy Services (NABCONS)

ASSOCIATE CONSULTANT:

SONNE INFRASTRUCTURE PVT. LTD
S-1, A, 2nd FLOOR, AMAR SINDUR COMPLEX,
43, PANTHEON ROAD, EDMORE,
CHENNAI - 600009
Contact :044-28552445

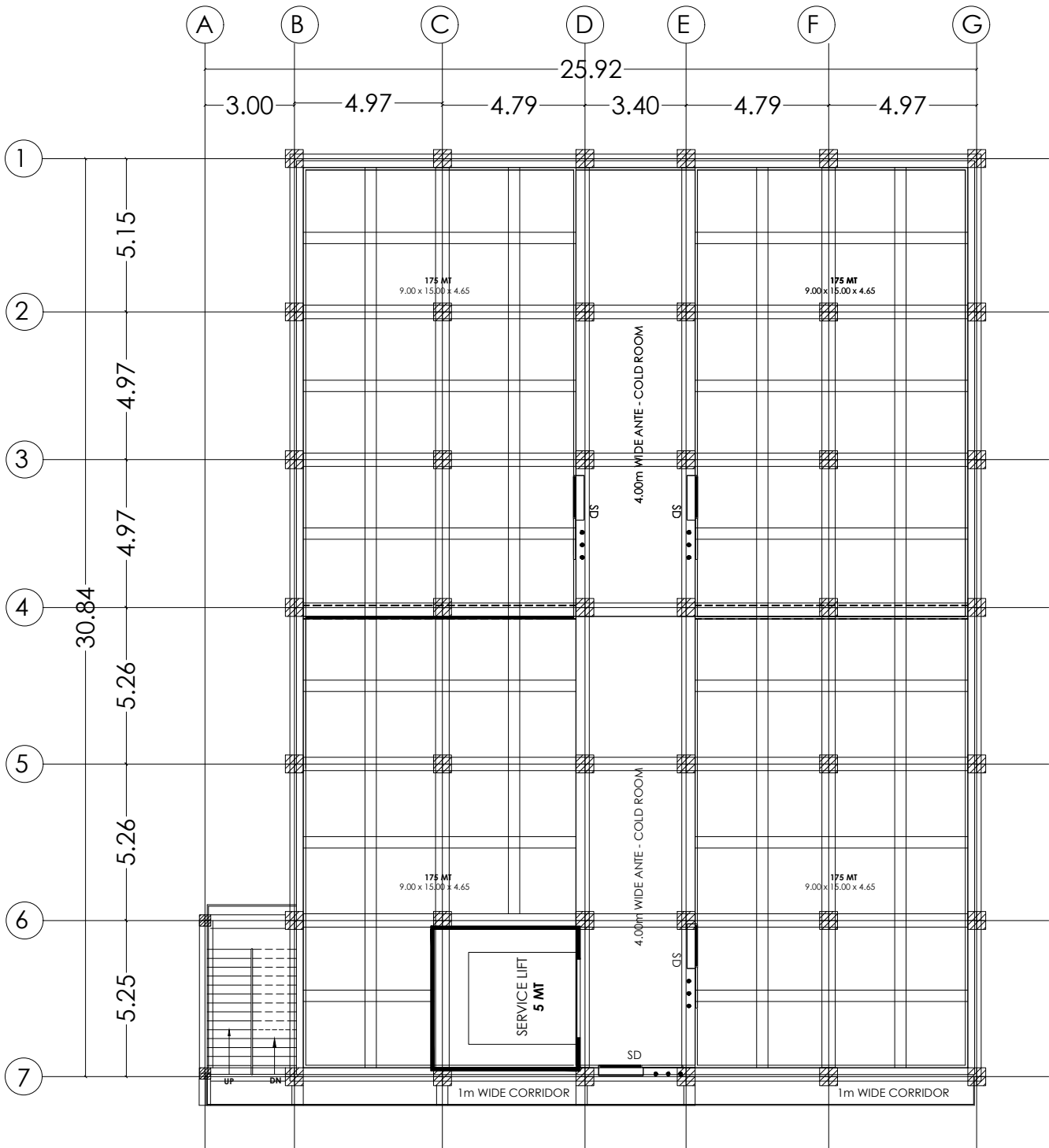
PROJECT : 2000 MT COLD STORAGE AT MURUKKANAHALLI FARM
KR PETE TALUK , MANDYA DISTRICT, KARNATAKA

