

**E-TENDER  
FOR**

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF  
MGPS FOR CONSTRUCTION OF 200 BEDDED CARDIOLOGY  
BLOCK AT GOVERNMENT MEDICAL COLLEGE KOTTAYAM**

**Tender No. HITES/IDS/MGPS-CARDIO/23-24/22  
(E-tender ID: 2024\_HITES\_656044\_1)**

**TENDER DOCUMENT  
VOLUME I, II, III & IV**



Golden Jubilee Block, HLL Bhavan,  
Poojappura P.O  
Thiruvananthapuram  
PH: 0471 - 2775500

**VOLUME I**

## HITES

### NOTICE INVITING E-TENDER

Tender No. HITES/IDS/MGPS-CARDIO/23-24/22

08.02.2024

HLL Infra Tech Services Ltd (HITES) on behalf of Government Medical College, Kottayam invites tender for the following work:

Name and Description of work	Estimated cost Excluding GST (Rs.)	Completion period of Work	Tender document fee / e-tender processing fee	Last date & time to submit the e-tender	Bid Security amount (Rs.)
Supply, Installation, Testing and Commissioning of MGPS for Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam	1,57,05,089/-	6 months	Rs.5900 /- (incl. of GST) Non refundable	21.02.2024 @ 3.00PM	Rs.50,000/-

All bidders shall pay e-tender processing fee and EMD online.

For submission & other tender details, please refer detailed NIT on e-tender portal [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) and [www.hllhites.com](http://www.hllhites.com).

HITES/ Client reserves the right to accept or reject any application without assigning any reason or incurring any liability whatsoever. Prospective bidders are advised to regularly scan through [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) and [www.hllhites.com](http://www.hllhites.com) as corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

1. The intending bidder must read the terms and conditions of Notice Inviting Bids and the Bid documents carefully. They should only submit the bid if they consider themselves eligible and they are in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. The document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from e-tender portal [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) and [www.hllhites.com](http://www.hllhites.com).
4. Contractor must ensure to quote rate of each item. Therefore, if any cell is left blank and

Tender No. HITES/IDS/MGPS-CARDIO/23-24/22

no rate is quoted by the bidder, rate of such item shall be treated as "0"(ZERO).

- a. If a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
5. The Technical bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.
6. The Client/HITES reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
7. TENDER FEE (NON-REFUNDABLE): The tender document(s), may be downloaded free of cost from the e-Government Procurement (e-GP) website ([www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in)). However the bid submission fee, as mentioned in the NIT, is required to be submitted along with the online bid.
8. EMD: Bidders shall remit the Bid Security /EMD using the online payment options of e-Procurement system only. Bidders are advised to visit the "Downloads" section of e-Procurement website.
9. The complete set of Tender Documents shall be made available, as per above schedule, on the above mentioned websites.
10. HITES reserves the right to accept or reject any application without assigning any reason or incurring any liability whatsoever.
11. Prospective bidders are advised to regularly scan through the given websites as corrigenda/amendments etc., if any, will be notified on these portals only and separate advertisement will not be made for this. Bidders are advised to check all these websites regularly as at times, it is not possible to upload data on a particular website due to some technical glitch.

## 12. **General Tender Terms & Conditions for e-Procurement**

This tender is an e-Tender and is being published online. The tender is invited in Two cover system from the registered and eligible firms through e-procurement portal of Government of Kerala ([etenders.kerala.gov.in](http://etenders.kerala.gov.in)). Prospective bidders willing to participate in this tender shall necessarily register themselves with above mentioned e-procurement portal.

The tender timeline is available in the critical date section of this tender published in [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in).

Online Bidder registration process:

Bidders should have a Class II or above Digital Signature Certificate (DSC) to be procured from any Registration Authorities (RA) under the Certifying Agency of India. Details of RAs will be available on [www.cca.gov.in](http://www.cca.gov.in). Once, the DSC is obtained, bidders have to register on [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) website for participating in this tender.

Website registration is a one-time process without any registration fees. However, bidders have to procure DSC at their own cost.

Bidders may contact e-Procurement support desk of Kerala State IT Mission over telephone at 0471-2577088/188/388 or 0484-2336006, 2332262 or 0497-2764788, 2764188 or 0483-273294 or through email: [etendershelp@kerala.gov.in](mailto:etendershelp@kerala.gov.in) or [helpetender@gmail.com](mailto:helpetender@gmail.com) for assistance in this regard.

A). Online Tender Process:

The tender process shall consist of the following stages:

- i. Downloading of tender document: Tender document will be available for free download on [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in). However, tender document fees shall be payable at the time of bid submission as stipulated in this tender document.
- ii. Publishing of Corrigendum: All corrigenda shall be published on [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) and shall not be available elsewhere.**
- iii. Bid submission: Bidders have to submit their bids along with supporting documents to support their eligibility, as required in this tender document on [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in). **No manual submission of bid is allowed and manual bids shall not be accepted under any circumstances.**
- iv. Opening of Technical Bid and Bidder short-listing: The technical bids will be opened, evaluated and shortlisted as per the eligibility and technical qualifications. All documents in support of technical qualifications shall be submitted (online). Failure to submit the documents online will attract disqualification. Bids shortlisted by this process will be taken up for opening the financial bid.
- v. Opening of Financial Bids: Bids of the qualified bidder's shall only be considered for opening and evaluation of the financial bid, on the date and time mentioned in critical date's section.

B). Documents Comprising Bid:

- i. The First Stage (Pre-Qualification or Technical Cover based on 1cover or 2 cover tender system):  
  
Pre-Qualification or Technical proposal shall contain the scanned copies of the documents which has to be uploaded in the e tender portal:  
  
The department doesn't take any responsibility for any technical snag or failure that has taken place during document upload.
- ii. The Second Stage (Financial Cover or as per tender cover system):  
  
The Bidder shall complete the Price bid as per format given for download along with this tender.

Note: The blank price bid should be downloaded and saved on bidder's computer without changing file-name otherwise price bid will not get uploaded. The bidder should fill in the details in the same file and upload the same back to the website.

Fixed price: Prices quoted by the Bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable/ variable price quotation will be treated as non - responsive and rejected.

C). Tender Document Fees/e-tender processing fee and Earnest Money Deposit (EMD)

The Bidder shall pay, Tender Document Fees /e-tender processing fee of and Earnest Money Deposit. The EMD is required to protect the purchaser against risk of Bidder's conduct, which would warrant the forfeiture of security.

Online Payment modes: The e-tender processing fee and EMD can be paid in the following manner through e-Payment facility provided by the e-Procurement system.

State Bank of India Multi Option Payment System (SBI MOPS Gateway): Bidders are required to avail Internet Banking Facility in any of below banks for making tender remittances in e Procurement System.

A) Internet Banking Options (Retail)			
1	Axis Bank	32	Lakshmi Vilas Bank
2	Andhra Bank	33	Mehsana Urban Co-op Bank
3	Bandan Bank	34	NKGSB Co-operative Bank
4	Bank of Bahrain and Kuwait	35	Oriental Bank of Commerce
5	Bank of Baroda	36	Punjab and Maharashtra Cooperative Bank
6	Bank of India	37	Punjab National Bank
7	Bank of Maharashtra	38	Punjab and Sind Bank
8	Bassein Catholic Co-operative Bank	39	RBL Bank
9	BNP Paribas	40	Saraswat Cooperative Bank
10	Canara Bank	41	ShamraoVithal Cooperative Bank
11	Catholic Syrian Bank	42	South Indian Bank
12	Central Bank of India	43	Standard Chartered Bank
13	City Union Bank	44	State Bank of India
14	Corporation Bank	45	Syndicate Bank
15	Cosmos Bank	46	Tamilnadu Mercantile Bank
16	DCB Bank	47	Tamilnadu Cooperative Bank
17	Dena Bank	48	The KalyanJanataSahakari Bank
18	Deutsche Bank	49	TJSB Bank (Erstwhile Thane JanataSahakari Bank)
19	Dhanalaxmi Bank	50	UCO Bank

20	Federal Bank	51	Union Bank of India
21	HDFC Bank	52	United Bank of India
22	ICICI Bank	53	Vijaya Bank
23	IDBI Bank	54	YES Bank
24	Indian Bank		
25	Indian Overseas Bank		
26	IndusInd Bank		
27	Jammu & Kashmir Bank		
28	JanataSahakari Bank		
29	Karnataka Bank		
30	KarurVysya Bank		
31	Kotak Mahindra Bank		
<b>B) Internet Banking Options (Corporate)</b>			
1	Bank of Baroda	21	Laxmi Vilas Bank
2	Bank of India	22	Oriental Bank of Commerce
3	Bank of Maharashtra	23	Punjab & Maharashtra Coop Bank
4	BNP Paribas	24	Punjab & Sind Bank
5	Canara Bank	25	Punjab National Bank
6	Catholic Syrian Bank	26	RBL Bank
7	City Union Bank	27	ShamraoVitthal Co-operative Bank
8	Corporation Bank	28	South Indian Bank
9	Cosmos Bank	29	State Bank of India
10	Deutsche Bank	30	Syndicate Bank
11	Development Credit Bank	31	UCO Bank
12	Dhanalaxmi Bank	32	Union Bank of India
13	Federal Bank	33	UPPCL
14	HDFC Bank	34	Vijaya Bank
15	ICICI Bank	35	Axis Bank
16	Indian Overseas Bank		
17	JantaSahakari Bank		
18	Jammu & Kashmir Bank		
19	KarurVysya Bank		
20	Kotak Bank		

During the online bid submission process, bidder shall select SBI MOPS option and submit the page, to view the Terms and Conditions page. On further submitting the same, the e-Procurement system will re-direct the bidder to MOPS Gateway, where two options namely SBI and Other Banks\* will be shown. Here, Bidder may proceed as per below:

- a) SBI Account Holders shall click SBI option to with its Net Banking Facility., where bidder can enter their internet banking credentials and transfer the Tender Fee and EMD amount.
- b) Other Bank Account Holders may click Other Banks option to view the bank selection page. Here, bidders can select from any of the 54 Banks to proceed with its Net Banking Facility, for remitting tender payments.

\*Transaction Charges for Other Banks vide SBI Letter No. LHO/TVM/AC/2016-17/47 – 1% of transaction value subject to a minimum of Rs. 50/- and maximum of Rs. 150/-.

\* Bidders who are using Other Banks option under SBI MOPS Payment Gateway, are advised by SBI to make online payment 72 hours in advance before tender closing time.

Any transaction charges levied while using any of the above modes of online payment has to be borne by the bidder. The supplier/contractor's bid will be evaluated only if payment status against bidder is showing “Success” during bid opening.

**D). SUBMISSION PROCESS:**

For submission of bids, all interested bidders have to register online as explained above in this document. After registration, bidders shall submit their Technical bid and Financial bid online on [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) along with online payment of tender document fees and EMD.

It is necessary to click on “Freeze bid” link/ icon to complete the process of bid submission otherwise the bid will not get submitted online and the same shall not be available for viewing/ opening during bid opening process.

**Deputy General Manager (ID)**



## **DISCLAIMER**

This document has been prepared by HITES on behalf of Government Medical College, Kottayam. The information is provided to prospective Bidders, who are interested to Bid for the tender Supply, Installation, Testing and Commissioning of MGPS for Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam.

This document is neither an agreement, nor an offer or invitation to perform work of any kind to any party. The purpose of this document is to provide interested parties with information to assist the preparation of their Bid. While due care has been taken in the preparation of the information contained herein, and is believed to be complete and accurate, neither any of the authorities/ agencies nor any of their respective officers, employees, agents or advisors give any warranty or make any representations, expressed or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

Further, HITES does not claim that the information is exhaustive. Respondents to this document are required to make their own inquiry/ survey and will be required to confirm, in writing, that they have done so and they did not rely solely on the information given herein.

HITES reserves the right not to proceed with the Project or to change the configuration of the Project, to alter the timetable reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline to discuss the Project further with any respondent.

No reimbursement of cost of any type or on any account will be made to persons or entities submitting their Bid.

## **Definitions**

1. **“Application”** shall mean the response submitted by interested parties.
2. **“BID/Tender”** shall mean documents downloaded from the website by the prospective Bidder. The word “Tender” is synonymous with **“Bid”**.
3. **“Bid Security/ Earnest Money”** shall mean the amount to be deposited by the Bidder with the Tender.
4. **“Bid Validity”** shall mean the period for which the Bids shall remain valid.
5. **“Bidder”** shall mean the party located in India who is participating in the Tendering process pursuant to and in accordance with the terms of this document. The word **“Tenderer”** is synonymous with **“Bidder”**.
6. **“Client”** means ‘Government Medical College, Kottayam’.
7. **“Contract Agreement”** shall mean the agreement to be signed between the Successful Tenderer and the Client / HITES.
8. **“Contract Price”** shall mean the financial bid of the Successful Tenderer as accepted by the Client / HITES.
9. **“Date of commencement of work”** shall mean the date of Start as specified in the Schedule “F” i.e. from the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later.
10. **“Defects Liability Period”/“Maintenance Period”** means the period after completion of the Project during which the Client or his authorized representative/ Engineer-in-charge of HITES that will notify to the Contractor any defect noticed in the work and the Contractor is liable for rectification of such defects. Proof of dispatch of letter notifying the defect/ intimating the representative of Contractor at site on the last date of Defect liability period will make the Contractor liable for rectify all such defects.
11. **“Engineer in Charge” (EIC)** means the Engineer Officer of HITES as mentioned in the schedule “F” hereunder, as authorized by HITES/ Client.

12. **“Evaluation Committee”** shall mean the committee constituted by M/s HLL Infra Tech Services Ltd. (HITES) for the evaluation of the bids.
13. **“HITES”** shall mean M/s HLL Infra Tech Services Ltd., appointed by the Client as ‘Consultant’ for the project.
14. **“Letter of Acceptance”** shall mean the letter issued by the HITES to the Successful Tenderer inviting him to sign the Contract Agreement.
15. **“Performance Guarantee”** shall mean the amount to be paid by the Successful Tenderer as per relevant clause mentioned elsewhere.
16. **“E-tender Processing Fee”** shall mean the amount to be paid by the Tenderers in consideration of cost of bid document.
17. **“Project / Work”** shall mean the work of Supply, Installation, Testing and Commissioning of MGPS for Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam.
18. **“Site”** shall mean the place where the works under the Project are to be carried out and the details of which are provided in this document.
19. **“Successful Tenderer”** shall mean the Tenderer declared technically and financially successful for the Project and with whom, the Contract Agreement shall be signed.
20. **“Similar Works”** as defined in eligibility criteria.
21. **“Scheduled banks”** mean **“Scheduled commercial Banks”**
22. **“NIT”** means **Notice Inviting Tender**. The word **“Notice Inviting Tenders”** is synonymous with **“Notice Inviting Bids”**.
23. **“ITB”** means **Instructions to Bidders**

**SECTION I**  
**NOTICE INVITING BIDS**

1. HITES on behalf of Government Medical College, Kottayam invites bids from eligible contractors/firms as per eligibility criteria laid down, for the work of ‘Supply, Installation, Testing and Commissioning of MGPS for Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam’.

This project is under the scheme NABARD-RIDF Tranche XXVI - Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam.

- 1.1 The work is estimated to cost as given in Table - I. Any clarification shall be sought from the tender inviting authority on courier / e-mail. The NIT and other details are also available on e-tender portal [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in), [www.hllhites.com](http://www.hllhites.com).

1.2 TABLE – I

Sl. No.	Description	Details
1	Tender no.	HITES/IDS/MGPS-CARDIO/23-24/22 dated 08.02.2024
2	Name of work	Supply, Installation, Testing and Commissioning of MGPS for Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam.
3	Estimated cost	Rs.1,57,05,089/- (Excl. GST)
4	Earnest Money deposit	Rs.50,000/- The bidder shall remit 100% of EMD as online
5	E-Tender Processing Fee (Non-refundable) – online	Rs.5,900/-(inclusive of GST)
6	Issue of Tender documents	Documents shall be available online at <a href="http://www.etenders.kerala.gov.in">www.etenders.kerala.gov.in</a> , and <a href="http://hllhites.com/tenders">http://hllhites.com/tenders</a>
7	Pre bid meeting	Pre-bid meeting on 13.02.2024 at 11.30 AM at HITES Office, Poojapura. Bidder can join the pre-bid through Video Conferencing link <a href="https://meet.google.com/iqk-mxqm-xfk">meet.google.com/iqk-mxqm-xfk</a> . The bidders having queries/clarification regarding the tender can submit their queries at e-tender portal/as email <a href="mailto:tenders@hllhites.com">tenders@hllhites.com</a> on or before 13.02.2024 @11.00 hrs.