TITLE : SECURITY BLOCK DETAILS

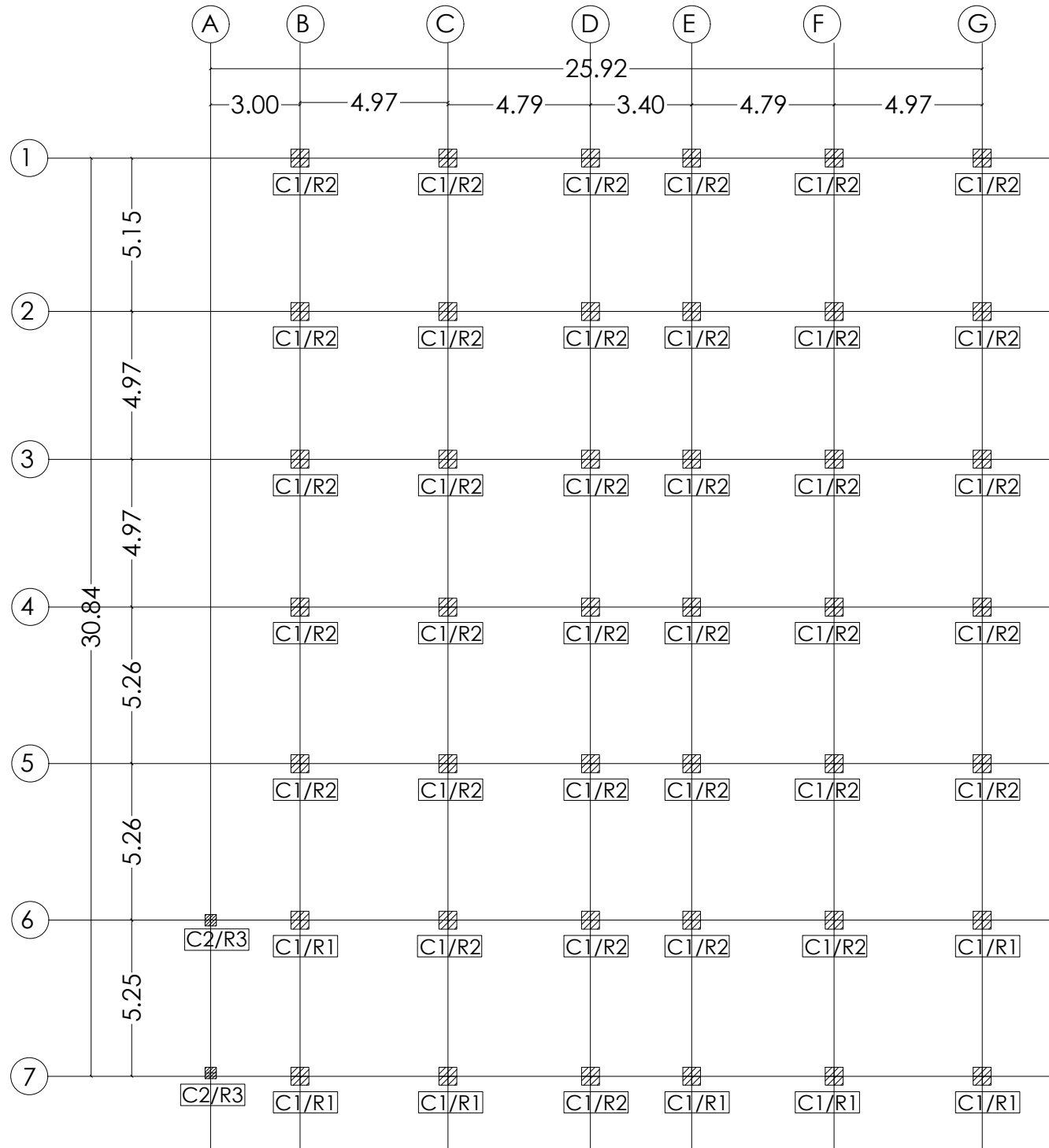
Drawn by : Shameem	Approved by : MSLP	SHEET A3
Date : 26.02.2024	Designed by : BLESSY	

SCALE : 1:500	DWG NO :SIPL/KA/KRPETE/ARC/06	SHT NO 06
---------------	-------------------------------	--------------

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G.A OF FLOOR PLAN



COLUMN LAYOUT

NOTES :

1. ALL THE DIMENSIONS ARE PROVIDED IN METER (m) UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONS SHALL NOT BE MEASURED FROM THE DRAWINGS, & ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. THIS DRAWING SHALL NOT BE USED FOR THE PURPOSE MARKED/ISSUED.
4. HIGH YIELD STRENGTH DEFORMED BARS Fe 500 CONFORMING TO IS 1786-1985 TO BE USED WITH MINIMUM PERCENTAGE OF ELONGATION 14.5%.
5. THE GRADE OF CONCRETE M-30 (DESIGN MIX) CONFORMING TO IS 456-2000 FOR ALL RCC WORK UNLESS OTHERWISE SPECIFIED.
6. MINIMUM CEMENT CONTENT SHALL NOT BE LESS THAN 320 kg/m³ FOR M-30 CONCRETE.

7. ADMIXTURES SHALL BE ADDED WITH PERMISSION OF CLIENT.
8. CLEAR COVER TO THE REINFORCEMENT ARE AS FOLLOWS

FOUNDATION	-	50mm
COLUMN	-	40mm
BEAM	-	30mm
RCC WALL	-	25mm
SLAB	-	25mm

9. STRUCTURE IS DESIGNED FOR GROUND+TWO UPPER FLOOR+STEEL ROOF ONLY.
10. LAPPING OF COLUMN BARS SHALL BE MIDWAY BETWEEN SLABS OF STAGGERED WITH LAP LENGTH NOT LESS THAN 50Ø.
11. ALL PCC WORKS SHOULD BE CARRIED OUT WITH PCC 1:4:8 CONFORMING TO IS 456-2000.
12. DESIGN MIX REPORT SHOULD BE GOT APPROVED BY ANNA UNIVERSITY/IIT/NIT/PWD.
13. DUCTILE DETAILING OF THE REINFORCED CONCRETE MEMBERS AS PROVIDED IN IS 13920-2016 SHOULD BE FOLLOWED.

14. THE SBC OF THE SOIL IS 250 kN/m² AT 2.0 m (AS PER SOIL REPORT) FROM GROUND LEVEL (+0.00m). THE SBC OF THE SOIL SHALL BE CONFIRMED WITH SPT TEST BEFORE LAYING CONCRETE. IF THE SBC IS LESS THAN 250 kN/m², THE FOUNDATION IS TO BE REDESIGNED

NOTATIONS:
E.F - EACH FACE
E.G.L - EXISTING GROUND LEVEL
Ø - DIAMETER OF THE BAR
C/C - CENTER TO CENTER DISTANCE
G - GROUND LEVEL
- NUMBER BARS

CONSULTANT:

SONNE INFRASTRUCTURE PVT. LTD.,
S-1, A, 2nd FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 044-28552445
E-mail : sonneinfra@gmail.com
www.sonneinfra.com

CLIENT NAME:

DEPARTMENT OF HORTICULTURE, KARNATAKA

DRAWN BY :

GS

CHECKED BY:

AVM

DATE:

21.09.2022

DESIGNED BY:

MOHAN

APPROVED BY:

MSLP

SIZE:

A3

TENDER PURPOSE ONLY

REV.	REVISIONS	DATE	DRAWN	DESIGNED	CHECKED

ISSUED FOR:

☐ DPR ☒ TENDER ☐ INFORMATION ☐ APPROVAL ☐ CONSTRUCTION

PROJECT TITLE:

COLD STORAGE-MURUKKANAHALLI (2000 MT)

DRAWING TITLE:

GENERAL ARRANGEMENT OF
FLOOR PLAN & COLUMN LAYOUT

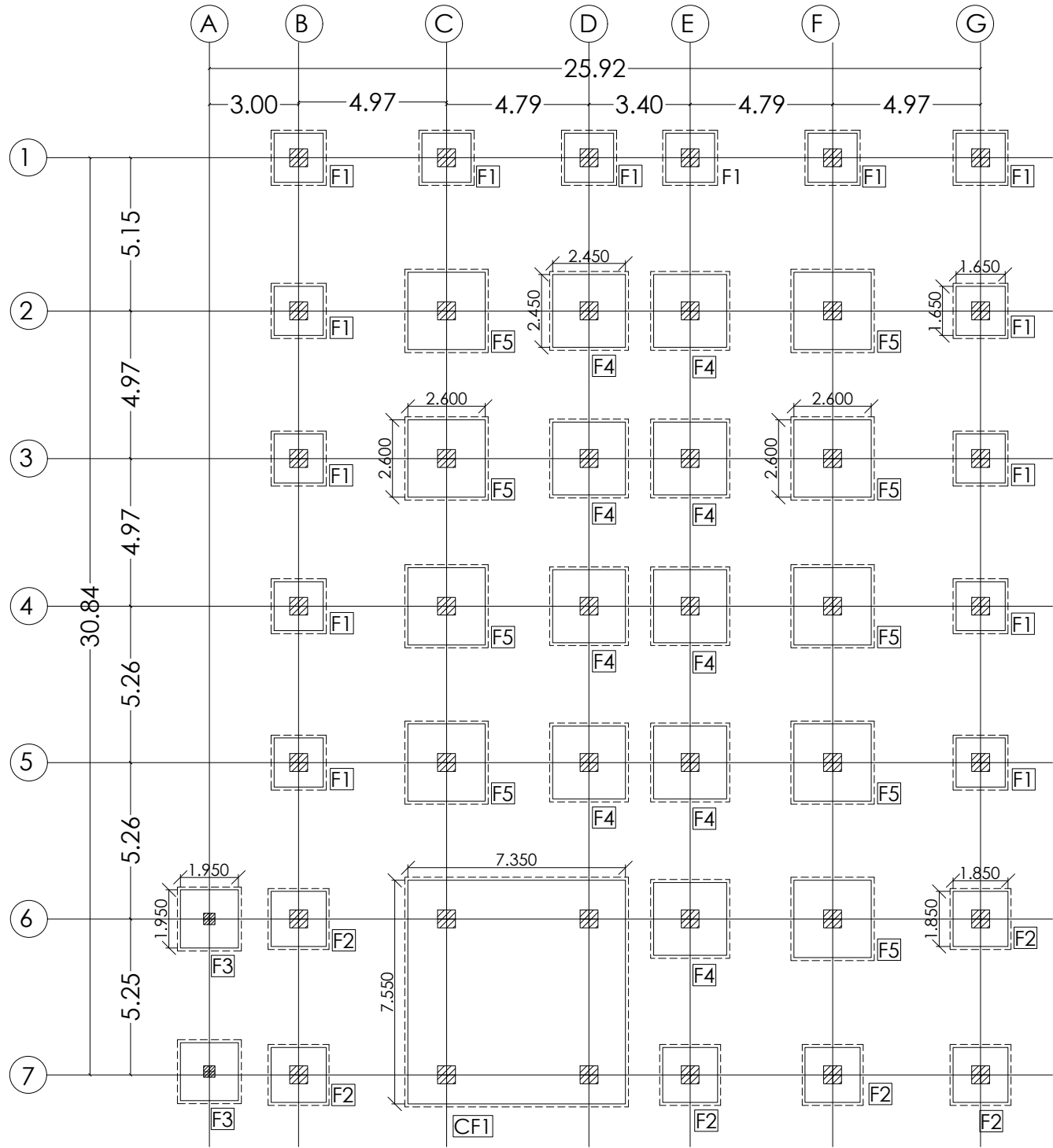
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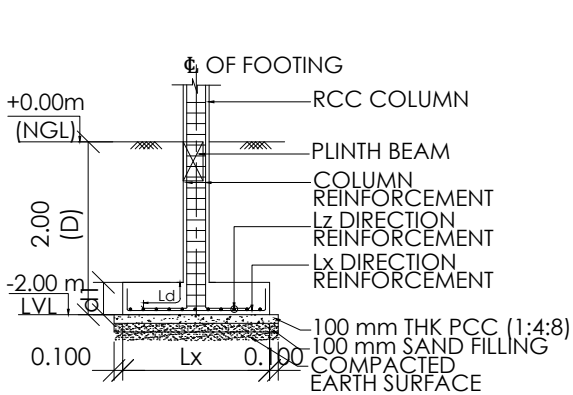
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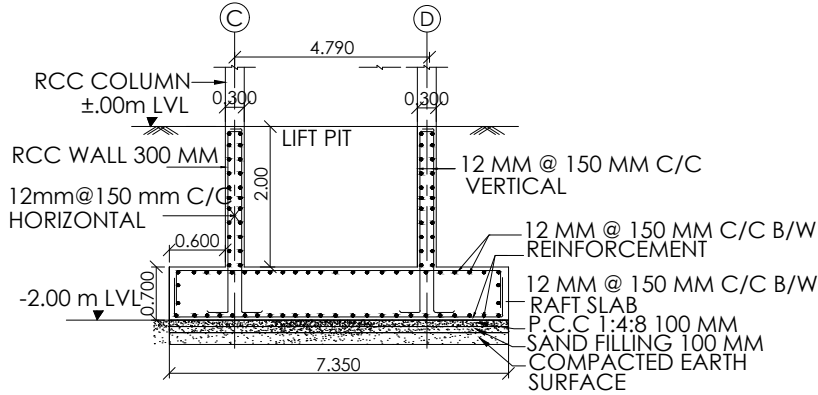
PROJECT CODE:
474



FOOTING LAYOUT



FOOTING SECTION



LIFT PIT SECTION DETAIL

SCHEDULE OF FOOTING

FOOTING NAME	FOOTING SIZE Lx X Lz	D	d1	BOTTOM REINFORCEMENT		NOS
				Lx DIRECTION	Lz DIRECTION	
F1	1.65 X 1.65	2.00	0.375	10Ø@ 100 C/C	10Ø@ 100 C/C	14
F2	1.85 X 1.85	2.00	0.450	10Ø@ 100 C/C	10Ø@ 100 C/C	06
F3	1.95 X 1.95	2.00	0.525	10Ø@ 100 C/C	10Ø@ 100 C/C	02
F4	2.45 X 2.45	2.00	0.600	10Ø@ 100 C/C	10Ø@ 100 C/C	09
F5	2.60 X 2.60	2.00	0.650	10Ø@ 100 C/C	10Ø@ 100 C/C	09
CF1	7.35 X 7.55	2.00	0.650	12Ø@ 100 C/C	12Ø@ 100 C/C	01
TOTAL						41