8	Last Date & time of Submission of Bids online (Bid due date)	21.02.2024 at 3.00 pm
9	Date & time of opening of Technical Bids through e-tender portal	22.02.2024 at 3.00 pm
10	Date of start of work	From the first date of handing over of the site or 15 <sup>th</sup> day from the date of issue of Letter of Acceptance (LOA), whichever is later
11	Completion period	06 (Six ) months from date of start of work
12	Performance Guarantee	3% of tendered value. Performance Guarantee shall be in form of Demand Draft or Treasury Fixed Deposit Receipt or Bank Guarantee from any scheduled commercial bank based in India. This guarantee to be valid up to six months beyond the stipulated date of completion or the extended period, thereof.
13	Security Deposit	5 % of tendered value (will be released only after completion of DLP Period)
14	Defects Liability period / Comprehensive Warranty Period	3 years for the work and equipment's supplied after taking over of work by the Client/ HITES.
15	Bank account details for the purpose of preparation of Bank Guarantee only:	A/c No.38160968975. IFS Code: SBIN0004350 Bank : SBI, Commercial Branch, Thycaud, Trivandrum Name of A/c: HLL Infra Tech Services Ltd.
16	Contact details for site visit	Ms. Keerthi KS, Manager(BME) e-mail: keerthiks@hllhites.com contact: 7012872867

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

## 1.4 Eligibility Criteria

### 1.4.1 The Tenderer should meet the following minimum eligibility criteria:

Bidder who fulfills the following requirement shall be eligible to apply. Joint ventures of whatsoever kind are not accepted.

- a. The bidder should be an Indian firm having Registered Office in South India
- b. The applicant should be an original manufacture or dealers authorized by the OEM and should submit the original authorization letter from the OEM.
- c. Experience should be in the name of the bidding company and not in subsidiary/ associate company/ Group Company etc.
- d. Experience of having successfully completed works during the last seven years ending last day of the month previous to the one in which tenders are invited as follows:

Three similar works each costing not less than amount equal to 40% of estimated cost put to tender

Or

Two similar works each costing not less than amount equal to 50% of estimated cost put to tender

Or

One similar work costing not less than amount equal to 80% of estimated cost put to tender

“**Similar Work**” shall means one work of Supply, Installation, Testing & Commissioning of Medical Gas Pipeline System (MGPS) in hospitals

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

Own works / work under the same management / own certification of the bidder shall not be considered.

In case the work experience is of Private sector the completion certificate shall be supported with copies of Corresponding TDS Certificates.

- e. **Turnover:** Average annual financial turnover should be at least 30% of the estimated cost put to tender during the immediate **last three** consecutive financial year ending 31<sup>st</sup>March, 2023. The turnover should be of the Bidding Company and not for Group Company or subsidiary company etc. ITRs for the last three years to be submitted. [Form T-1 to be submitted]

- f. **Profit/loss:** The bidder should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending 31st March 2023. This should be duly certified by the Chartered Accountant.
- g. **Solvency certificate:** The bidder shall have a solvency equivalent to 40% of the estimated cost put to tender certified by his bankers for this work. Banker's certificates (as prescribed in Form T-1 B) in the current financial year should be on letter head of the Bank, addressed to tendering authority.
- h. The performance of the bidder for the completed works shall be rated by the Client as satisfactory or above. Those who had done work/doing work in HITES/HLL shall produce completion/ progress certificate from the Engineer in charge not below the rank of Project manager. The bidder shall be considered for further evaluation only if the performance of the bidder for the work is rated as **'good or above'**. This is mandatory. The bidders who have initiated litigation against HITES shall be considered only after the litigation is completed.
- i. The bidders shall submit along with the bid a declaration as per **FORM-J** of this document duly signed by nominated representative of HITES/Client after site visit. This is mandatory. **Bids submitted without FORM-J duly signed by nominated representative of HITES/Client and bidder will be summarily rejected and will not be considered for evaluation.**
- j. The works completed/being executed by the bidders if required will be inspected by a technical officer /expert authorized by HITES. If it is found after inspection that the performance of the bidder for the inspected works is not satisfactory in terms of quality/ time overrun/overall performance etc, the bidder may get disqualified after due verification even though the documents submitted by them will meet the other eligibility criteria as above.
- k. The bidder shall have GST registration. The copy of GST registration shall be submitted.
- l. The bidder shall have ESI/ EPF registration. The copy of valid ESI/EPF registration shall be submitted. In case the same is not applicable declaration to that effect may be submitted by the bidder.
- m. The bidder should not have been under blacklisting or debarred or penalised from bidding by any government agency or public sector undertaking or judicial authority/arbitration body as on last date of submission of bid. The bidder shall submit the affidavit on a Rs.100/- non judicial stamp paper duly notarized, to this effect, as per prescribed format (Form "F").
- n. The bidder shall submit an affidavit duly signed and sealed by their authorized representative stating that 'The work if awarded to us, the work will be executed directly us.'

1.5 The time allowed for carrying out the work will be **06 (six months)** from the date of start of work.

Date of start will be reckoned from the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later.

- 1.6 (i) The site for the work is available.
- (ii) The labour camp shall not be allowed to locate inside the proposed site.
- (iii) As the work is to be executed in the existing functioning hospital, contractor shall take special care to avoid disturbance to the functioning of the hospital.
- (iv) The Contractor shall work in close co-ordination other contractor if any working in the campus to ensure smooth & timely completion of the work
- (v) The Contractor shall settle labour problems if any occurred at site during the construction stage.
- 1.7 The bid documents consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents is available on line free of cost.
- 1.8 The bid submitted shall become invalid and e-tender processing fee shall not be refunded if:
- (i) The bidder is found ineligible.
- (ii) The bidder does not upload all the documents (including GST registration) as stipulated in the bid document. In case the firm is not registered at the time of submission of bid, they will submit an undertaking that they will get themselves registered with the concerned authorities in case they are awarded the work.
- (iii) If any discrepancy is noticed in the documents as uploaded at the time of submission of bid.
- 1.9 The Technical package and Financial Package as detailed in clause 2.3.6 and 2.3.7 of ITB shall be submitted online, each marked as per clause 2.3.11 of ITB as per the stipulated date & time of submission of bid.
- 1.10 The Contractor, whose tender is accepted, will be required to furnish performance guarantee @ 3% (Three Percent) of the tendered amount within 25 days of issue of LOA in form of Demand Draft or Treasury Fixed Deposit Receipt or Bank Guarantee of any scheduled commercial bank based in India, in favour of "HLL Infra Tech Services Limited" as per Form B. Performance Guarantee to be valid up to six months beyond the stipulated date of completion or the extended period, thereof.

#### **1.10.1 Additional Performance Security:**

If the bid of the successful bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract, the HITES may require the bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices. After evaluation of the price



analysis, the HITES may require that the amount of the Performance Security set forth in ITB be increased at the expense of the successful bidder to a level sufficient to protect the HITES against financial loss in the event of default of the successful bidder under the Contract. The amount of the increased Performance Security shall be decided at the sole discretion of the HITES, which shall be final, binding and conclusive on the bidder. The detailed price analysis produced by bidder if not found satisfactory, the bid will be rejected.

The Bidder quoting below Minus (-) 5% of the estimated cost put to tender shall submit the additional performance guarantee as follows:

<b>Sl. No.</b>	<b>Range of Difference between the estimated cost put to tender and Bid Amount</b>	<b>Additional Performance Security to be deposited by the successful bidder</b>
<b>i</b>	upto 5%	No Additional Performance Security
<b>ii</b>	From 5% and above and below 10%	50% of (Difference between estimated cost put to tender and Bid Amount)
<b>iii</b>	From 10% and above	150% of (Difference between estimated cost put to tender and Bid Amount)

The Additional Performance Guarantee shall remain valid up to six months beyond the stipulated date of completion or the extended period, thereof.

The performance guarantee and additional performance security shall be released to the Contractor upon successful completion of project including extended period thereof, as certified by EIC. No interest shall be payable on performance guarantee and additional performance security.

1.11 In case the contractor fails to deposit the said performance guarantee within the period as indicated in schedule 'F', including the extended period if any, the earnest money deposited by the contractor shall be forfeited automatically without any notice to the contractor.

1.12 The contractor whose tender is accepted will also be required to furnish either copy of applicable licenses/ registration or proof of applying for obtaining labour licenses, registration with EPFO, ESIC (which ever required and applicable as per scope of work and direction of EIC), programme chart (time and progress) and manpower deployment schedule within 25 days of issues of LOA.

**1.13 Evaluation of performance :**

Evaluation of the performance of contractors for eligibility shall be done by the HITES. If required, the works being executed by the bidders who otherwise qualify will be got inspected by a Technical Officer / Expert authorized by the Client

/HITES. If it is found that the performance of the bidder for the inspected works is not satisfactory in terms of quality/ time overrun/overall performance etc, the bidder may get disqualified even though the documents submitted by them will meet the eligibility criteria as laid down in clause 1.4.1.

- 1.14 Tenderers are instructed to compulsorily inspect and examine the site and its surroundings at their own cost and satisfy themselves before submitting their tenders as to the nature of the ground and sub soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender.. The bidder shall be responsible for arranging and maintaining at its own cost all materials, tools & plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work. **The bidders shall submit along with the bid a declaration as per FORM-J of this document duly signed by nominated representative of HITES/Client after site visit. This is mandatory. Bids submitted without FORM-J duly signed by nominated representative of HITES/Client and bidder will be summarily rejected and will not be considered for evaluation.**

Client/HITES shall not be liable for such costs, regardless the outcome of the selection process.

- 1.15 The Competent Authority of the HITES does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
- 1.16 Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 1.17 The competent authority of HITES reserves to himself the right of accepting the whole or any part of the tender and the bidder shall be bound to perform the same at the rate quoted.
- 1.18 The contractor shall not be permitted to tender for works in case his near relative is Gazetted officer in Client or in the Managerial cadres of HITES and is directly dealing with the Project. Any breach of this condition by the contractor would disqualify him from participation and consideration in the tender process.
- 1.19 No Engineer of gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from

Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.

- 1.20 The tender for the works shall remain open for acceptance for a period of **120 (ONE HUNDRED AND TWENTY)** days from the LAST date of submission of bid or any extension thereto. If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the Client / HITES, then the Client / HITES shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the re-tendering process of the work.
- 1.21 This is a Time Bound Project.
- 1.22 The scope of work shall be as per section III of this document.
- 1.23 The Bidder must associate with the other agencies working at the site.
- 1.24 The contractor/firm will indemnify Client/HITES, as the case may be, against all penal action that may be levied/effected by any concerned authority for default in any labour regulation/PF/ESI and other statutory requirements of the relevant Acts/Laws related to the work of the contractor and will bear the legal charges, if any, and will pay the legal charges/dues directly to the concerned authority. An undertaking in this regard is required to be submitted by applicants along with prequalification.
- 1.25 This Notice Inviting bid shall form a part of the contract document. The successful Tenderer/ contractor, on acceptance of his tender by the Accepting Authority, shall, **within 25 days** from the date of issue of the Letter of Acceptance, sign the contract consisting of :-

The Notice Inviting Bids, all the documents including General Conditions of the Contract (GCC), Special Conditions of Contract (SCC), Specifications, Bill of Quantities and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto including amendments, corrigendum etc. if any.

1.26 **Bid document consists of :**

- 1.26.1 Volume – I (Notice Inviting Tenders (NIT), Eligibility Criteria & Instructions to Bidders (ITB))
- 1.26.2 Volume – II (General Conditions of Contract)
- 1.26.3 Volume – III(Specific Conditions of Contract)
- 1.26.4 Volume – IV (Technical Specifications)
- 1.26.5 Volume – V (Financial Bid/ Bill Of Quantities(BOQ))

All amendments(s)/ corrigendum/ minutes of pre bid meeting, if any.

- 1.27 HITES reserves the right to accept or reject any or all the tenders without assigning any reason, No Bidder shall have any cause of action or claim against the HITES for rejection of his tender.
- 1.28 This project is funded by NABARD and Govt. of Kerala. Payments to the selected Contractor will be made directly by the Client through bank transfer. A tripartite agreement will be entered between Client, HITES and Contractor for release of payments.

**Deputy General Manager (ID)**

**SECTION-II**  
**INSTRUCTIONS TO BIDDERS (ITB)**

**2.1 Eligibility Criteria : As per Notice inviting Bids**

**2.2 Disqualification.** Even if a Contractor meets the eligibility criteria as per clause 1.4.1, Client / HITES may, at their discretion and at any stage during the selection process or execution of the Project, order disqualification of the contractor if the Contractor has:

2.2.1 Made misleading or false representations in the forms, statements and attachments submitted; or

2.2.2 The Contractor has been blacklisted by any government agency even after bids have been opened; or

2.2.3 Record of poor performance such as abandoning work, not properly completing the contract, or financial failures/weaknesses etc.

2.2.4 Suppression of actual facts will be sufficient cause for disqualification.

**2.3 BID Documents :**

**2.3.1 Contents of BID Documents**

BID Document shall consist of the documents listed in this document along with any schedules, addendum or corrigendum etc. issued by Client for the purpose.

**2.3.2 Pre-Bid Conference**

The bidders having queries/clarification regarding the tender can submit their queries as mentioned in Notice Inviting Bid. The pre bid meeting will be held as per the details mentioned in Section-I (Notice Inviting Bids). No other queries shall be entertained or replied to, after the date of submission of queries .HITES' response (including an explanation on the query but without identifying the source of the inquiry) will be uploaded on e-tender portal [www.etenders.kerala.gov.in](http://www.etenders.kerala.gov.in) and website of HITES [www.hllhites.com/tenders](http://www.hllhites.com/tenders).

**2.3.3 Clarifications**

Contractor requiring any clarification with regards to the BID document may submit queries/clarification regarding the tender can submit their queries at e-tender portal/as email [tenders@hllhites.com](mailto:tenders@hllhites.com). HITES will respond to any request for clarification which is received within date specified in the NIT. The response (including an explanation on the query but without identifying the source of the inquiry) will be uploaded in the e-tender portal. Only written communication/clarification can be considered as valid.

**2.3.4 Amendment to BID Document**

- i. At any time prior to the deadline for the submission of Bids, HITES, may, for any reason, whether at its own initiative or in response to a clarification

or query raised by prospective Bidders, modify the BID document by an amendment.

- ii. The said amendments in the form of the addendum/corrigendum will be made available on the HITES website [www.hllhites.com/tenders/](http://www.hllhites.com/tenders/) and e-tender portal [www.etenders.kerala.gov.in.](http://www.etenders.kerala.gov.in) not later than 3 days to the original or extended deadline for the submission of the bids. The uploading of the said amendments shall be binding of the bidders. The Bidders are strongly advised to regularly visit above websites to ensure that they are aware of the amendments. The addendum (s) / corrigendum (s) issued will form part of the BID documents.
- iii. In order to afford prospective Bidders reasonable time for preparing their Bids after taking into account such amendments, the HITES may, at its discretion, extend the deadline for the submission of Bids.

### 2.3.5 Preparation of Bid:

#### a) Bidder's responsibility:

- i. The Bidder is solely responsible for the details of his Bid and the preparation of Bids.
- ii. The Bidder is expected to examine carefully all the contents of BID document as mentioned in Notice Inviting Bids including instructions, conditions, forms, terms, etc. and take them fully into account before submitting his offer. Bids, which do not satisfy all the requirements, as detailed in these documents, are liable to be rejected as being unresponsive.
- iii. **The Bidder shall be deemed to have inspected the Site and its surroundings and taken into account all relevant factors pertaining to the Site, while preparing and submitting the Bid.**

#### b) Project Inspection and Site Visit

Any Site information and drawings given in this Bid Document is for guidance only. The Bidders are instructed to visit and examine the Site of works and its surroundings, understand the scope of work at his/their cost and obtain at his/their own responsibility, any information that may consider necessary for preparing the Bid and entering into a Contract with HITES, including availability of electricity, water and drainage.

The HITES shall not be liable for such costs, regardless the outcome of the selection process.