NOTES :

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- DIMENSIONS SHALL NOT BE MEASURED FROM THE DRAWINGS, & ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- THIS DRAWING SHALL NOT BE USED THAN THE PURPOSE MARKED/ISSUED.
- HIGH YIELD STRENGTH DEFORMED BARS Fe 500 CONFIRMING IS 1786-1985 TO BE USED WITH MINIMUM PERCENTAGE OF ELONGATION 14.5%.
- THE GRADE OF CONCRETE M-30 (DESIGN MIX) CONFORMING FOR IS 456-2000 FOR ALL RCC WORK UNLESS OTHERWISE SPECIFIED.
- MINIMUM CEMENT CONTENT SHALL NOT BE LESS THAN 320 kg/m³ FOR M-30 CONCRETE.

7. ADMIXTURES SHALL BE ADDED WITH PERMISSION OF CLIENT.

8. CLEAR COVER TO THE REINFORCEMENT ARE AS FOLLOWS

FOUNDATION	-	50mm
COLUMN	-	40mm
BEAM	-	30mm
RCC WALL	-	25mm
SLAB	-	25mm

9. STRUCTURE IS DESIGNED FOR GROUND+TWO UPPER FLOOR+STEEL ROOF ONLY.

10. LAPPING OF COLUMN BARS SHALL BE MIDWAY BETWEEN SLABS OF STAGGERED WITH LAP LENGTH NOT LESS THAN 50Ø.

11. ALL PCC WORKS SHOULD BE CARNED OUT WITH PCC 1:4:8 CONFORMING TO IS 456-2000.

12. DESIGN MIX REPORT SHOULD BE GOT APPROVED BY ANNA UNIVERSITY/IIT/NIT/PWD.

13. DUCTILE DETAILING OF THE REINFORCED CONCRETE MEMBERS AS PROVIDED IN IS13920-2016 SHOULD BE FOLLOWED.

14. THE SBC OF THE SOIL IS 250 kN/m² AT 2.0 m (AS PER SOIL REPORT) FROM GROUND LEVEL (+0.00m). THE SBC OF THE SOIL SHALL BE CONFIRMED WITH SPT TEST BEFORE LAYING CONCRETE. IF THE SBC IS LESS THAN 250 kN/m², THE FOUNDATION IS TO BE REDESIGNED

NOTATIONS:

E.F	-	EACH FACE
E.G.L	-	EXISTING GROUND LEVEL
Ø	-	DIAMETER OF THE BAR
C/C	-	CENTER TO CENTER DISTANCE
G	-	GROUND LEVEL
#	-	NUMBER BARS

CONSULTANT:

SONNE INFRASTRUCTURE PVT. LTD.,
S-1, A, 2nd FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact :044-28552445
E-mail: sonneinfra@gmail.com
www.sonneinfra.com

CLIENT NAME:

DEPARTMENT OF HORTICULTURE, KARNATAKA

DRAWN BY :

GS

CHECKED BY:

AVM

DATE:

21.09.2022

DESIGNED BY:

MOHAN

APPROVED BY:

MSLP

SIZE:

A3

TENDER PURPOSE ONLY

REV.	REVISIONS	DATE	DRAWN	DESIGNED	CHECKED

ISSUED FOR:

☐ DPR ☒ TENDER ☐ INFORMATION ☐ APPROVAL ☐ CONSTRUCTION

PROJECT TITLE:

COLD STORAGE-MURUKKANAHALLI (2000 MT)

DRAWING TITLE:

FOOTING LAYOUT, SECTION &
REINFORCEMENT DETAILS

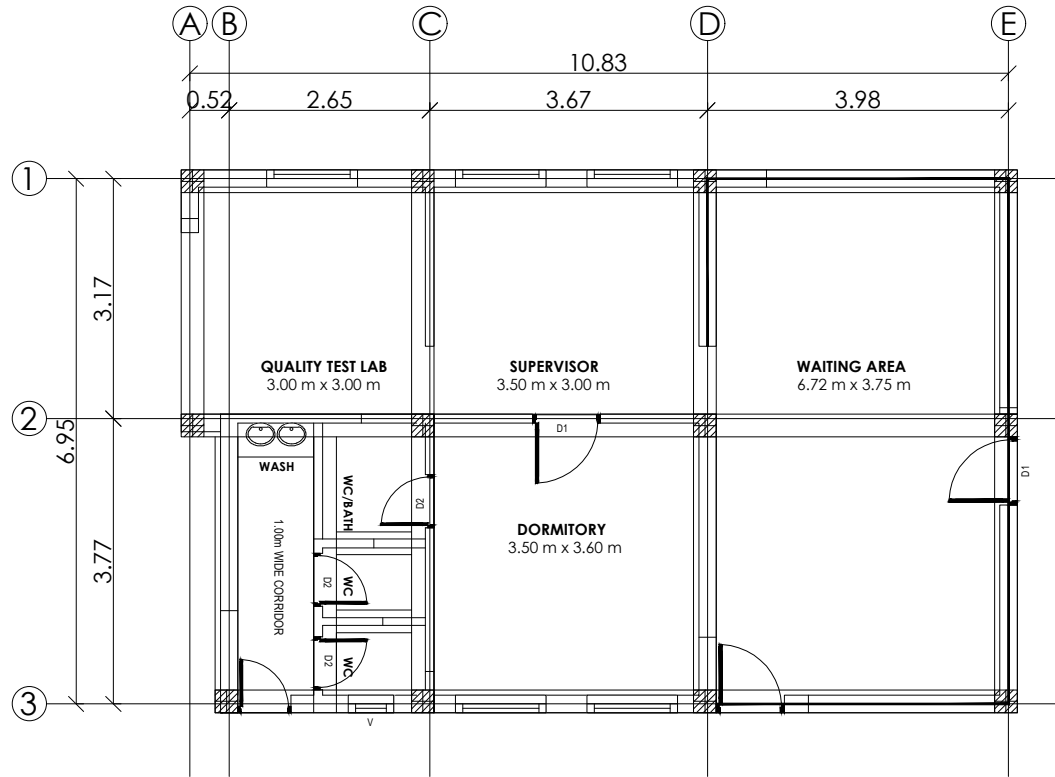
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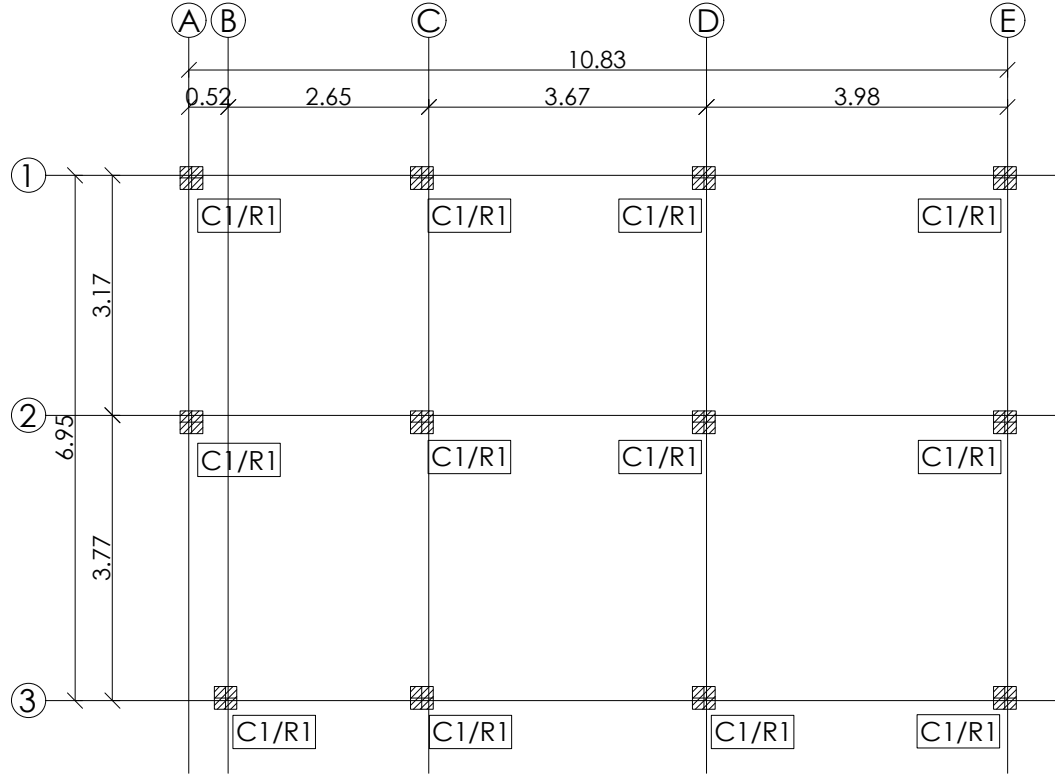
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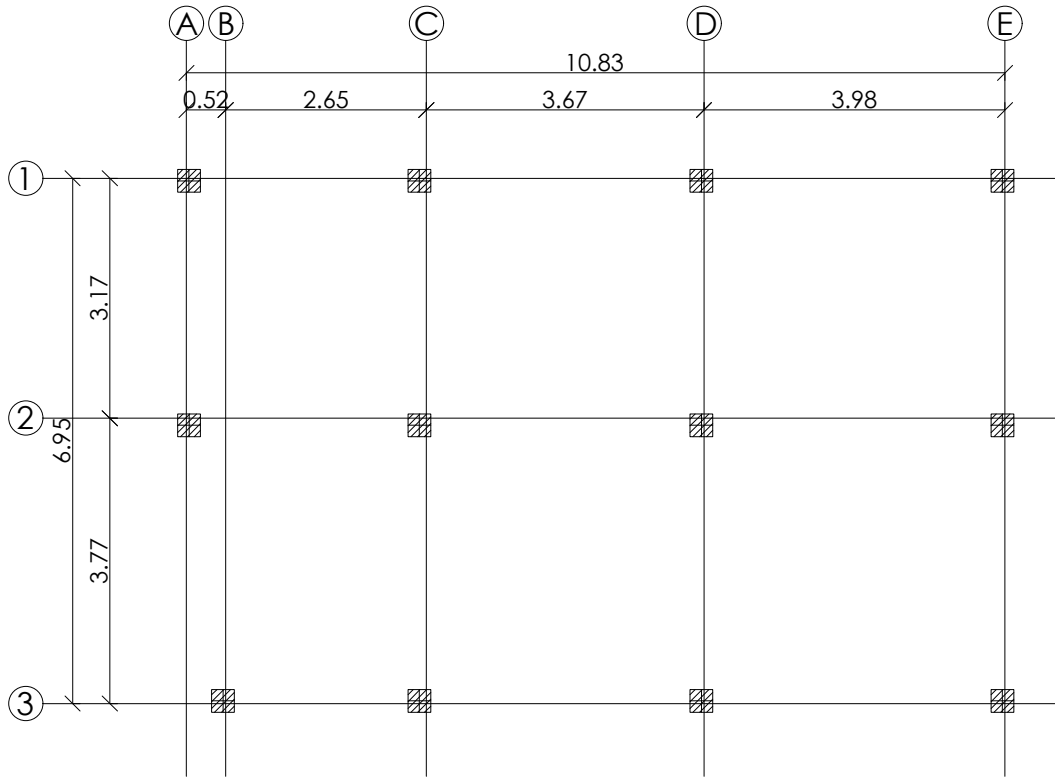
PROJECT CODE:
474