The tenderer may obtain all necessary information as to risks, contingencies & other circumstances (insurgencies etc.) which may influence or affect their tender. Tenderer shall be deemed to have considered site conditions whether he has inspected it or not and to have satisfied himself in all respect before quoting his rates and no claim or extra charges whatsoever in this regard shall be entertained / payable by the HITES/Client at a later date.

Interested bidders may contact HITES authorized officials (refer Table -I at Section 1 NIT) for site visit and/or for seeking any details regarding execution of proposed work.

Before submitting a Bid, the Bidder shall be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that the rates entered in the Price Bid document are adequate and all-inclusive for the completion of work to the entire satisfaction of the Employer/Owner

c) Documents Comprising the Bid

Bidder shall submit their Bids ONLINE. The contents of the Technical and Financial packages are as mentioned hereinafter i.e. Clause 2.3.6 & 2.3.7.

d) Alternative Proposal by bidders:

Bidders shall submit offers that comply with the requirement of the Tender, as indicated in the drawing and specifications. Alternatives will not be considered.

e) **Method of Application:**

- i. If the bidder is an individual, the application shall be signed by him above his/her full type written name and current address.
- ii. If the bidder is a proprietary firm; the application shall be signed by the proprietor above his/her full type written name and the full name of his firm with its current address.
- iii. If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full type written names and current addresses or alternatively by a partner holding power of attorney for the firm. In the latter case, a certified copy of the Power of Attorney should accompany the application. In both the cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.
- iv. If the bidder is a Limited company or a corporation, the bid shall be signed by a duly authorized person holding Power of Attorney for signing the application and certified copy of such power of attorney shall also be furnished. The bidder should also furnish a copy of memorandum of articles of association duly attested by a Public Notary.

f) **Bid documentation**

- i. All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even, if no information is to be provided in a column, a 'Nil' or 'no such case' entry should be made in that column. If any

particulars/query is not applicable in case of the bidder, it should be stated as 'Not applicable'. **The bidders are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms (or) deliberately suppressing the information may result in the bid being summarily disqualified.** Bid made by telegram or telex and those received late will not be entertained.

- ii. The bid should be type written. The bidder should sign & seal each page of application, forms and documents before scanning & uploading.
- iii. Over writing should be avoided. Corrections if any should be made by neatly crossing out, initialling, dating and rewriting. Pages of the eligibility criteria document are numbered. Additional Sheets if any added by the Bidder should also be numbered by him. They should be submitted as a package with signed letter of transmittal.
- iv. References, information and certificate from the respective Clients certifying suitability, technical knowledge or capability of the bidder should be signed by the authorised representative of the Client.
- v. The bidder may furnish any additional information, which he thinks is necessary to establish his capabilities to successfully complete envisaged work. He is, however advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the HITES/ Client.

### 2.3.6 **Contents of Technical Package:**

The technical package has to be submitted in two parts.

**(A) Technical Package Part –I ; shall comprise the following :**

- I. Online submission of e-tender processing fee/ tender document fee. The e- tender fee is non-refundable.

**II. Bid Security**

- a. The Bidder shall submit EMD for an amount, as mentioned in Notice Inviting e-tender.
- b. The Bid securities of unsuccessful Bidders shall be discharged/ returned after expiry of the final bid validity and latest on or before the 30<sup>th</sup> day after the award of contract. However, in case of two packet or two stage bidding, bid securities of unsuccessful bidders during first stage , i.e, technical evaluation etc should be returned within 30 days of declaration of result of first stage i.e, technical evaluation etc.
- c. The Bid Security shall be forfeited if a bidder withdraws his bid during the period of bid validity or in the case of the successful



bidder, if he fails to furnish the necessary performance security or enter into the Contract within the specified time limit.

- d. The Bid Security Bank Guarantee of the successful bidder shall be returned, after receipt of Performance Bank Guarantee as per Clause 1 of General Conditions of Contract (Volume-2).
- III. Form A: Form of bid along with Appendix to be typed on the letter head and duly signed and stamped by authorized person.
- IV. Form D: Format for Power of Attorney for signing of proposal. In case bid is signed by Managing Director/Partner/Proprietor himself, Power of Attorney is not required. It is mandatory to mention on letterhead that the bid is duly signed and stamped by Managing Director / Partner / Proprietor.
- V. Indemnity/ Undertaking/ Affidavits as per requirements (Form- G)
- VI. Form F: Original Affidavit as per format at Form 'F' (L1 bidder shall submit the original affidavit within 25 days of award of work)
- VII. Form "T-1"(Financial Information) – Annual Financial Statement for the last five years ending 2022-23
- VIII. Completion certificates from Client
- IX. Form "T-5" (Structure and Organization)
- X. Copies of GST Registration or undertaking in this regard as per tender
- XI. Certificate of Registration for ESI, EPF and acknowledgement of up-to-date file return.
- XII. All pages of the entire tender document, Corrigendum/ addendum (if any)/ pre bid clarifications (if any) signed by the authorized person of the bidder(s).

### 2.3.7 Contents of Financial Package

The financial package (**VOLUME V–FINANCIAL BID/ BILL OF QUANTITIES (BOQ)**) should be submitted ONLINE only. Physical submission of financial bid will not be accepted and e-tender shall be rejected. The price quoted shall be excluding GST but include all applicable costs associated with the Project i.e. any out of pocket/ mobilization expenses, taxes & duties and any other applicable statutory taxes, levies as applicable till the last stipulated date for the receipt of tender including extensions if any and services during DLP, Performance warranty as per tender. In case Government levies/modifies any tax subsequently, the same will be adjusted plus/minus as the case may be. In case Government levies/modifies any tax subsequently the same will be adjusted plus/minus as the case may be. The Bidder must ensure to fill up price against each item of Price bid. If any cell is left blank then value of that cell shall be treated as "0" (ZERO).

However, in respect of GST, where ever legally applicable the same shall be paid by the contractor to the concerned Authorities as per the prevailing rules. The payment for any bills as per this contract shall be made for the total value of the works at the contract rate plus the GST @18% at the time of billing. Any variation in tax rate of GST (increase or decrease) after the last date of tender submission shall be adjusted at the time of settlement of bills. TDS and other deductions shall be made on payments excluding GST.

#### **2.3.8 Language of Bid**

The Bid and all related correspondence and documents relating to the Project shall be in English language.

#### **2.3.9 Currency of Bid**

Bid prices shall be quoted in Indian Rupees only. The amount mentioned elsewhere in the bid document will also deemed to be in Indian Rupees unless otherwise mentioned.

#### **2.3.10 Extension of Bid Validity**

Prior to the expiry of the original Bid Validity Period, HITES may, at its discretion, request Bidders to extend the Bid Validity Period for a specified additional period and also correspondingly extend the period of validity of Bid Security submitted in the form of a Bank Guarantee.

#### **2.3.11 Format and Signing of Bid**

- a. Bid documents (technical package/ bid Part II and financial package/ bid) shall be digital signed by a person duly authorized to sign the Bid documents. The Bidder shall also submit a power of attorney authorizing the person signing the documents.
- b. Entries to be filled in by the Bidder shall be typed or written in indelible ink.
- c. The complete Bid shall be without alterations, overwriting, interlineations or erasures except those to accord with instructions issued by Client, or as necessary to correct errors made by the Bidder. All amendments/corrections shall be initialed by the person or persons signing the Bid.
- d. All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be written below their signatures.

#### **2.3.12 Sealing and Marking of Bids**

- a. The Bid shall be submitted along with documents and mode of submission mentioned above in this section and also mentioned in the Checklist at Annexure - I of this volume I.

Please note that the price should not be indicated in any of the documents enclosed in Technical package part I, Technical Package part II and III. Non-compliance shall entail rejection of the Bid.

- b. In the case of Item Rate Tenders, only rates quoted shall be considered. Any

tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures shall be accurately filled. In e-tendering, the intending bidder can quote his rates in figures only. The rates in words, amount of each item and total is generated automatically. Therefore, the rate quoted by the bidder in figures shall be taken as correct. In event no rate has been quoted for any item (s), it will be presumed that the contractor has included the cost of this/these items(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.

However, if a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

Please note that the price should not be indicated in any of the documents enclosed in Envelope no. 1. Non-compliance shall entail rejection of the Bid.

#### **2.3.13 Modifications/ Substitution/ Withdrawal of Bids**

- (a) No modification or substitution of the submitted Bid shall be allowed after last date of submission of bids.
- (b) The bidder may read the instructions in 'Vendor guide' in the e-tender portal for submission/ modification/ withdrawal of bids.

#### **2.3.14 Power of Attorney:**

Bidders shall submit, along with Technical Package, a power of attorney, on a stamp paper of appropriate value, in favour of the person signing the Bid documents authorizing him to sign the Bid documents, make corrections/modifications thereto and interacting with HITES and act as the contact person. The format for the power of attorney shall be as per form D of Bid Document Volume-I. In case bids are signed by Managing Director/Partner/Proprietor himself, Power of Attorney is not required.

In the event of tender being submitted by a firm, it must be signed separately by each partner thereof or in the vent of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act 1932.

#### **2.3.15 Bid Opening and Evaluation:**

##### **Bid Opening**

- i. The Bids will be opened in the presence of Bidders or their authorized representatives who may choose to attend on date & time as mentioned in Notice Inviting e-tender. If such nominated date for opening of Bid is subsequently declared as a public holiday, the next official working day shall be deemed as the date of opening of the Bid.

- ii. Bids for which an acceptable notice of withdrawal has been submitted shall not be opened.
- iii. Bids which have not complied with one or more of the foregoing instructions may not be considered.
- iv. On opening of the e-Bid, it will be checked if they contain Technical & Financial Bids and e-Tender Processing Fees and EMD/ Bid Security paid online, as detailed above.
- v. The Bidders name, the presence or absence of the requisite details as required or their authorized representative, may consider appropriate will be announced at the time of Bid opening.
- vi. Technical Package of the Bids will be opened first. These will be checked for completeness and confirmation of submission of the requisite EMD/Bid Security. If the documents do not meet the requirements of the e-Tender, a note will be recorded.
- vii. Technical evaluation shall be as per section IV, Evaluation Process.
- viii. Financial Package of all bidders whose bids are found responsive after Technical evaluation will be opened at a later date.

**2.3.16 Determination of Responsiveness**

- i. Prior to the detailed evaluation of Bids, Client will determine whether each Bid is responsive to the requirements of the tender.
- ii. For the purpose of this clause, a responsive Bid is one which:
  - a. have digital signature.
  - b. is accompanied by the power(s) of attorney if required
  - c. contains all the information as requested in the Bid Document
  - d. contains information in formats same/similar as those specified in this Bid Document
  - e. mentions the validity period of the offer
  - f. is accompanied by the Bid Security/ EMD,
  - g. conforms to all the terms, conditions and specifications of Tender without material deviation or reservation. "Deviation" may include exceptions and exclusions. A material deviation or reservation is one which affects, in any substantial way, the scope, quality, performance or administration of the works to be undertaken by the Bidder under the Contract, or which limits in any substantial way, HITES's rights or the Bidder's obligations under the Contract as provided for in Bid and/or is of an essential condition, the rectification of which would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids at reasonable price.
- iii. If a Bid is not substantially responsive to the requirements of Bid, it will be

rejected by HITES. The decision of the HITES in this regard shall be final and binding. The financial Packages of non-responsive Bidders shall not be opened.

#### **2.3.17 Evaluation of Bids**

- i. HITES would examine and evaluate responsive Bids, as per the criteria set out in this document at Section IV Evaluation Process
- ii. HITES reserves the right to reject any Bid if:
  - a. At any time, a material misrepresentation is made or uncovered; **or**
  - b. The Bidder does not respond within the stipulated time to requests for supplemental information/ clarifications required for the evaluation of the Bid; **or**
  - c. It is found that the information provided is not true or incorrect or facts/ material for the evaluation have been suppressed.

#### **2.3.18 Clarification of Bids**

- i. Evaluation of technical Bids submitted by Bidders shall be undertaken based on details submitted therein only. Bidder shall not be allowed to submit on their own, additional information or material subsequent to the date of submission and such material/ information, if submitted, will be disregarded. It is therefore essential that all details are submitted by the Bidder comprehensively, accurately and specifically in their technical Bid, avoiding vague answers. However, Evaluation Committee, if it so desires, reserves the right to seek any clarification from the Bidders on the information provided in the technical package. The request for clarifications and the response shall be in writing. No change/ addition in the information or substance of the Bid shall be sought, offered or permitted.
- ii. No change in the price or substance of the Bid shall be sought, offered or permitted except as required to confirm correction of arithmetical errors observed by the Evaluation Committee during the evaluation of Bids.

#### **2.3.19 Process to be Confidential**

- i. Except the public opening of the Bids, information relating to the examination, clarification, evaluation and comparison of Bids and recommendations concerning the award of Contract shall not be disclosed to Bidders or other persons not officially concerned with such process.
- ii. Any effort by a Bidder to influence HITES's Evaluation Committee/ Client in the process of examination, clarification, evaluation and comparison of Bids and in decisions concerning award of Contract, shall result in the rejection of their Bid.

#### **2.3.20 Award of Contract**

- i. Award Criteria  
HITES will declare the Bidder ranked L1 as Successful Bidder and proceed to

issue Letter of Acceptance (LOA) as per the procedure mentioned in the Bid Document and terms and conditions set out in this Bid document.

ii. Notification of Award

- a. Prior to the expiry of the period of Bid Validity, HITES will issue the Letter of Acceptance to the Successful Bidder, notifying him of being declared successful and the intent to sign the Contract Agreement with him. This letter (hereinafter and in the Conditions of Contract called 'the Letter of Acceptance') shall mention the sum which HITES, will recommend to pay to the Contractor in consideration of the completion and guarantee of the work to be performed by them, as prescribed therein (hereinafter and in the conditions of Contract called 'the Contract Price'). No correspondence will be entertained by HITES from the unsuccessful Bidders.
- b. The Letter of Acceptance shall constitute a part of the Contract.
- c. Upon submission of Performance Guarantee by the Successful Bidder, HITES will promptly notify the other Bidders and discharge/ return their Bid securities.

iii. Signing of Agreement

- a. HITES shall prepare the Contract Agreement in the Proforma (Form C) included in this document, duly incorporating all the terms of agreement between the two parties. Within **25 days** from the date of issue of the Letter of Acceptance the Successful Bidder will be required to execute the Contract Agreement in stamp paper of value as per the prevailing stamp duty as prescribed in the Kerala Stamp Act 1959. The successful bidder has to bear the cost of stamp paper.
- b. Prior to the signing of the Contract Agreement, the Successful Bidder shall submit Performance Guarantee.
- c. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registrations (required as per scope of work), Programme Chart (Time and Progress) in MS project and manpower deployment schedule within 25days of issues of LOA.
- d. The Contract Agreement shall be duly signed by the HITES and the Contractor through their authorized signatories.
- e. In case the Successful Bidder does not sign the Contract Agreement, HITES reserves the right to cancel the selection process, forfeit any Bid Security and/or Performance Guarantee, as the case may be, submitted by the Successful Bidder and either re-Bid or proceed in any manner that it may deem fit.
- f. Contract agreement will be signed by the authorized signatories.

**SECTION-III**  
**SCOPE OF WORK**

1. Bids are now invited for following scope of work:

The scope of work comprises of Supply, Installation, Testing and Commissioning of MGPS for Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam

The activities to be carried out for the completion of the Project shall include the following and any additional activities incidental to these:

- i. Scope of work as specified.
- ii. Submission of 3 sets of completion (i.e. 'as-built') drawings and other related documents, both a hard copy and the soft copy in Auto CAD or any other IT application used for the purpose.

**2. Approvals Required**

The contractor shall obtain all necessary approval from Agencies concerned as the case may be with related to/ required for execution/Completion/Commissioning. All expenditure on this account will be borne by the contractor. Statutory payment on this account will be reimbursed by the Client at actuals on production of payment receipts.

**SECTION IV**  
**EVALUATION PROCESS**

**4.1 Evaluation Process:**

The Bids will be evaluated in the following stages:

- i. Stage 1- Preliminary & Technical Evaluation
- ii. Stage 2- Financial Evaluation.

**4.2 Stage I-Preliminary & Technical Evaluation**

- i. In Preliminary Stage, e-Tender Fee/ Processing Fee and EMD will be checked online. E-Tender Fee / Processing Fee and EMD will be checked for veracity of Amount and Form as required by e-tender terms and conditions. If e-Tender Fee / Processing Fee and/or EMD submitted by any bidder is not as per e-tender terms and conditions, his bid will be rejected and will not be considered for further stages of evaluation.

**ii. Technical Evaluation**

**a. Technical Bid – Eligibility Criteria**

Bidders qualifying in Stage 1 will be considered for further evaluation and the Technical Bids shall be evaluated as per eligibility criteria detailed in Clause 1.4.1 and bidder's eligibility for the work shall be determined. If bidder is not meeting with the minimum eligibility criteria as detailed in Clause 1.4.1, his bid will be rejected and will not be considered for further stages of evaluation. The bidder shall also comply with the technical specification as per the tender document.

HITES, however, reserve the rights to restrict the list of such qualified bidders to any number deemed suitable by it.

- i. The financial Bid of only those Bidders who are technically qualified shall be opened.
- ii. The financial Bids of Bidders whose technical Bids are found unacceptable shall not be opened.
- iii. HITES shall notify all the technically qualified Bidders of their technical qualification indicating the date, time and venue for opening of financial Bids.

**4.3 Stage II-Financial Evaluation**

- i. Evaluation Committee shall open the financial Bid of the technically qualified Bidders in the presence of the Bidders/their authorized representative, who choose to attend, at the scheduled date and time.
- ii. On opening the financial Bids, the Evaluation Committee shall read out the financial Bid to all the Bidders and record the same.



- iii. The Evaluation Committee shall correct arithmetic errors, if any and sign the same. If any discrepancy is found between the amount in figures and the amount in words, the amount in words shall prevail.
- iv. If a tenderer quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
- v. All the financial Bids shall then be ranked according to the financial Bid in increasing order with the Bidder quoting the least amount ranked L1, Bidder quoting next higher figure as L2 and so on.
- vi. L1 will be declared as Successful Bidder and his offer will be processed further. For arriving L1, quote for CMC will not be considered.
- vii. (a) The financial bid of all eligible bidders as decided by HITES shall be opened and the decision of HITES will be final and binding.  
(b) The date and time of opening of financial bids shall be decided by HITES which will be intimated at an appropriate time.

#### **4.4 Letter of Acceptance:**

The Successful Bidder would be notified in writing by HITES by issuing the Letter of Acceptance (LOA) in favour of the Bidder.

**Form A-Form of Bid and Appendix**

**FORM OF BID**

**Name of the Work:** .....

Tender no. ....

From

..... (Bidder)

To

**Deputy General Manager (ID)  
HLL Infra Tech Services Limited  
Golden Jubilee Block  
Poojappura P.O  
Thiruvananthapuram- 695 012**

Sir,

**Sub : Submission of Proposal**

Having visited the Site, ascertained the Site conditions and examined the General Conditions of Contract as well as Specific Conditions of Contract, Notice Inviting Bids, Instructions to Bidders etc. and addenda for the above project, we the undersigned, are pleased to submit our technical and financial Bid along with relevant documents.

1. We acknowledge that the Appendix forms an integral part of the Bid.
2. While preparing this Bid, we have gathered our own information and conducted our own inquiry/survey to our satisfaction and we did not rely solely on the information provided in the Bid Documents. We shall not hold HITES responsible on any account in this regard.
3. We hereby certify that all the statements made and information supplied in the enclosed forms and accompanying statements are true and correct.
4. We have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
5. I/We authorize Deputy General Manager (ID), HITES or his/her representative to approach individuals, employers, banker, competence, work experience, and general reputation.

6. We undertake, if our Bid is accepted, to commence the works within the stipulated time and to complete the whole of the works comprised in the Contract within the stipulated time calculated from the start date.
7. If our Bid is accepted, we will furnish a bank guarantee as Performance Guarantee for the due performance of the Contract. The amount and form of such guarantee or bond will be in accordance with as given in the General Conditions of the Contract.
8. We are aware that in the event of delay in execution of the Project, beyond the agreed timelines due to reasons attributable to us, liquidated damages shall be recovered from us.
9. Our Bid is valid for your acceptance for a period of (120) ONE HUNDRED AND TWENTY DAYS from the last date of submission of the Bid as per the Bid Documents or any extension thereto.
10. We agree to the General Conditions of Contract and Technical Conditions of Contract and the terms and conditions mentioned in the Bid Documents.
11. We declare that we are not having any Litigation pending / in progress with HLL / HITES.
12. We declare that we have not made any suppression of facts for meeting the requirement of eligibility to bid.
13. We declare that the submission of this Bid confirms that no agent, middleman or any intermediary has been, or will be engaged to provide any services, or any other item of work related to the award of this Contract. We further confirm and declare that no agency commission or any payment, which may be construed as an agency, commission has been, or will be, paid and that the Bid price does not include any such amount. We acknowledge the right of HITES, if it finds anything to the contrary, to declare our Bid to be non-compliant and if the Contract has been awarded to declare the Contract null and void.
14. We understand that you are not bound to accept the lowest or any Bid you may receive.
15. If our Bid is accepted, we understand that we are to be held solely responsible for the due performance of the Contract.
16. We enclose;
  - a. All documents as per the checklist

- Note :
- i. The Appendix forms part of the Bid
  - ii. Bidders are required to fill up all the blank spaces in this form of Bid and Appendix.

Dated this.....day of.....**2024**

Signature .....

Name..... in the capacity of .....

duly authorized to sign Bids for and on behalf of.....

Address .....  
Witness – Signature .....  
Name .....  
Address .....

**Certificate**

**It is certified that the information given by us towards meeting the requirement of the eligibility to bid are correct. It is also certified that I/We shall be liable to be debarred, disqualified/ cancellation of enlistment in case any information furnished by me/us is found to be incorrect.**

**Date Seal of bidder**

**Signature of bidder**

**APPENDIX TO THE FORM OF BID**

i.	(a) Amount of Performance Guarantee to be deposited by financially successful bidder	As per clauses of GCC
	(b) Amount of Security Deposit	As per clauses of GCC
ii	Date for commencement of work	From the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later
iii	Time for completion	06 months
iv.	Amount of compensation in case of extension of completion date due to delays by the Contractor	As per clauses of GCC
v.	Defects Liability Period / Comprehensive Warranty period	3 years for the work and equipment supplied after taking over of work by the client/ HITES.
vi.	(a)Period of validity of Performance Guarantee	As per clauses of GCC
	(b) Period of validity of Security Deposit	As per clauses of GCC

Signature

(Authorized Signatory)

Date .....

Name .....

Place .....

Address.....

**FINANCIAL INFORMATION**

**Name of bidder:.....**

**1. Financial Analysis**-Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last five years duly as submitted by the applicant to the Income tax Department (Copies to be attached) and duly certified by the Chartered Accountant mentioning the membership number issued by ICAI along with the full address.

**i) Gross Annual Turnover for last three years ending 31.03.2023**

Financial Year	Annual Turn Over in Indian Rupees ( or equivalent to Indian Rupees) as per Audited Balance Sheet
2020-21	Rs.
2021-22	Rs.
2022-23	Rs.
Average Annual Turnover over the past three years	Rs.

**ii) Profit / Loss for last Five years ending 31.03.2023**

Financial Information in Rs. Equivalent	For year 2018-19	For year 2019-20	For year 2020-21	For year 2021-22	For year 2022-23
1. Total Assets					
2. Current Assets					
3. Total Liabilities					
4. Current Liabilities					
5. Profit before Tax					
6. Profit after Tax					
7. Net Worth					

Note: Copies of relevant balance sheets, P&L statements, notes to accounts shall be submitted along with the bid.

Signature of Chartered Accountant with Seal

FRN Number-----

UDIN Number----

Signature of Bidder.

FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK  
(SOLVENCY CERTIFICATE)

Dated:

To

(Tender inviting authority)

.....  
.....  
.....

This is to certify that to the best of our knowledge and information that M/s./Sh. ....having marginally noted address, a Customer of our bank are/is respectable can be treated as good for any engagement upto a limit of Rs. .... (Rupees.....).

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

Signature Name Designation

Address of Bank

BANK'S SEAL

- NOTE (1) Bankers certificates should be on letter head of the Bank, addressed to tendering authority issued after invitation of bid
- (2) In case of partnership firm, certificate should include names of all partners as recorded with the bank.

**DETAILS OF ALL WORKS OF SIMILAR NATURE COMPLETED**  
**DURING THE LAST SEVEN YEARS ENDING LAST DAY OF THE MONTH PREVIOUS**  
**TO THE ONE IN WHICH TENDERS ARE INVITED**

<b>Sl. No</b>	<b>Name of Work/ Project &amp; location</b>	<b>Owner of sponsoring Organization</b>	<b>Cost of Work In Lakh)</b>	<b>Date of Commencement As per contract</b>	<b>Stipulated Date of completion</b>	<b>Actual date of completion</b>	<b>Litigation/ Arbitration Pending/ in Progress with details*</b>	<b>Name &amp; address/ Telephone No. of officer to whom reference may be made</b>	<b>Remarks</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

\* indicate gross amount claimed and amount awarded by the Arbitrator.

**Copy of work Orders and Completion Certificates (as per FORM T-4) of the above works should also be submitted with date of start and completion of project and quality of work.**

Signature of Applicant



**SIMILAR WORK UNDER EXECUTION OR AWARDED**

<b>Sl. No</b>	<b>Name of Work/ Project &amp; location</b>	<b>Owner of sponsoring Organization</b>	<b>Cost of Work</b>	<b>Date of Commencement As per contract</b>	<b>Stipulated Date of completion</b>	<b>Uptodate Percentage Progress of work</b>	<b>Slow Progress, If any, &amp; reasons Thereof</b>	<b>Name &amp; address/ Telephone No. of officer to whom reference may be made</b>	<b>Remarks</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Certified that above lists of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Applicant

**PERFORMANCE REPORT OF WORKS**  
**REFERRED TO IN FORM "T-2" TO "T-3"**

01.	Name of Contractor	
02.	Name of work / Project & Location	
03.	Agreement No.	
	Estimated Cost	
04.	Awarded Value of work	
05.	Cost on completion of work	
06.	Date of Start	
	<b>Date of completion :</b>	
07.	i) Stipulated date of completion	
	ii) Actual date of completion	
08.	Components of work	
	SITC of Medical Gas Pipeline System	
09.	Whether case of levy of compensation for delay has been decided or not	Yes/ no
10.	If decided, amount of compensation levied for delayed completion, if any	
11.	<b>Performance Report :</b>	
	a) Quality of work	Excellent/Very Good / Good/ Satisfactory/ Poor
	b) Financial soundness	Excellent/Very Good / Good/ Satisfactory/ Poor
	c) Technical Proficiency	Excellent/Very Good / Good/ Satisfactory/ Poor
	d) Resourcefulness	Excellent/Very Good / Good/ Satisfactory/ Poor
	e) General behavior	Excellent/Very Good / Good/ Satisfactory/ Poor

Dated : \_\_\_\_\_

Executive Engineer or Equivalent

**STRUCTURE & ORGANIZATION**

01.	Name & Address of the applicant	
02.	Telephone No. / Email id.	
03.	GST no.	
04.	Legal status of the applicant (attach copies of original document defining the legal status)	
	a) An Individual	
	b) A proprietary firm	
	c) A firm in partnership	
	d) A Limited company or Corporation	
05.	Particulars of registration with various Government bodies ( <i>attach attested photocopy</i> )	
	<u>Organization / Place of Registration :</u>	
	1.	
	2.	
	3.	
06.	Names and Titles of Directors & Officers with designation to be concerned with this work	
07.	Designation of individuals authorized to act for the organization.	
08.	Was the applicant ever required to suspend construction for a period of more than six months continuously after you commenced the construction? If so, give the name of the	

	project and reasons of suspension of work.	
09.	Has the applicant or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.	
10.	Has the applicant or any constituent partner in case of partnership firm, ever been debarred/black-listed/penalized for Biding in any organization at any time? If so, give details.	
11.	Has the applicant or any constituent partner in case of partnership firm, ever been convicted by a Court of Law? If so, give details.	
12.	In which field of construction Services the applicant has specialization and interest?	
13.	Any other information considered necessary but not included above.	

Signature of Applicant

**TDS DETAILS FOR PRIVATE SECTOR PROJECTS FOR THE WORKS EXECUTED IN INDIA**

<b>Sl. No.</b>	<b>Description</b>	<b>Details</b>
1.	Name of work	
2.	Name of Clients	
3.	Project cost in crores	
4.	No. and date of completion certificate	
5.	Cost of the work on completion in crores	
6.	Payments received as per TDS in Crores	
7.	TDS Corresponding to the payments	
8.	Year wise TDS as per form-26AS/ Form 16A relating to the work.	

Note:

1. Value of work done will be considered commensurate with value of TDS certificates.
2. In case of multiple contracts undertaken from a client, reconciliation for the TDS pertaining to the work mentioned above need to be segregated and reconciled with Form-26AS.
3. This form need to be supported with form-26AS taken in HTML format or Form -16A.

Signature of Chartered

Accountant with Seal

FRN No.

UDIN No.-----

Membership No.

Signature of Bidder.

Tender No. HITES/IDS/MGPS-CARDIO/23-24/22

**FORM OF PERFORMANCE BANK GUARANTEE**

(On a stamp paper of appropriate value from any Nationalised Bank or Scheduled Bank)

To,

**DEPUTY GENERAL MANAGER (ID)  
HLL INFRA TECH SERVICES LIMITED  
GOLDEN JUBILEE BLOCK  
POOJAPPURA PO,  
THIRUVANANTHAPURAM- 695 012**

Dear Sir,

In consideration of the HLL Infra Tech Services Limited for \_\_\_\_\_ (name of work) which expression shall include his successor and assignees, (herein after called HITES) having awarded to----- having its Office at -----and Registered Office at ----- (hereinafter referred to as "the said Contractor (s)", which expression shall include his successor and assignees) for the work of \_\_\_\_\_ Contract No. / LOA No.--- -----in terms interalia, of the and the General Conditions of Contract and upon the condition of the Contractor's furnishing Security for the performance of the Contractor's obligations and discharge of the Contractor's liability under and in connection with the said Contract up to a sum of Rs.-----Rupees ----) amounting to .....% percent of the total Contract value.

1. We, \_\_\_\_\_ (hereinafter called 'The Bank' which expression shall include its successors and assignees) hereby jointly and severally undertake to guarantee the payment to the HITES in rupees forthwith on demand in writing and without protest or demur or any and all moneys payable by the Contractor to the HITES in respect of or in connection with the said Contract inclusive of all the HITES's losses and damages and costs, (inclusive between attorney and HITES) charges and expenses and other moneys payable in respect of the above as specified in any notice of demand made by the HITES to the Bank with reference to this guarantee upto an aggregate limit of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only).
2. We \_\_\_\_\_ Bank Ltd. further agree that the HITES shall be sole judge of and as to whether the said Contractor has committed any breach or breaches of any of the terms and conditions of the said Contract and the extent of loss, damage,

cost, charges and expenses caused to or suffered by or that may be caused to or suffered by the HITES on account thereof and the decision of the HITES that the said Contractor has committed such breach or breaches and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered by the HITES from time to time shall be final and binding on us.

3. The HITES shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other Security in respect of the Contractor's obligations and liabilities hereunder or to vary the Contract or the work to be done there under vis-a-vis the Contractor or to grant time or indulgence to the Contractor or to reduce or to increase or otherwise vary the prices of the total Contract value or to release or to forbear from enforcement of all or any of the Security and/or any other Security(ies) now or hereafter held by The HITES and no such dealing(s) reduction(s) increase(s) or other indulgence(s) or arrangements with the Contractor or release or forbearance whatsoever shall absolve the bank of the full liability to the HITES hereunder or prejudice the rights of the Employer against the bank.
4. This guarantee shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all monies payable to the HITES in terms thereof.
5. The bank hereby waives all rights at any time inconsistent with the terms of this guarantee and the obligations of the Bank in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by the Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to the HITES in terms hereof.
6. The amount stated in any notice of demand addressed by the HITES to the Bank as liable to be paid to the HITES by the Contractor or as suffered or incurred by the HITES on account of any losses or damages or costs, charges and/or expenses shall be conclusive evidence of the amount so liable to be paid to the HITES or suffered or incurred by the HITES as the case may be and shall be payable by the Bank to The Employer in terms hereof.
7. This guarantee shall be a continuing guarantee and shall remain valid and irrevocable for all claims of the HITES and liabilities of the Contractor arising upto and until midnight of \_\_\_\_\_.
8. **This guarantee is valid till \_\_\_\_\_(date to be mentioned) (This guarantee to be valid up to six months beyond the stipulated date of completion or the extended period, thereof.)**
9. This guarantee shall be in addition to any other guarantee or Security whatsoever that the HITES may now or at any time anywise may have in relation to the Contractor's obligations/or liabilities under and/or in connection with the said Contract, and the HITES shall have full authority to have recourse to or enforce this Security in preference to any other guarantee or Security which the HITES may have or obtain and no forbearance on the part of the HITES in enforcing or requiring enforcement of any

other Security shall have the effect of releasing the Bank from its full liability hereunder.