G.A OF FLOOR PLAN



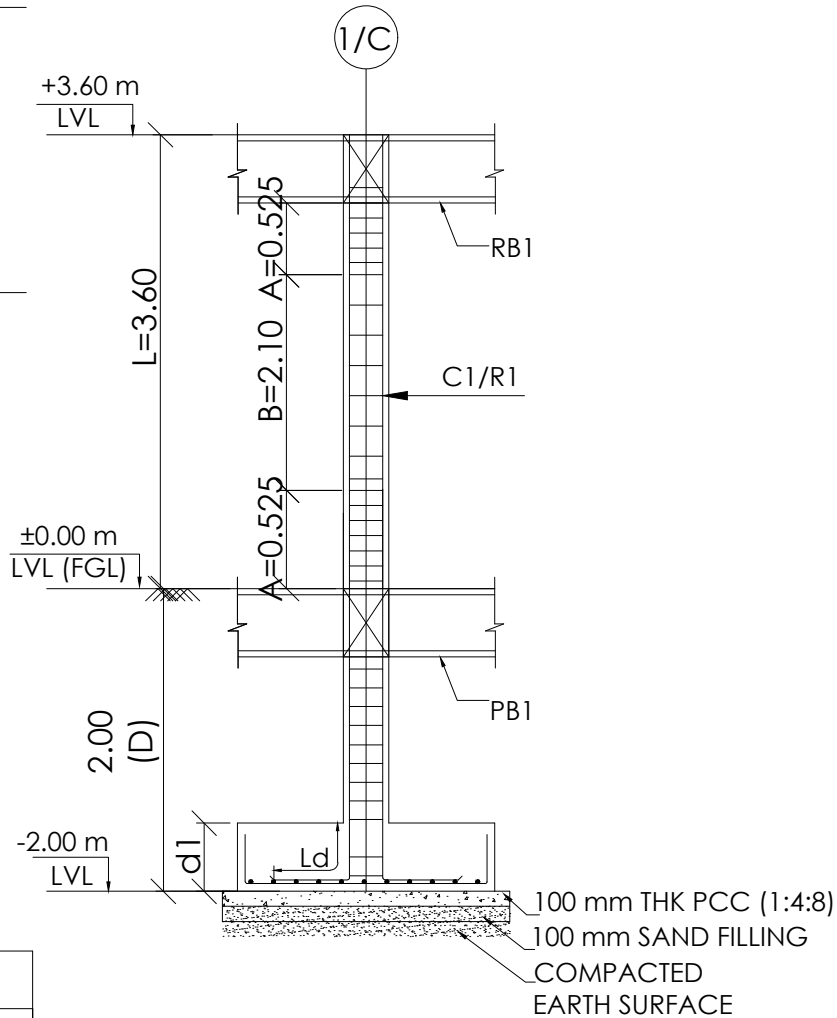
COLUMN LAYOUT



COLUMN MARKING LAYOUT

COLUMN REINF. DETAILS		
COLUMN SIZE	COLUMN C.S	SHAPE OF STIRRUPS
C1-R1 300 X 300 ● 4#-16Ø + ○ 4#-12Ø		

COLUMN REINFORCEMENT DETAILS					
COL TYPE	COLUMN SIZE(mm)	COL REIN.	NORMAL LINKS (B)	DUCTILE LINKS (A)	NO.OF COL
C1/R1	300 X 300	4#-16Ø+4#-12Ø	8Ø@150C/C	8Ø@100C/C	12



COLUMN SECTION

NOTES :
1.ALL THE DIMENSIONS ARE PROVIDE IN METER (m) UNLESS OTHER WISE SPECIFIED.
2.DIMENSIONS SHALL NOT BE MEASURED FROM THE DRAWINGS, & ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3.THIS DRAWING SHALL NOT BE USED THAN THE PURPOSE MARKED/ISSUED.
4.HIGH YIELD STRENGTH DEFORMED BARS Fe 500 CONFIRMING IS 1786-1985 TO BE USED WITH MINIMUM PERCENTAGE OF ELONGATION 14.5%.
5.THE GRADE OF CONCRETE M-30 (DESIGN MIX) CONFORMING FOR IS 456-2000 FOR ALL RCC WORK UNLESS OTHERWISE SPECIFIED.
6.MINIMUM CEMENT CONTENT SHALL NOT BE LESS THAN 320 kg/m³ FOR M-30 CONCRETE.

7. ADMIXTURES SHALL BE ADDED WITH PERMISSION OF CLIENT.
8. CLEAR COVER TO THE REINFORCEMENT ARE AS FOLLOWS
FOUNDATION - 50mm
COLUMN - 40mm
BEAM - 30mm
RCC WALL - 25mm
SLAB - 25mm
9. STRUCTURE IS DESIGNED FOR GROUND FLOOR ONLY.
10. LAPPING OF COLUMN BARS SHALL BE MIDWAY BETWEEN SLABS OF STAGGERED WITH LAP LENGTH NOT LESS THAN 50Ø.
11. ALL PCC WORKS SHOULD BE CARNED OUT WITH PCC 1:4:8 CONFORMING TO IS 456-2000.
12. DESIGN MIX REPORT SHOULD BE GOT APPROVED BY ANNA UNIVERSITY/IIT MADRAS/PWD

13. THE 600M DIA PILE CARRYING CAPACITY IS 86 TONNES(31 M LENGTH PILE).

NOTATIONS:
SFR - SIDE FACE REINFORCEMENT
E.F - EACH FACE
E.G.L - EXISTING GROUND LEVEL
Ø - DIAMETER OF THE BAR
C/C - CENTER TO CENTER DISTANCE
GL - GROUND LEVEL
- NUMBER BARS

CONSULTANT:
SONNE INFRASTRUCTURE PVT. LTD.,

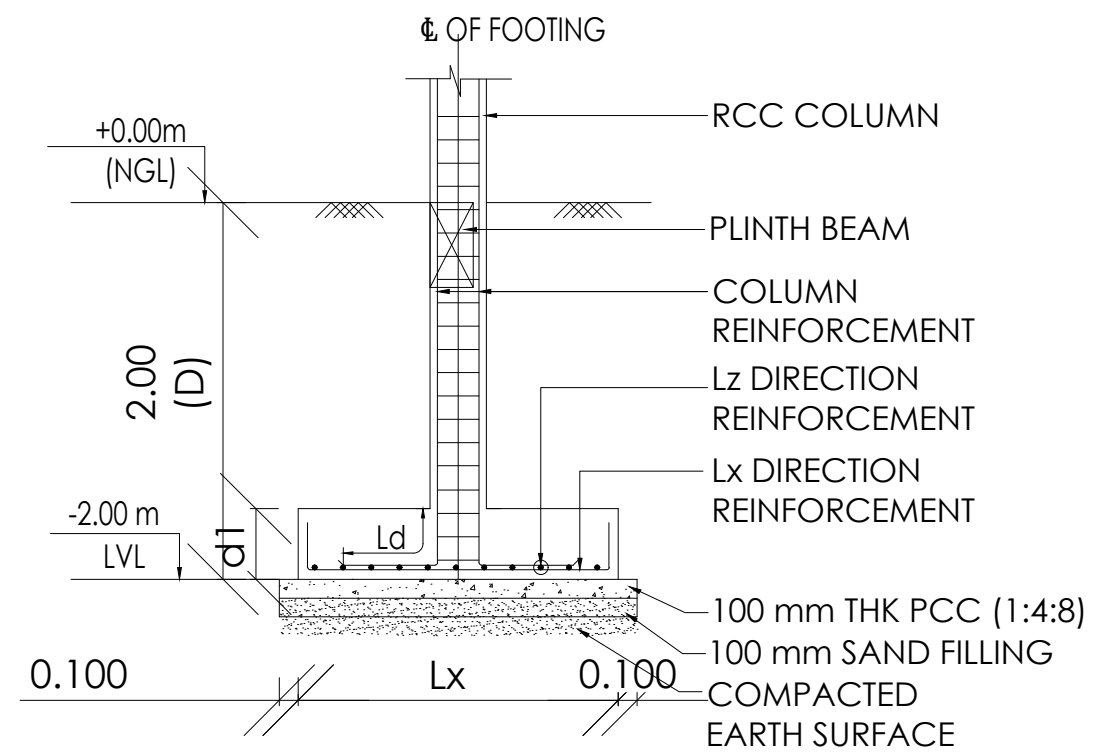
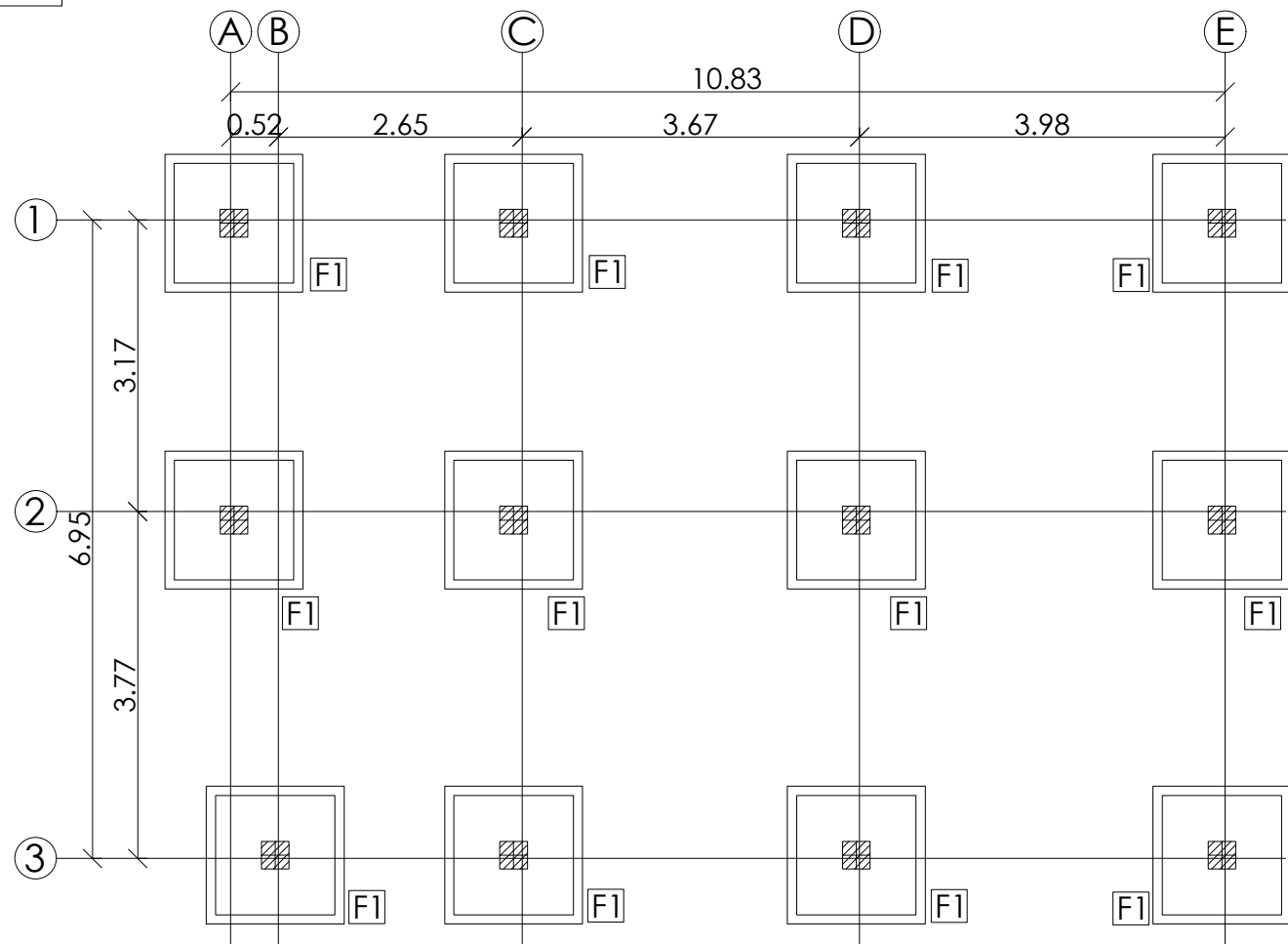
S-1, A, 2nd FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 944-28552445
E-mail: sonneinfra@gmail.com
www.sonneinfra.com