10. It shall not be necessary for the HITES to proceed against the said Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding that any Security which The HITES may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the said bank hereunder be outstanding or unrealised.
11. We, the said Bank undertake not to revoke this guarantee during its currency except with the consent of the HITES in writing and agree that any change in the constitution of the said Contractor or the said bank shall not discharge our liability hereunder.
12. We \_\_\_\_\_ the said Bank further that we shall pay forthwith the amount stated in the notice of demand notwithstanding any dispute/difference pending between the parties before the arbitrator and/or that any dispute is being referred to arbitration.
13. Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) and this guarantee shall remain in force till \_\_\_\_\_ and unless a claim is made on us within 3 months from that date, that is before \_\_\_\_\_ all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities there under.

Notwithstanding anything contained herein above:

- (a) Our liability under this Bank Guarantee shall not exceed Rs. -----  
----(Rupees -----)
- (b) This Bank Guarantee shall be valid up to -----
- (c) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before -----at (bank address)otherwise, all your rights under this guarantee shall be forfeited and bank shall be relieved and discharged from all the liabilities there under irrespective of whether or not the original bank guarantee returned to us or not

Dated \_\_\_\_\_ day of \_\_\_\_\_ 2024

For and on behalf of Bank.

Issued under seal :



**FORM OF AGREEMENT**

(On a stamp paper of appropriate value as per the prevailing stamp duty as prescribed in Kerala stamp act 1959 amended from time to time. Contractor shall bear the cost of stamp paper)

**Agreement No.....**

This agreement is made at ..... on the ..... day of ..... 2024 between **M/s HLL Infra Tech Services Ltd (HITES)** which expression shall, unless repugnant to the context or meaning thereof be deemed to mean and include its successors, legal representatives and assigns of the **First Part.**

**AND**

M/s ----- a Company incorporated under the Companies Act 1956 having Head Office at ----- and Office at -----, (hereinafter called the “Contractor” which expression unless repugnant to the context shall mean and include its successors-in-interest assigns etc.) of the **Second Part.**

Whereas HITES is desirous that certain works should be executed, for \_\_\_\_\_ hereinafter called the “The Project” and has accepted a Tender submitted by the contractor for the execution and completion of such works as well as guarantee of such works and the remedying of defects therein.

NOW THIS AGREEMENT WITHNESSTH as follows:

1. In this agreement words and expression shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and constructed as part of this agreement Viz.

**Volume – I (NIT &Instructions to Bidders)**

**Volume- II (GCC)**

**Volume – III (SCC)**

**Volume - IV (Technical Specifications)**

**Volume - V (Financial Bid/ Bill of Quantities (BOQ))**

**All the correspondence till award of contract i.e. addendum, minutes, LOA etc.**

**Technical and Financial bids submitted by bidder.**

3. In consideration of the payment to be made to the Contractor as hereinafter mentioned, the Contractor hereby covenants with HITES to executed and complete the Project by ----  
----- and remedy and defects therein in conformity in all respects with the provisions of the Contract.
4. Whereas HITES has accepted bid/ negotiated Bid for the above mentioned work for an amount of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ Only). The above bid/ negotiated bid amount is inclusive of all prevailing taxes including, Building and other Construction Workers welfare Cess and any other applicable statutory taxes, levies and excluding Goods and Services Tax as per terms & conditions of Bid document.
5. The payment to the contractor will be made by Client based on the recommendation of HITES in consideration of the execution and completion of the Project and the remedying of defects therein, the total Contract Price of Rs. -----  
-----  
- only) being the sum stated in the letter of Acceptance(LOA) subject to such additions thereto or deductions there from as may be made under the provisions of the Contract at the times and in the manner prescribed by the Contract.
6. OBLIGATION OF THE CONTRACTOR  
The Contractor shall ensure full compliance with tax laws of India with regard to this Contract and shall be solely responsible for the same.

IN WITNESS OF WHEREOF the parties hereto have caused their respective common seals to be hereunto affixed / (or have hereunto set their respective hands and seals) the day and year first above written.

For and on behalf of the Contractor SIGNED, SEALED AND DELIVERED	For and on behalf of the HITES SIGNED, SEALED AND DELIVERED
Signature of the authorized official	Signature of the authorized official
Name of the Contractor Stamp / Seal of the Contractor	Name of the official Stamp / Seal
in the presence of:  Witness _____ Name _____ Address _____	in the presence of:  Witness _____ Name _____ Address _____

**AFFIDAVIT**

**(To be prepared in a 100 rupee non-judicial stamp notarized, duly signed and sealed by the authorized signatory)**

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that our firm M/s \_\_\_\_\_ have neither abandoned any contract awarded to us nor such works have been rescinded, during the last five years prior to the date of this application.
3. The undersigned also hereby confirm that M/s \_\_\_\_\_ have not been under blacklisting or debarred or penalised from bidding by any government agency or public sector undertaking or judicial authority/arbitration body as on last date of submission of bid
4. The undersigned hereby authorize (s) and request (s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
5. The undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the HITES.
6. The undersigned undertakes that the works submitted against eligibility criteria is executed by us directly and not through any sub-contractors.
7. The undersigned hereby confirmed that if the work is awarded to us, the work will be executed with utmost quality and in case of any rectification suggested by Client/HITES at any stage of work due to poor quality, the same will be re executed by us at free of cost.
8. The undersigned undertake that 'I/We have not altered/ modified the financial bid attached in the HITES e-tender portal. If it is found during the tender stage or later that the BOQ is modified by us, the HITES shall have the right to reject our bid'.
9. The undersigned hereby confirmed that 'The work if awarded to us will be directly executed by us and subcontractors will be employed only for specialized works after getting the concurrence of HITES'.
10. The undersigned undertake that '.....(name of bidder) shall provide Comprehensive warranty / DLP for 3 (three) Years for the work and equipment's supplied (entire MGPS system) from date of taking over of completed work by HITES/Hospital Authorities.
11. The undersigned undertake that ' ..... (name of bidder) shall enter to CMC

contract for 5 years with the Hospital Authorities after completion of warranty period as per requirement.

12. The undersigned undertake that ‘.....(name of bidder) shall provide service support during the warranty and CMC period. The entire responsibility of the contract including warranty and CMC will be with us.
13. The Undersigned hereby confirm that we are not having any Litigation pending / in progress with HLL / HITES.
14. The Undersigned hereby confirmed that we have not suppressed any fact for being eligible to bid.
15. The undersigned hereby confirm that we will follow all the guidelines issued by Government w.r.t Make in India Policy.

Signed by an Authorised Officer of the Firm

**UNDERTAKING**  
**(In letter head of bidder)**

We do hereby indemnify HITES/Client, against all penal action that may be levied/effectuated by any concerned authority for default in any labour regulation/PF/ESI and other statutory requirements of the relevant Acts/Laws related to the work of the contractor and will bear the legal charges, if any, and will pay the legal charges/dues directly to the concerned authority.

Signed by an Authorised Officer of the Firm

**FORMAT FOR UNDERSTANDING THE PROJECT SITE  
(on Bidder Letter Head)**

I/we hereby certify that I/we have examined & inspected the site & its surrounding satisfactorily, where the project is to be executed as per the scope of works. I/ We are well aware about the Location and conditions etc.

I / We hereby submit our BID considering above all facts gathered during site visit and each & every aspect has been considered in the Quoted cost of the project as per BOQ.

- 1. Name of Bidder Representative with Designation visited the site: - .....
- 2. Name of Bidder/Firm:-.....
- 3. Tender to be participated by Bidder:- .....
- 4. Name of Site visited with dates: -

a) \_\_\_\_\_ on \_\_\_\_\_

b) \_\_\_\_\_ on \_\_\_\_\_

Please add on as required

(Name with designation)  
Representative of the Agency/Firm

Countersigned

Representative of HITES

Note: Technical Bids without Proof of Site Visit will be summarily rejected.

**Checklist**

**CHECK LIST OF DOCUMENTS TO BE SUBMITTED WITH THE BID**

**TECHNICAL PACKAGE - Part I**

<b>S.No.</b>	<b>Name of Document</b>	<b>Mode of submission</b>	<b>Page No.</b>
1.	Non-refundable fee of Rs.5,900/- (inclusive of GST) only as e-tender processing fee	<b>Online</b>	
2.	Bid Security/EMD of Rs.50,000/-		
3.	Form of bid and Appendix (Form A) for the bid		
4.	Power of Attorney (Form D) in favour of the person signing the Bid		
5.	Affidavit by Bidder (Form F) on a Rs.100/- non judicial stamp paper duly notarized, to this effect, as per prescribed format		
6.	Affidavit/ Indemnity / Undertaking (Form G) – Form G shall be in stamp paper duly notarized		
7.	Form “T-1” (Financial Information)		
8.	Form “T-2” (Details of works)		
9.	Form “T-3” (Project under execution of award)		
10.	Form “T-4” (Performance Report of Works)		
11.	Form “T-5” (Structure and Organization)		
12.	Form “T-6” (TDS details)		
13.	Copies of GST Registration as per clause 1.12/ ESI/EPF registration		
14.	All pages of the entire tender document/ Corrigendum/ addendum (if any)/ pre bid clarifications (if any) signed by the authorised person of the bidder/bidder.		
15.	Any other document as specified in the tender document		

**FINANCIAL PACKAGE COMPRISING OF:**

<b>S.No</b>	<b>Name of Document</b>	<b>Mode of submission</b>	<b>Page No.</b>
1.	Signed bid /Financial Bid (Bill of Quantities – Volume-V)	Online	

**Volume –II**  
**General Conditions of Contract (GCC)**



## I. CONDITIONS OF CONTRACT

### Definition:

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the Client / HITES and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-charge of the Consultant appointed by the Client and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another
2. In the contract the following expressions shall, unless the context otherwise requires, have the meanings, thereby respectively assigned to them:-
  - i) The expressions **works or work** shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional. The **work(s)** shall also mean the work including survey, investigation, design, both permanent and temporary, or services to be carried out, designed, constructed, manufactured, fabricated, delivered to Site, erected, installed, completed, tested, commissioned, (including Integrated Testing and Commissioning) and remedying of any defects, and/ or supplied in accordance with the Contract and include Plant, Goods and Materials and their accessories and other necessary items/activities to complete the project/work.
  - ii) **Accepting Authority** shall mean the authority nominated by HITES
  - iii) The **Contractor** shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
  - iv) Client” means ‘Government Medical College, Kottayam.
  - v) **“HITES”** shall mean HLL Infra Tech Services Ltd. (HITES), (100% Subsidiary of HLL Lifecare Ltd., A Government of India Enterprise) appointed as Consultant by Client
  - vi) **“Engineer in Charge”** (EIC) means the Engineer Officer as authorized by HITES / Client.
  - vii) **Expected risk(s) are** risks due to riots (other than those on account of the contractor’s employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any act of Client, damage from aircraft, acts of God, such as

earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Client of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Client's faulty design of work.

- viii) **Specifications** means the specifications followed in the area where the work is to be executed.
- ix) **Market rate** shall be the rate as decided by Engineer-in-charge on the basis of the cost of materials and labour at the site where the work is to be executed plus 15% on cost of materials and labour to cover, all overheads and profits, provided that no extra overheads and profits shall be payable on the part(s) of work assigned to other agency(s) by the contractor as per terms of contract.
- x) **Schedule(s)** referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates of the Government, with the amendments thereto issued upto the date of receipt of the tender.
- xi) The **"Site"** shall mean the land/ or place on, into or through which work is to be executed or any adjacent land, path or street which may be located or used for the purpose of carrying out the contract.
- xii) **"Tendered Value"/ "Contract Price"** means the value of the entire work as stipulated in the letter of award.
- xiii) **"GST"** shall mean Goods and Service Tax.
- xiv) **"Date of commencement of work"**: The date of commencement of work shall be the date of start as specified in NIT

### **Scope and performance**

3. Where the context so requires, words imparting the singular only also include the plural or vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa
4. Heading and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, Schedule of rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

### **Works to be carried out**

6. The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The description given in the

Schedule of Quantities shall, unless otherwise stated, be held to include wastage of materials, cartage and carriage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labour necessary in and for the full entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

### **Sufficiency of tender**

7. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and price quoted in the Schedule of Quantities, which rates and price shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works.

### **Discrepancies and Adjustment of errors**

8. The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scale and specific conditions in preference to general conditions.
  - i. In the case of discrepancy between the various documents, the following order of preference shall be observed:–
    - a) Description of Schedule of Quantities
    - b) SCC
    - b) GCC, NIT, ITB
    - c) Technical Specification
    - d) Tender Drawings
    - f) Indian Standard Specifications of B.I.S.
    - g) For items not covered by any of the above, the work shall be done, as per sound engineering practices and as directed by the Engineer-in-charge.
  - ii. If there are varying or conflicting provisions made in any one document forming Part of the contract, Accepting Authority shall be deciding authority with regard to the intention of the document and his decision shall be final and binding on the Contractor.

Any error in description, quantity or rate in schedule of quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligation under the contract.

### **Signing of Contract**

9. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 25 days from the stipulated date of start of the work, sign the contract consisting of notice inviting tender, all the documents including

drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

## II. CLAUSES OF CONTRACT

### 1. PERFORMANCE GUARANTEE

- (i) The contractor shall submit an irrevocable Performance Guarantee of 3% (Three percent) of the tendered value in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within 25 days from the date of issue of letter of acceptance (LOA) in form of Treasury Fixed Deposit Receipt or DD or BG from any scheduled commercial bank based in India or the State Bank of India in accordance with the form annexed hereto.

This period of 25 days for submission of Performance Guarantee can be further extended by the Engineer-in-Charge up to a maximum period of 7 days with a late fee @ 0.1% per day of Performance Guarantee amount beyond the period of 25 days, on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the HITES / Engineer-in-Charge.

- (ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus six months beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest. The Bank Guarantee shall be kept alive till the completion or extended period whichever is later and expenses of renewal thereof are the responsibility of the contractor.
- (iii) In the event of the default by contractor, Contract being determined or rescinded under provision of any of the Clause /Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the HITES/ Client
- (iv) Additional Performance Security:

The contractor shall submit Additional Performance Security as per clause 1.10.1 of Volume 1 (NIT). Additional Performance Security shall remain valid up to six months beyond the stipulated date of completion or the extended period, thereof. The additional Performance Security shall be submitted within 25 days of issue of LOA.

The performance guarantee and additional performance security shall be released to the Contractor upon successful completion of project including extended period thereof, as certified by EIC. No interest shall be payable on performance guarantee and additional performance security

## **2. SECURITYDEPOSIT**

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit HITES/ Client at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 5% of the gross amount of each running and final bill till the sum deducted will amount to security deposit of 5 % of the tendered value of the work. Such deductions will be made and held by HITES by way of Security Deposit unless he/ they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any Bank is furnished by the contractor to the HITES as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused there by shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the HITES to make good the deficit.

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

The Security Deposit as deducted above can be released against bank guarantee issued by a scheduled bank or Treasury Fixed Deposit Receipt

The security Deposit shall be returned to the Contractor only after successful completion of Defect Liability Period.

It is also a condition of contract that Security Deposit of the work shall be refunded if no labour complaint has been received from the Labour Officer till the due date of its payment. If a labour complaint is received during this period, the Engineer-In-Charge shall, after issue of notice in this regard to the Contractor, deduct the amount required to settle the complaint from his security deposit and refund the balance amount.

## **3. COMPENSATION FOR DELAY**

The work must be completed in all respect within the stipulated time as per tender conditions. If the Contractor fails to maintain the required progress in terms of the agreed time and progress chart or to complete the work and clear the site on or before the date of completion of Contract or extended date of completion, he shall without prejudice to any other right or remedy available under the law to the HITES / Client on account of such breach, pay as compensation, Liquidated damages as below:

- (i) Compensation for delay of work @ 1.0 % of accepted tendered amount per month of delay (to be computed on per day basis)

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed 10% of the Tendered Value of work.

Such amount payable shall be recovered from the amount payable to the contractor / PBG/ SD available with HITES / Client.

#### 4. WHEN CONTRACT CAN BE DETERMINED

Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, not following safety norms, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:

- (i) If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workman like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- (ii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.
- (iii) If the contractor fails to complete the work or section of work with individual date of completion on or before the stipulated or justified extended date, on or before such date of completion; and the Engineer in Charge without any prejudice to any other right or remedy under any other provision in the contract has given further reasonable time in a notice given in writing in that behalf as either mutually agreed or in absence of such mutual agreement by his own assessment making such time essence of contract and in the opinion of Engineer-in-Charge the contractor will be unable to complete the same or does not complete the same within the period specified.
- (iv) If the contractor persistently neglects to carry out his obligations under the contract and/or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.
- (v) If the contractor shall offer or give or agree to give to any person in HITES/ Client or to any other person on his behalf any gift or consideration of any kind as

an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for HITES.

- (vi) If the contractor shall enter into a contract with HITES in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-Charge.
- (vii) If the contractor had secured the contract with HITES as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of integrity pact.
- (viii) If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.
- (ix) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- (x) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.
- (xi) If the contractor assigns (excluding part(s) of work assigned to other agency(s) by the contractor as per terms of contract), transfers, sublets (engagement of labour on a piece- work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer -in-Charge. When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the HITES shall have powers:
  - (a) To determine the contract as aforesaid so far as performance of work by the Contractor is concerned (of which determination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and

shall be absolutely at the disposal of the HITES/Client.

- (b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work including any new items needed to complete the work. In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

#### **5. MEASUREMENT OF WORKS**

All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance and will be maintained by the Engineer-in-Charge. The contractor has to maintain measurement book as per the direction of EIC.

#### **6. PAYMENT TERMS**

The payments will be released to the contractor directly by the Client through bank transfer based on the certification of bills by HITES as below:

- 60 % on delivery on pro-rata basis
- 20% against Installation Certificate
- 20% against Final Acceptance Certificate (FAC)

Required documents for direct bank transfer shall be submitted by the Contractor to the Engineer-In-Charge / Client as per requirement.

Bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format given by EIC in triplicate within the time frame fixed for the same by the Engineer-in-Charge (EIC). The bills shall be submitted with all supporting documents as required by the EIC / tender.



The final bill shall be submitted by the contractor, along with all supporting documents required as per tender / EIC in the same manner as specified in interim bills within one month of physical completion of the work. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Final bill shall be paid within 6 months from the date of submission of bills with all supporting documents, the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized Engineer, complete with account of dismantled materials.

No bills shall be paid for the work till the licenses like registration with EPFO and ESIC and whichever applicable for the scope of work, are submitted by the contractor to the Engineer-in-charge.

All statutory payments in connection with the employment of the Workmen & Employees State Insurance for this work will be borne by the Contractor at the prevailing rates.

The contractor is the employer of all the workers engaged for this work and should therefore take all required registrations and pay premiums correctly to labour welfare funds/ Employees State Insurance, PF etc as per requirement.

The Contractor shall also ensure the compliances of all statutory provisions by the sub-contractors, if any, engaged by contractor for above said work.

The contractor shall submit affidavit to indemnify and save harmless the Client / HITES and against all actions, suits, proceedings, losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the HITES by reasons of any act or omission of the Contractor, his agents or employees in connection with complying the provisions of the EPF, ESI, Labour laws etc as amended from time to time. All sums payable by way of compensation/ penalty/ damages/ interest on the outstanding amounts payable by the contractor shall be considered as reasonable and be payable by the contractor to the HITES immediately and if the contractor does not pay the amount immediately the same will be deducted from security deposit or earnest money or any other amount available with the HITES or any money payable to the Contractor by the HITES.

The deduction towards statutory deductions shall be changed if the government revises the rate. Any tax omitted, to be deducted in any part bill shall be deducted in the subsequent bills/final bill.

However, it shall be the responsibility of the contractor to ensure that all the statutory requirements like filing of returns etc. are met with as per the prevailing norms.

7.           **SECURED ADVANCE – NOT APPLICABLE**
8.           **MOBILISATION ADVANCE – NOT APPLICABLE**
9.           **ESCALATION – NOT APPLICABLE**

**10. COMPLETION CERTIFICATE AND COMPLETION PLANS**

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-Charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

11. No advances shall be paid to the contractor under any circumstances unless otherwise specifically mentioned in the contract.
12. The rates quoted by the contractor are firm and fixed for the entire tenancy of the contract. The quoted rates shall be deemed to have included all components required for the successful installation, completion, commissioning and handing over of work as per the tender Specifications and BOQ.
13. The ESI and EPF contributions on the part of this Contract shall be paid by the Contractor and nothing shall be reimbursed by the Client/ HITES.
14. The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed thereunder and other labour laws affecting contract labour that may be brought into force from time to time.
15. The Contractor(s) shall make their own arrangements for water and power required for the work and nothing extra will be paid for the same.
16. The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work.

17. The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract. Required supervisor, technicians, labourers and resources shall be deployed by the Contractor for the timely completion of work. The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

18. The labour camp shall not be allowed to locate inside the proposed site. The Contractor shall make his own arrangements for the labor accommodation etc.

19. **DEVIATIONS/ VARIATIONS EXTENT AND PRICING**

The Engineer-in-Charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

**19.1** The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows:

- (i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus
- (ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-Charge.

**19.2 Deviation, Extra Items and Pricing:**

In the case of extra item(s) (**items which are not available in the contract**), the contractor may within fifteen days of receipt of order or occurrence of the item(s), submit claim for market rates (s), supported with proper analysis of rates and manufacturer's specification for the work, invoices, vouchers, etc (as applicable), failing which the rate(s) approved later by the Engineer in charge shall be final and binding. Where the contractor submits claim for market rates(s) in the manner prescribed above, the Engineer-in-Charge shall, within 45 days of the receipt of claims, after giving consideration to the analysis of rates and other documents submitted by the contractor, determine the rates on the basis of the market rates

and the contractor shall be paid in accordance with the rates so determined. **The prevailing market rates or rates as per actual invoice, whichever is less will be considered. For prevailing market rates, if the rates are available in PWD local market rates, the same is to be considered. The rates (s) of extra items so determined by the Engineer-in-charge shall be final and binding on the contractor, and shall not be arbitrable.**

**Deviation, Deviated Quantities & Pricing:**

In the case of contract items which exceed the limit laid down in schedule F, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates. The Engineer-in-Charge shall within 45 days of receipt of the claims, shall determine the rates for excess quantities i.e. quantities in excess of 25% over agreement scheduled quantity, the admissible rates shall be limited to Technical Sanctioned estimate rate modified by overall tender excess / tender deficit, as the case may be, subject to a maximum of PWD local market rates prevailing at the time of ordering. **The rates (s) so determined by the Engineer-in-charge shall be final and binding on the contractor, and shall not be arbitrable.**

**19.3** In case of contract items which exceed the limit laid down in schedule F, the Engineer-in-Charge shall after giving notice to the contractor within 30 days of submission of that bill by the contractor which contains such item(s), and after taking into consideration any reply received from the contractor within 25 days of the issue of such notice, reduce the rate for quantity in excess of the above mentioned limit on , within 30 days of the expiry of the said period of 25 days, and the contractor shall be paid in accordance with the rates so determined. The rates (s) so determined by the Engineer-in-charge shall be final and binding on the contractor, and shall not be arbitrable

**19.4** The cost of any operation necessarily in contemplation of tenderer while quoting tender or necessary or incidental to proper execution of an item of work included in the Schedule of quantities or in the schedule of rates mentioned in schedule F, whether or not specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

The following conditions shall be used in determining the deviation items:

The Engineer-in charge reserves the right to vary the quantities of items or groups of items to be ordered as specified in the Bill of quantities, as may be necessary, during the execution of the Contract. The following are defined for the purpose of this clause:

- i. Abnormally High Quoted Rate (AHQR) -Items for which the quoted rate is having a deviation of more than 25% over the corresponding rate in the technically sanctioned estimate.
- ii. Abnormally Low Quoted Rate (ALQR) -Items for which the quoted rate is having a deviation of less than 25% below the corresponding rate in the technically sanctioned estimate

- iii. For AHQR items, the Contractor is bound to execute up to the agreed quantity. In case of variation over the agreed quantity, the admissible rate for the excess quantity shall be limited to the technically sanctioned estimate rate modified by the overall tender excess/tender deduction subjected to a maximum of the PWD local market rate prevailing at the time of ordering the excess quantity
- iv. For other items, the Contractor is bound to execute up to 25% over the agreed quantity. In case of variation over 25% of the agreed quantity, the admissible rate for the excess quantity shall be limited to the technically sanctioned estimate rate modified by the overall tender excess/tender deduction subjected to a maximum of the PWD local market rate prevailing at the time of ordering the excess quantity
- v. In case of ALQR items sanction of Technical Sanction Authority shall be insisted before limiting execution of concerned item less than 75% scheduled quantity.
- vi. No increase shall be permitted within the original contract period and the rate in excess of market rate shall not be given under any circumstances. Upon rate revision shall be considered only in exceptional cases which shall be approved by the Employer for the enhanced rates based on the recommendation of the Engineer.

**20. CONTRACTOR'S REPRESENTATIVE FOR EXECUTION & COORDINATION OF WORKS**

The Contractor shall ensure their representative at site all times during working hours throughout the course of the Contract or depute a competent representative who shall be empowered to receive instructions from the Engineer - in- Charge in respect of all matters likely to arise in connection with the execution & coordination of the works at the site. Contractor's Authorized Representative shall take joint measurements and sign the measurement books / bills. Any direction, explanations, instructions or notices given by the Engineer-in-charge to such representative shall be held to be given to the Contractor. In case of absence of said Representative other alternative representative should also be mentioned having same responsibilities.

The contractor shall be solely responsible for the means, methods, techniques sequence and procedure of construction. The Contractor shall be responsible to see the completed work complies accurately with the Contract requirements. The Contractor shall provide all necessary superintendence during the execution of the Works as per contractual provisions

**21. CARRYING OUT PART WORK AT RISK & COST OF CONTRACTOR**

If contractor:

- (i) At any time makes default during currency of work or does not execute any part

of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in- Charge; or

- (ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; or

Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

- (iii) The Engineer-in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to HITES, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to:

- (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon;and/or
- (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost ofthe contractor.

The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by Government /HITES because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor.

The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the HITES/department are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by HITES/Client in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by HITES/Client as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to

HITES/Client in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

In the event of above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

## 22. SETTLEMENTS OF DISPUTES

Arbitration shall not be a means of settlement of any dispute or claim out of this contract. All disputes and differences arising out of the contract may be resolved through discussions between the HITES and the Contractor within the purview of the contract agreement. If such discussions are not fruitful, the disputes shall be settled only by the Court of law.

Jurisdiction shall be High Court of Kerala.

## 23. INSURANCE

The contractors shall to suitably insure at their own cost for the men, materials and finished product against theft, losses, damages due to accidents during transit of purchase of materials, during storage at the time of manufacturing and during delivery of the finished product or at the time of execution of works. The successful bidder, to whom the work will be entrusted, shall obtain Contractor's all Risk Insurance (CAR) policy, Workmen compensation policy and any other insurance required by the EIC and submit a copy of the same along with the bill.

**Remedy on the contractor's failure to insure:** If the contractor shall fail to effect and keep in force the insurance referred to above or any other insurance which he/they may be required to effect under the terms of the contract then and in any such case Engineer-in-charge may without being bound to, effect and keep in force any such insurance and pay such premium or premiums, as may be necessary for that purpose and from time to time deduct the amount so paid by the Engineer-in-charge from any

moneys due or which may become due to the contractor or recover the same as a debt due from the contractor.



**VOLUME III**  
**SPECIFIC CONDITIONS OF CONTRACT**

## SPECIAL CONDITIONS OF CONTRACT

### 1.1 TIME LIMITS PRESCRIBED

Sl. No.	Activity	Time Limit
1.1.1	Installation & Commissioning period	06 months from the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later.
1.1.2	Comprehensive warranty period /DLP	3 years for the work and equipment's supplied after taking over of work by the Client / HITES
1.1.3	CMC period (after warranty)	5 years
1.1.4	Payment of CMC charge	<p>The bidder shall also quote for the CMC charges for 5 (five) years as per the format provided in the Volume V –FINANCIAL BID/ PRICE BID.</p> <p>To arrive L1, rates quoted for CMC will not be considered. The successful bidder is bound to do the CMC for 5 years after the warranty period. For CMC the successful bidder shall enter into a contract with the Institute (Hospital) directly after completion of warranty period on the terms and condition of this bid document, as per the requirement of Institute (Hospital).</p>
1.1.5	Frequency of visits to all User Institution concerned during Warranty/CMC	One visit every three months (4 visits in a year) for periodic/preventive maintenance and any time for attending repairs/break down calls.
1.1.6	Frequency of payment of CMC charges	Every six months after completion of the period
1.1.7	Payment Installments of Price of equipment's and ratio	<p>3 Installments and in the ratio 60: 20:20.</p> <ul style="list-style-type: none"> <li>• 60 % on delivery on pro-rata basis</li> <li>• 20% against Installation Certificate</li> <li>• 20% against Final Acceptance Certificate (FAC)</li> </ul>
1.1.8	Maximum time to attend any Repair call	Within 24 hours
1.1.9	Uptime in a year	98% uptime warranty and during CMC period on 24 (hrs) X 7 (days) X 365 (days)basis

## **2.2. SERVICE FACILITY:**

- 2.2.1 Bidder should have service facility in South India and have the capability to attend repairs of the equipment within the time mentioned in the tender and shall provide stand by equipment or replace the faulty equipment if the repair/down time extends beyond 72 hours from the time of reporting of the fault within the next 48 hours (total down time should not exceed 5 days in one instance).

## **2.3 SCOPE OF TENDER**

- 2.3.1 Tender is invited for Supply, Installation, Testing and Commissioning of MGPS for Construction of 200 Bedded Cardiology Block at Government Medical College Kottayam
- 2.3.2 The successful bidder shall visit the respective hospital on receipt of LOA and prepare shop drawing to show the route of pipeline with dimensions as per the requirement, approved by the respective head of institution. The successful bidder shall obtain for himself at his own responsibility all the information which may be necessary for the purpose of the successful execution of the contract.
- 2.3.3 Bidder shall complete the work within the stipulated time period.
- 2.3.4 All related civil works which include but not limited to demolition, fixing, fastening, drilling, welding, painting and electrical works should be carried out as per specification by the bidder and all expenses shall deemed to have included in the quoted rate.

Bidder will be responsible for other associated work related to installation and commissioning of complete MGPS system.

Installation and commissioning of area valve service unit and alarm unit for the operation theatre shall be done by the MGPS bidder.

Medical gas pipe line inside the operation theatre has to be done by the MGPS bidder.

Bidder should provide factory test certificates for the materials used. Bidder should supply complete set of part manuals, service manuals and user manuals for all the systems and subsystems supplied. Final electrical safety test, system test, leakage and calibration should be done by authorized persons using calibrated test equipment as per standards.

The Medical Gas Pipe Line System must follow Single Standard any one only from: NFPA 99c/HTM 02-01/ ISO 7396-1/DIN/EN

## **2.4 OTHER GENERAL CONDITIONS:**

- 2.4.1 Bidder shall offer unit rates of each category works as specified in the technical specifications in the price bid form.
- 2.4.2 The measurements mentioned is prepared by HITES and the evaluation of price bids will be only on the basis of area/Qty mentioned in the price bid form.
- 2.4.3 The demolition work required shall be done by the bidders and the debris has to be removed from the site and disposed properly.
- 2.4.4 Acquiring power required for the complete installation and commissioning of the MGPS work is the responsibility of the bidder. This may be done in coordination with the main building contractor and any expenses for the same shall be borne by the MGPS Contractor.
- 2.4.5 Measurement which has to be taken during the course of work shall be intimated promptly by the bidder to EIC/HITES in writing. In case if it is not informed to EIC/HITES appropriately, then the measurement shall be done only for the visible area and the decision of EIC/HITES is final in this regard.
- 2.4.6 The technical specifications of the work within scope are provided in Annexure I.
- 2.4.7 All the equipment supplied shall have the warranty period as per the tender.