CLIENT NAME:
DEPARTMENT OF HORTICULTURE, KARNATAKA

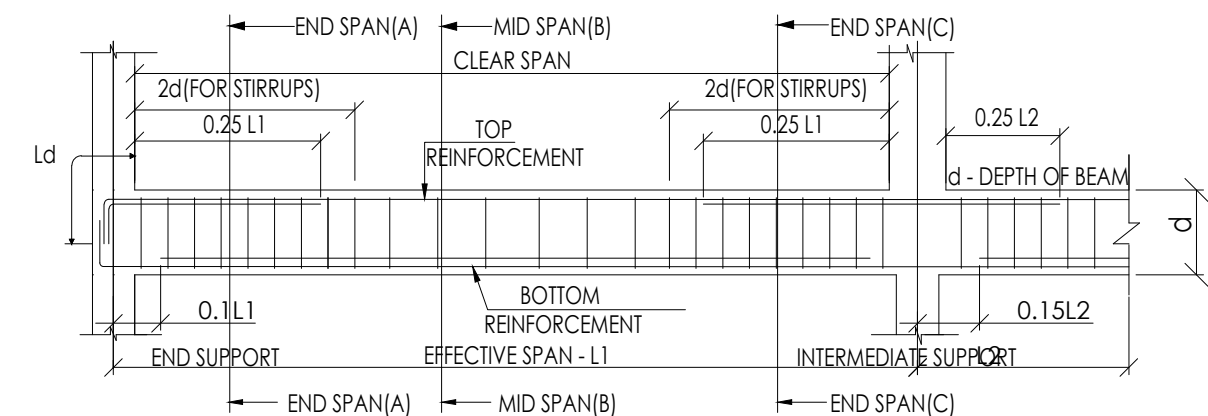
DRAWN BY : GS
DESIGNED BY : GS
CHECKED BY : AVM
APPROVED BY : MSLP
DATE: 26.02.2024
SIZE: A3

TENDER PURPOSE ONLY					
REV.	REVISIONS	DATE	DRAWN	DESIGNED	CHECKED

ISSUED FOR:
☐ DPR ☒ TENDER ☐ INFORMATION ☐ APPROVAL ☐ CONSTRUCTION
PROJECT TITLE:
"RE - CONSTRUCTION OF BUS STAND UNDER PUDUCHERRY SMART CITY DEVELOPMENT LIMITED"
DRAWING TITLE:
MAINTENANCE SHED - COLUMN & PILE CAP LAYOUT & REINFORCEMENT DETAILS
DRAWING NO:
SIPL-PDY-22-473-ST- 09
SHEET NO:
09



FOOTING SECTION



BEAM REINFORCEMENT

SCHEDULE OF FOOTING						
FOOTING NAME	FOOTING SIZE Lx X Lz	D	d1	BOTTOM REINFORCEMENT		NOS
				Lx DIRECTION	Lz DIRECTION	
F1	1.30 X 1.30	2.00	0.350	10Ø@ 100 C/C	10Ø@ 100 C/C	12

NOTES :

- 1.ALL THE DIMENSIONS ARE PROVIDE IN METER (m) UNLESS OTHER WISE SPECIFIED.
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- 3.THIS DRAWING SHALL NOT BE USED THAN THE PURPOSE MARKED/ISSUED.
- 4.HIGH YIELD STRENGTH DEFORMED BARS Fe 500 CONFIRMING IS 1786-1985 TO BE USED WITH MINIMUM PERCENTAGE OF ELONGATION 14.5%.
- 5.THE GRADE OF CONCRETE M-30 (DESIGN MIX) CONFORMING FOR IS 456-2000 FOR ALL RCC WORK UNLESS OTHERWISE SPECIFIED.
- 6.MINIMUM CEMENT CONTENT SHALL NOT BE LESS THAN 320 kg/m³ FOR M-30 CONCRETE.

7. ADMIXTURES SHALL BE ADDED WITH PERMISSION OF CLIENT.
8. CLEAR COVER TO THE REINFORCEMENT ARE AS FOLLOWS

FOUNDATION	-	50mm
COLUMN	-	40mm
BEAM	-	30mm
RCC WALL	-	25mm
SLAB	-	25mm
9. STRUCTURE IS DESIGNED FOR GROUND FLOOR ONLY.
10. LAPPING OF COLUMN BARS SHALL BE MIDWAY BETWEEN SLABS OF STAGGERED WITH LAP LENGTH NOT LESS THAN 50Ø.
11. ALL PCC WORKS SHOULD BE CARNED OUT WITH PCC 1:4:8 CONFORMING TO IS 456-2000.
12. DESIGN MIX REPORT SHOULD BE GOT APPROVED BY ANNA UNIVERSITY/IIT MADRAS/PWD

13. THE 600M DIA PILE CARRYING CAPACITY IS 86 TONNES(31 M LENGTH PILE).

NOTATIONS:

SFR	-	SIDE FACE REINFORCEMENT
E.F	-	EACH FACE
E.G.L	-	EXISTING GROUND LEVEL
Ø	-	DIAMETER OF THE BAR
C/C	-	CENTER TO CENTER DISTANCE
GL	-	GROUND LEVEL
#	-	NUMBER BARS

CONSULTANT:

SONNE INFRASTRUCTURE PVT. LTD.,

 S-1, A 2nd FLOOR, AMAR SINDUR COMPLEX,
43- PANTHEON ROAD, EGMORE,
CHENNAI - 600008
Contact : 044-28552445
E-mail: sonneinfra@gmail.com
www.sonneinfra.com

CLIENT NAME:
DEPARTMENT OF HORTICULTURE, KARNATAKA

DRAWN BY: GS	CHECKED BY: AVM	DATE: 26.02.20
DESIGNED BY: GS	APPROVED BY: MSLP	SIZE: A3

TENDER PURPOSE ONLY					
REV.	REVISIONS	DATE	DRAWN	DESIGNED	CHECKED

ISSUED FOR:	
<input type="checkbox"/> DPR	<input checked="" type="checkbox"/> TENDER <input type="checkbox"/> INFORMATION <input type="checkbox"/> APPROVAL <input type="checkbox"/> CONSTRUCTION
PROJECT TITLE:	
"RE - CONSTRUCTION OF BUS STAND UNDER PUDUCHERRY SMART CITY DEVELOPMENT LIMITED"	
PROJECT CODE:	473

DRAWING TITLE:

MAINTENANCE SHED- BEAM & SLAB
LAYOUT & REINFORCEMENT DETAILS

DRAWING NO:	SHEET NO:
SIPL-PDY-22-473-ST- 10	10