## **2.5 INSPECTION OF SITE.**

- 2.5.1 Bidders are expected to inspect the site of the proposed work before offering rates and shall go through all the drawings, specifications and other tender conditions. The Bidder shall clearly understand the scope of work and shall offer the rates. Any further clarifications in the drawings and documents can be obtained from EIC/HITES.

2.5.2 The Bidder shall inspect and acquaint himself with the site conditions approaches, availability of raw materials, geological and weather conditions examine the site and its surroundings, and shall satisfy himself before submitting tender, as to the nature of the ground, form and nature of the site, the quantities and nature of work and materials required for the completion of the works, the means of access to the site, the local labour conditions, the facilities available at site, the accommodation required and in general shall obtain all necessary information as to the risks, contingencies and other circumstances which may influence or affect the tender.

## 2.6 DELIVERY AND INSTALLATION

2.6.1 Bidder may visit the site before bidding with prior permission. The bidders will have to integrate the OT with the medical gas pipeline that will be installed along with this work.

2.6.2 The final quantity may increase or decrease at the request of the consignee, hence bidder should provide details of prices of all the components, equipment and their accessories on Unit basis wherever required. If the bidder does not provide rate of any equipment / instrument / accessories / consumables then that particular instrument will be considered free of cost.

2.6.3 On acceptance of the tender, the bidder shall intimate the name of his authorized representative who would be supervising the construction and would be responsible for taking entire Instructions for carrying out the work

2.6.4 The bidder should inspect the source of material, their quality, quantity and availability. The material must strictly comply with the relevant I.S. specifications.

2.6.5 The bidder must co-operate and co-ordinate with other contractors involved in other works on the site. The bidder should also note that they shall have to clear the site of vegetation, debris etc. before the commencement of the work and that no extra payment is permissible on this account.

2.6.6 Installation / construction works shall be carried out by the bidder as per the drawings approved and issued by the User Department / EIC/HITES. Bidder shall arrange for the execution of the works and the procurement of materials accordingly.

2.6.7 The bidder must not vary or deviate from the drawings in any respect while executing the work or executing any extra work of any kind whatsoever duly consulting the EIC/HITES.

2.6.8 The bidder shall give adequate notice in writing to EIC/HITES for any further drawings or specifications that may be required for the execution of the works or otherwise under the contract.

- 2.6.9 One copy of the drawings furnished to the bidder as aforesaid shall be kept at the site and the same shall at all reasonable times be available for inspection and use by EIC/HITES / Representative.
- 2.6.10 The bidder shall provide and employ only such skilled and experienced technical assistants in their respective fields and such sub-agents, foreman and leading hands as are competent to give proper supervision to the work they are required to supervise and necessary for the proper timely execution and maintenance of works in site for the execution and maintenance works.
- 2.6.11 No land, building belonging to or in the possession of the institution shall be occupied by the bidder. The bidder shall not use, or allow to be used, the site for any purpose other than that for executing the works. Under no circumstances, the roads within the institution campus shall be used for dumping/collection of materials by the contractor.
- 2.6.12 Any site-shed, proposed to be temporarily constructed by the bidder for his office work, storage of materials etc, shall conform to the standard sketch, or to the plan approved by the representative of EIC/HITES. Permission for the construction of such sheds shall be obtained in writing.
- 2.6.13 All materials required for the execution of the works other than those mentioned in the Notice Inviting Tender if any, shall be supplied by the bidder. Materials so supplied shall have the approval of the representative of EIC/HITES before using on the works. All the rejected materials shall be removed at once from the site of work at the bidder's own cost.
- 2.6.14 The bidder shall pay all tollages and other royalties, rent and other payments or compensations, if any for getting stone, gravel, sand, clay and all other materials required for the works.
- 2.6.15 The bidder shall be responsible for the true and proper setting out of the works and for the correctness of the position, levels, dimensions and alignment of all parts of the works and for the provision of all necessary instruments, appliances and laboring connection therewith. If at any time during the progress of the works any error shall appear or arise in the position, level, dimensions or alignment of any part of the works, the bidder on being required to do so by the representative of EIC/HITES / User Institution, shall at his own cost rectify such error to the satisfaction of the EIC/HITES. The checking of any setting out or of any line or level by the representative of EIC/HITES shall not in any way relieve the bidder of his responsibility for the correctness thereof. The bidder shall provide all necessary instruments, appliances and labour required by the representative of EIC/HITES for checking, if any, of the setting out. The bidder shall carefully protect and observe all

bench marks, site levels, pegs and other things used in setting out the works. The rates quoted for the work shall also include the cost of reference and level pillars and their dismantling, when no longer required. The bidder shall verify all dimension and elevations mentioned in the drawings prior to the commencement of work.

- 2.6.16 The bidder shall co-operate with the work of other agencies or Contractors that may be employed or engaged by EIC/HITES and as far as it relates to the bidders' work. The sequence of work shall be so arranged that the work of other agencies is also in progress simultaneously.
- 2.6.17 The bidder must take precautionary measures to protect the underground and other services lines viz. cables, water and sewer lines, etc. and observe any specific instructions which may be given in this regard by the representative of EIC/HITES / User Institution.
- 2.6.18 Any defect developed within warranty will have to be rectified by the bidder at their own cost and in case the defects are not rectified by the bidder in time, The Site engineer/" EIC/HITES" or their representative shall get the work done at the risk and cost of the bidder.
- 2.6.19 The bidder shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause for such delays may be including delays in procuring Government Controlled or other materials.
- 2.6.20 All items should be carried out as per relevant specification and all the clauses of preliminary specifications should be complied with. The bidder should submit relevant brochures of the quoted make and model along with the bid.
- 2.6.21 The method of measurement will be as per Indian Standard 1200-1958.
- 2.6.22 The bidder should submit the manufacturers test certificate before producing the material for the approval of the Site engineer.
- 2.6.23 Earthing arrangements for all the equipment should be completed as per standard practice.
- 2.6.24 Warranty must be given for a period 3years.
- During the warranty period, preventive maintenance should be carried out minimum twice per year.
  - 98% uptime during warranty and during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis should be covered.

- All the air filters used in the system including the vacuum system and surgical air system must be covered under warranty and CMC.

2.6.25 Training should be given to the required staff of the hospital as to how to operate and maintain the system till they get familiar with it.



**Volume- IV**

**TECHNICAL SPECIFICATION**

SN	<b>Technical Specification</b>
	The system comprises of
1	Nitrous Oxide Manifold and Emergency NO2 Manifold with automatic control panel
2	Medical Air Supply System (4 Bar & 7 Bar) complete.
3	Medical Vacuum (suction) Supply System Complete.
4	Distribution Piping Complete with Accessories.
5	Area Valve Service System.
6	AGSS system Complete
7	Alarm Systems (Master & Area)
8	Gas Outlets with Probes
9	Bed Head Panels
10	Other associated & Optional works
<b>RESPONSIBILITY OF BIDDER</b>	
1	Bidder shall be responsible for complete design, supply, installation, testing and commissioning including Civil Modification works, demolition and construction as applicable. The bidders are required to survey the site before furnishing the quotations.
2	Bidder shall execute all required civil, electrical, plumbing, fire safety, false ceiling trap door/ cutout and repair(if any) and other works as maybe required for complete installation and trouble-free functioning as a part of the 'Civil Modification'.
3	Hospital will provide one point electrical supply with isolator and an earth strip in the plant. The internal wiring and earthing, has to be done by the bidder.
4	Control panel for Vacuum system and Air plant system has to be supplied by the bidder.
5	Bidder will be responsible for other associated work related to installation and commissioning of complete MGPS system.
6	The MGPS bidder has to terminate/interconnect all the medical gas lines to OT/MOT up to pendant
7	Installation and commissioning of area valve service unit and alarm unit for the operation theatre shall be done by the MGPS bidder.
8	Medical gas pipe line inside the minor operation theatre has to be done by the MGPS bidder. MGPS bidder shall cooperate with the MOT bidder for associated works.
9	The bidder shall be responsible for the complete works including the submission of working drawings, and isometric views, detailed work schedule and materials. Bidder shall be responsible for design, supply, installation, testing and commissioning of medical gas supply system in coordination with respective institute authorities & HLL/HITES.
10	Bidder shall be responsible for free maintenance of all component of Gas pipeline system during warranty period including all filters & consumables.

11	Bidder should provide factory test certificates for the materials used. Bidder should supply complete set of part manuals, service manuals and user manuals for all the systems and subsystems supplied. Final electrical safety test, system test, leakage and calibration should be done by authorized persons using calibrated test equipment as per standards.
12	The Medical Gas Pipe Line System must follow Single Standard any one only from: NFPA 99c/HTM 02-01/ ISO 7396-1/DIN/EN except Copper Pipe, For AGSS Ventury type is not acceptable.
13	All Gas Outlets in MOT (i.e. O2, N2O, MA4, MA7, Vacuum, CO2(if required), etc.) will come with OT Pendants(Under MOT Tender) Bidder has to provide pipe lines upto all MOTs (if required)
14	Bidder shall co-ordinate with respective Departments Head for their final Gas Outlets requirement per bed in their wards and should incorporate the same in drawing.
15	The final Payment will be made on the actual consumption of the BOQ Items and ranking will be done with tendered BOQ.
16	<b>Control Panels &amp; Manifold for N2O &amp; Medical Air Plant &amp; Medical Vacuum Plant, AGSS Plant, Area &amp; Master Alarm, All types Outlets, Oxygen flowmeter, AVSU, Line Isolation Valves ,High Pressure Tubes shall comply with HTM 02-01/NFPA 99C/DIN/EN/ISO-7396-1 standards and bidder should submit applicable certificates along with the bid.</b>
17	The third party compliance certification after installation to be done for the standard followed i.e HTM 02-01/NFPA 99C/DIN/EN/ISO-7396-1 except copper pipe from the authorised agency. The cost for the same will be borne by the bidder.
18	Bidder must have a satisfactory installation of complete MGPS as per any International standard as asked in tender and demo may be taken for the same.
19	Bidder will be provided after award either AutoCAD or PDF or hard Copy of building Layout drawing for preparation of MGPS drawings.
	Responsibility of Consignee:
1	The institute will provide MGPS plant & manifold room (complete with plastering , painting & flooring )
2	Institute will provide one point electrical, water and drain connection at the plant & manifold room
3	Institute will provide shaft for MGPS riser
4	Institute will provide temporary storage for storing of raw materials of MGPS system during installation period and the security of the store is the responsibility of MGPS vendor
	<b><u>Scope and Technical Specification:</u></b>
1.2	Oxygen Manifold Supply System (without Cylinders)
	The size of Manifolds should be as mentioned in BOQ of respective Institute and it shall be compatible with Class-D type bulk cylinders.
	Manifold shall consist of two high pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with respective numbers of cylinder pigtail connections to suit cylinder valves as per IS.3224/ BS/ ASME incorporating a check valve at the header connection.

	Each header bar assembly shall be provided with a high pressure shut off valve. Oxygen Manifold should consist of 2 rows of respective numbers of class D-type bulk oxygen cylinders. The manifold should be hydraulically tested to 3500 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The system should have non – return valves for easy changing of cylinders without closing the bank. The cylinder should be placed with the help of cylinder brackets and fixing chains which should be galvanized.
<b>1.3</b>	Emergency Oxygen Manifold (without Cylinders)
	The size of Manifolds should be as mentioned in BOQ of respective Institute and it shall be compatible with Class-D type bulk cylinders.
	Manifold shall consist of two high pressure header bar assemblies to facilitate connection of respective numbers of primary and secondary cylinder supplies. Each header bar shall be provided with respective numbers of cylinder pigtail connections to suit cylinder valves as per IS.3224/ BS/ ASME incorporating a check valve at the header connection. Each header bar assembly shall be provided with a high pressure shut off valve.
	Oxygen Manifold should consist of 2 rows of respective numbers of class D-type bulk oxygen cylinders. The manifold should be hydraulically tested to 3500 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The system should have non – return valves for easy changing of cylinders without closing the bank. The cylinder should be placed with the help of cylinder brackets and fixing chains which should be galvanized.
<b>1.4</b>	Oxygen Flow meter with Humidifier Bottle
	Back Pressure Compensated flow meter for accurate gas flow measurement with following features:
<b>A)</b>	Control within a range of 0-15 LPM.
<b>B)</b>	It should meet strict precision and durability standard.
<b>C)</b>	The flow meter body should be made of brass chrome plated materials.
<b>D)</b>	The flow tube and shroud components should be made of clear, impact resistant polycarbonate.
<b>E)</b>	Flow tube should have large and expanded 0-15 LPM range for improved readability at low flows.
<b>F)</b>	Inlet filter of stainless steel wire mesh to prevent entry of foreign particles
<b>G)</b>	The humidifier bottle is made of unbreakable & reusable polycarbonate /polysulfone material autoclavable at 121 degree centigrade .
<b>H)</b>	Humidifier Bottle should be covered under warranty & CMC.
<b>I)</b>	Shall comply with HTM 02-01/NFPA 99C/DIN/EN/ISO-7396-1 standards and bidder should submit applicable certificates along with the bid"
<b>2</b>	NITROUS OXIDE SYSTEM
<b>2.1</b>	Fully Automatic Nitrous Oxide Control Panel
	The fully automatic N2O control panel should comply with HTM 02-01/ NFPA 99 C/ EN /DIN /ISO 7396-1 STANDARD.

	The manifold assembly should provide two stages of pressure regulation. A single stage primary regulator, one for each cylinder bank should be used to initially reduce cylinder pressure and two single stage pressure regulators should be provided in the control cabinet for final delivery pressure regulation. One delivery pressure regulator in service and one should be ready for service in a Standby mode. The Manifold control panel should be digital, fully automatic type and switches from “Bank in Use” to “Reserve bank “ without fluctuation in delivery supply line pressure. Changeover should be performed by electrically/pneumatically operated valves contained in the control cabinet. In the event of an electrical power failure the valves should automatically open to provide an uninterrupted gas flow. The manifold should not require any manual resetting or adjustments after the replacements of the depleted cylinders.
	The Control Panel shall include two pressure relief valves, one high pressure approx.200psi and one low pressure approx.75 psi.
	The control panel should also have heaters to prevent ice formation on the regulators at high flow rates.
	The Control Panel should be made to provide Heavy Duty and have a flow capacity of 500 LPM or more at 50 to 60 psi.
	<b>The Automatic Control Panel should be installed in such a way to meet the peak flow requirement of the Hospital/Institute</b>
	Control panel should have Alarm reset switch/Mute / acknowledgement switch to control and monitor the alarm indications by the operator.
<b>2.2</b>	Nitrous Oxide Manifold (Without Cylinders)
	The size of Manifolds should be as mentioned in BOQ of respective Institute and it shall be compatible with Class-D type bulk cylinders.
	Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with respective number of cylinder pigtail connections to suit cylinder valves as per IS.3224/ BS/ ASME incorporating a check valve at the header connection. Each header bar assembly shall be provided with a high pressure shut off valve. The manifold should be hydraulically tested to 3500 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The cylinder should be locked with the help of cylinder brackets and fixing chains which should be galvanized.
<b>2.3</b>	Emergency N2O Manifold (Without Cylinders)
	The size of Manifolds should be as mentioned in BOQ of respective Institute and it shall be compatible with Class-D type bulk cylinders.
	Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with respective numbers of cylinder pigtail connections to suit cylinder valves as per IS 3224/ BS/ ASME incorporating a check valve at the header connection. Each header bar assembly shall be provided with a high pressure shut off valve. Nitrous oxide manifold should consist of 2 rows of respective numbers of cylinders.
	The manifold should be hydraulically tested to 3500 psig. The manifold should be so designed that it shall suit easy cylinder changing and positioning. The system should have non – return valves for easy changing of cylinders without closing the bank. The cylinder should be placed with the help of cylinder brackets and fixing chains which should be

	galvanized.
3	Medical and Surgical Air System (Package Unit ) - Tolerance of +/-5% is acceptable on plant flow capacity
	Air-cooled Oil-Less compressors for continuous duty application with highest output of compressed air, low power consumption and very low vibration resulting in low noise level.
	The medical air plant shall fully comply with the requirements of the HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 and bidder should submit applicable certificates along with the bid"
3.1	Air Compressor Modules
	It should be Oil-Less Screw Compressors /Scroll Compressors to produces the plant output of {minimum Liters Per Minutes(LPM) Plant capacity } as mentioned in BOQ of respective institute as primary and same as standby.
	Medical quality air shall be delivered at a nominal pressure of 400 kPa (4 bar) and 700kPa(7 bar) gauge for supply of the hospital medical air and surgical air.
	Compressor plant should be designed in such a way that compressors will switch on in a sequential manner as per flow demand.
	The compressors should be standalone ones with independent power supply.Each Compressor should be suitable for both continuous and frequent start/stop operation at a nominal plant pressure of 10bar or more.
	The duty compressors shall be automatically rotated by the plant control system to ensure even wear. Compressors shall be supplied and installed. <b>Desiccant dryer shall be provided with a dew point sensing switch that shall provide an alarm on the plant control panel a when the water concentration in the delivered air rises above the limit.</b> Duplex desiccant dryer and filtration modules shall be provided with three or more individual stages of filtration as follows:
	Stage 1: Coalescing filter upstream of the desiccant dryer for removing liquid water particles down to 1micron.
	Stage 2: Particulate filter after the desiccant dryer for dust protection and removing particles down to 1 micron.
	Stage 3: Bacteria filter for removing particles down to 0.01 micron.
	Purity should be tested as per the American Pharmacopeia / European Pharmacopeia standard.
	The plant control and power management system shall monitor the safe operation of the plant, providing signal into the alarm system as per the requirements of the standard.

	Pressure Reducing Station: for 4 bar and 7 bar should fully comply and meet with the requirements of the standard. Simplex pressure reducing station shall comprise as in-line pressure regulator, with downstream pressure gauge. Isolation valves and pressure release valves should be provided as per the standard. Duplex pressure reducing station to have two branches, connected to the MGPS in parallel in order to allow maintenance on the components of one branch, while the gas flow is maintained in the other branch. Ball Valves - Full bore which operate from fully open to fully closed position with a quarter turn of the handle. Complete pressure reducing station with base plate mounted for ease of installation.
	Padlocks available to allow locking of the valves in both open and closed positions and must have easy to read pressure gauges. Base plate mounted and supplied with copper stub pipes for ease of installation using inert jointing procedures.
	The compressor system should have-
<b>1</b>	Intake filter Delivery pipe
<b>2</b>	Mounting on air tank along with all standard fittings viz. safety valve, pressure gauge, delivery valve, drain valve etc.
<b>3</b>	Bidder shall provide all electric control panels, starters etc required for proper functioning of motor.
<b>4</b>	Desiccant Air Dryer – 2 nos.(Duplex)
<b>5</b>	2-Stage or more Breathing Air Filters – 2 sets(Duplex)
<b>6</b>	Outlet pressures for drills/equipment and ventilators should be a minimum of 7 bar and 4 bar respectively.
<b>7</b>	Duplex pressure reducing station
	The compressor should be heavy duty, reliable with long MTBF. Each compressor cylinder is to be protected by a temperature switch, which will stop the drive motor and provide an alarm signal in the event of abnormal discharge air temperature. Each compressor module should include an inline filter with particle retention of 10 microns, inlet isolation valve, discharge isolation valve, and pressure relief valve. The capacity should be capable to take care of total load of all the outlets.
<b>3.2</b>	Vertical Air Receiver
	Total air receiver capacity shall be at least 50% of the primary plant capacity (capacity as mentioned in the tender) in 1 minute in terms of free air delivered at normal working pressure. Each air receiver shall be protected by a pressure relief valve, a fusible plug and include a pressure gauge with isolating valve and a drain cock.
	The corrosion resistant coated receiver is to be equipped with tested safety pressure relief valve, sight glass pressure gauge, automatic drain, three-valve by-pass and source isolation valve. Should be fabricated as per ISO/ASME/BS
<b>3.3</b>	Air Treatment Module

	The air treatment module should include dual dryers, dual filtration system and a dewpoint transmitter with local audible and visual signals and dry contacts for remote monitoring. The components should be mounted on a common base with interconnecting copper/brass piping and upstream and downstream isolation valves. The isolation valves must allow either set of components to be serviced without shutting down the system.
	Dryers should be of heatless desiccant design and sized to provide for the peak calculated demand. The desiccant dryers should be equipped with dew point dependent switching feature to minimize the need for purge air.
	The dual filtration system should remove liquid and particulate matter, consisting of 0.5micron coalescing filters with differential pressure indicators and automatic drain, airline pressure regulators with gauges, final pressure relief valve, and sampling valve.
	Each bank should consist of three stage treatment. Digital dew point monitor is to be supplied with alarm contacts as per requirement of the standard.
<b>3.4</b>	<b>System Controls</b>
	The “Continuous on Demand” feature will stop the operation of the motors during periods of low or no demand. The control include individual self-protected combination motor controls with short circuit protection, single phase and thermal overload protection, individual control circuit with transformers primary and secondary protection, pressure sensors, temperature switches with reset buttons, and an electronic controller to automatically change the operating sequence of the compressors. The cabinet shall have status display to include system pressure, dew point pump operation, accumulated time, maintenance interval, fault conditions, and silence button, lighted Hand-Off-Automatic selector switches and safety disconnect operating handles. All required local alarm functions shall be integrated in to the packaged system.
	The system should be designed to function even if the programmable controller fails.
<b>3.5</b>	<b>Accessories</b>
	Accessories including for job site installation such as inlet and discharge flexible connectors, vibration mounting pads, and source isolation valve should be supplied.
	All the filters should be covered under warranty period and CMC Period.
<b>4</b>	<b>VACUUM SYSTEMS (Package unit)</b>
	Vacuum system shall fully comply with the requirements of the HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 and bidder should submit applicable certificates along with the bid"
<b>4.1</b>	<b>Vacuum Pump Module</b>
	It should be Oil Sealed Rotary Vane Type to produces the plant output of {minimum Liters Per Minutes(LPM) Plant capacity } as mentioned in BOQ of respective institute as primary and same as standby
	Designed flow capacity should be minimum of LPM capacity as mentioned in BOQ of respective institute. The vacuum plant shall comprise air-cooled, oil lubricated rotary vane vacuum pumps suitable for both continuous and frequent start/stop operation at inlet vacuum levels between 500mmHg and 660 mmHg.



	The control system should normally employ automatic rotation of the lead pump to maximize pump life and ensure even wear. Vacuum pump inlets shall include a wire mesh filter and integral non-return valve to prevent oil suck back and pressure increases in the vacuum system.
	Each vacuum pump shall be fitted with anti-vibration pads between the pump foot and mounting frame. The plant shall be fitted with duplex bacteria filter system.
<b>4.2</b>	<b>Vacuum Receiver</b>
	The vacuum receiver shall be made of rust free corrosion resistant steel and fabricated as per ASME/BS/ISO for a vacuum pressure of 760mmHg. It should include bypass valves, manual drain valves, vacuum gauge. Vacuum reservoir shall have total volume of at least 100 % of primary plant output (capacity as mentioned in the tender) in one minute in terms of free air aspired at normal working pressure.
<b>4.3</b>	<b>System Controls</b>
	<b>The control include individual self-protected combination motor controls with short circuit, single phase and thermal overload protection, individual control circuit transformers with fuse less/fused primary and secondary protection,</b> pressure sensors, temperature switches with reset buttons, and an electronic controller to automatically change the operating sequence of the compressors. The system should have a status display to show the system pressure, elapsed time, maintenance interval, fault conditions, and silence button, lighted Hand-Off-Automatic selector switches and safety disconnect operating handles.
	All required local alarm functions should be integrated into the packaged system. The circuitry should be designed so that the audible signal can be silenced and the visual indicator will remain until the fault has been cleared and the reset button resets. Local alarm functions should be annunciated for reserve pump in use
<b>4.4</b>	<b>Bacterial Filters</b>
	The filters should be designed for removal of solid, liquid and bacterial contamination from the suction side of vacuum pump systems, preventing damage to the pump and the potential biological infection of the surrounding environment. The dryer should be particulate filter dryer with ability to remove particles as small as 1micron.
	Each individual filter shall have the capacity to deliver full design flow such that one set is designated duty and the other will be standby. Bacteria filters shall have efficiency at least 99.999% when tested by the sodium flame method in accordance with BS 3928:1969/as per required standard utilising particles in the 0.02 to 2 micron size range. The pressure drop across each clean filter at 50% of the system design flow should not exceed 25 mm Hg (3 kPa) at a vacuum of 475mm of Hg (63 kPa). Bacteria filters shall be marked with the legend 'Bio-Hazard'.
	Each bacteria filter shall be provided with a transparent sterilizable collection jar to collect condensate. The total water capacity of the pressure vessels shall be at least 100% of the design flow rate of the plant in 1 minute in terms of free air aspired.
<b>4.5</b>	<b>Accessories</b>

	Accessories included for job site installation are inlet and discharge flexible connectors, vibration mounting pads, and source isolation valve, inlet check valve, thermal malfunction switch and vacuum control switch. Flexible connectors on inlet and exhaust of each pump, exhaust tee with union as well as copper tubing with Shutoff- cock for gauge/bypass valve and vacuum switch etc.
	All the filters should be covered under warranty period and CMC Period.
<b>5</b>	Ward Vacuum Units
	It must consists of the following:-
<b>1</b>	1no of Suction Regulator and 1no of 1000 ml polysulfone /polycarbonate collection jar.
<b>2</b>	Suction regulator should be supplied with a safety jar, including and antibacterial filter and an anti-overflow safety device. Should have wide membrane continuous suction controller
<b>3</b>	Should have vacuum levels: 0-750 mm Hg or more
<b>4</b>	Should have vacuum gauge fitted with a protective bumper device.
<b>5</b>	Should have on/off knob allowing for the quick restoration of a readjusted vacuum level.
<b>6</b>	Must have central adjustment knob with a color coded for 0 to 750 mm Hg or more. Should have Polysulfone/ polycarbonate 100cc safety jar, autoclavable at 121° C at 5mins,unbreakable, fitted with an anti-overflow safety device and equipped with antibacterial filter. It should be totally transparent, to ensure perfect sucked liquid visibility.
	Added para:
<b>5A</b>	<b>Low flow ward vacuum unit - Should have vacuum levels: 0-150 mm of Hg +/-10%</b>
<b>6</b>	Theatre Vacuum unit for OT
	It must consist of the following: -
<b>1</b>	Suction Regulator and 2nos. 1500ml or more polysulfone/ polycarbonate collection jar and both to be mounted on a trolley.
<b>2</b>	Suction regulator should be supplied with a safety jar, including an anti-bacterial filter and an anti-overflow safety device. Should have wide membrane continuous suction controller
<b>3</b>	Should have vacuum levels : 0-750 mm of Hg or more
<b>4</b>	Should have vacuum gauge fitted with a protective bumper device.
<b>5</b>	Should have on/off knob allowing for the quick restoration of a readjusted vacuum level.
<b>6</b>	Must have central adjustment knob with a color coded for 0-750 mm Hg or more. Should have polysulfone/ polycarbonate safety jar, autoclavable at 121° C, unbreakable, fitted with an anti-overflow safety device and equipped with antibacterial filter.
<b>7</b>	Collection jar should be totally transparent, to ensure perfect sucked liquid visibility.
<b>7</b>	AGSS (Anesthetic Gas Scavenging System) Plant -
	Anesthetic Gas Scavenging System (AGSS) of minimum 1000LPM as Primary & 1000LPM as Standby. AGSS system shall comply with the requirements of the HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 and bidder should submit applicable certificates along with the bid"

	The package should consist of rotary vane/claw type vacuum pumps (Dry/Oil less only), a control panel, and mounted on a common base frame.
	AGSS pump: AGSS pump shall operate completely dry . Each pump should be completely air cooled and have absolutely no water requirements. The suitable wiring from OTs to AGSS plant for remote control/suitable reservoir (as applicable) is the responsibility of the bidder.
	System in-line non-return valves should allow individual pump servicing. Active anesthetic gas scavenging systems should be designed to safely remove exhaled anesthetic agents from the operating environment and dispose of them to atmosphere from the highest point of the hospital building, thus preventing contamination of the operating department and providing a safe and healthy workspace for the personal. AGSS design should be dependent upon flow rate and pressure drop characteristics of the individual components of systems. It is essential that terminal units, remote controls (If required) and pump units work in synchronized manner after connection of workstation to the AGSS System.
	Installation should be on roof top/suitable location. Piping, Non-Return-Valves (NRVs), and inlet nozzle should be suitably placed. Connecting hose suitable to fit with anesthesia workstation should be provided.
<b>8</b>	<b>DISTRIBUTION PIPING</b>
<b>8.1</b>	<b>Piping specifications</b>
	Copper pipe should be as per standard BS: EN 13348:2008/ ASTM B819 standards, Solid drawn, seamless, deoxidized, non-arsenical, half hard (hard can be accepted only for sizes 54mm or more), tempered and degreased copper pipe conforming to the standard. All copper pipes should be degreased & delivered capped at both ends. The pipes should be accompanied with manufacturers test certificate for the physical properties & chemical composition.
	Copper pipe must have reputed third party inspection certificate (Eg. Lloyd's or TUV or SGS).
	Fittings should be made of copper and suitable for a working Pressure of up to 17bar and especially made for brazed socket type connections. All valves shall be pneumatically tested for twice the working pressure and factory degreased for medical gas service.
	Copper fittings should comply with EN 1254:1 factory degreased and brazing filler metals should comply with EN 1044. Fitting should be degreased, individually packed for medical use.
	The minimum thickness of copper pipes of 35mm and above outer diameter, should be 1.2mm and the thickness of copper pipes less than 28mm outer diameter, should be 1mm as mentioned in respective Institute's BOQ.
<b>8.2</b>	<b>Installation &amp; testing</b>
	Installation of piping shall be carried out with utmost cleanliness. Only pipes, fittings and valves that have been degreased and fittings shall be used at site. Pipe fixing clamps shall be of nonferrous or non-deteriorating plastic suitable for the diameter of the pipe.

	<p>Inert gas welding technique should be used by passing oxygen Free Nitrogen Gas inside the copper pipes during silver brazing, in order to avoid carbon deposition inside the copper pipes. Only copper-to-copper joints are permitted on site except threaded or flanged joints may be made where pipelines are connected to items such as valves and control equipment. No flux shall be used for joining Copper to Copper joints and on for joints made on site. Copper to copper joints shall be brazed using a 5% silver-copper phosphorous brazing alloy CP104. A total of 5 joints shall be cut out for examination to establish the quality of the joints being made on site. The insides shall be clean and free from oxides and particulate matter and the minimum penetration of the brazing alloy at any point shall be three times the wall thickness of the tube. If the joints examined do not conform to these requirements, then adjacent joints shall be cut out and examined until the extent of faulty workmanship has been made good. Copper-to-brass or gunmetal joints shall only be made under controlled conditions off site. The joints are ordinarily used to join short copper pipe tails to brass, gunmetal or bronze fittings to permit their connection into the pipeline. The sub-assemblies shall be degreased and individually sealed in bags or boxes before delivery to site.</p>
	<p>Adequate supports should be provided while laying pipelines to ensure that the pipes do not sag. Suitable sleeves shall be provided wherever pipes cross through walls / slabs. All pipe clamps shall be non-reactive to copper.</p>
	<p>After erection, the pipes are to be flushed with dry nitrogen gas and then pressure tested with dry nitrogen at a pressure equal to twice the working pressure or 150 psig, whichever is higher for a period of not less than 24 hours.</p>
	<p>Length and quantity of individual items (Copper pipes, AVSUs, Alarm panels, Isolation valves, Outlets, pendants etc.) are mentioned. However quantity will be calculated and paid at actuals. Bidder should quote unit price for all the items as detailed</p>
	<p>Maximum interval between supports (Horizontal and Vertical)</p>
	<p>(12mm Pipe - 1.5m, 15mm pipe - 1.5m, 22mm pipe – 2m, 28mm pipe-2m, 35mm pipe-2.5m, 42mm pipe -2.5m, 54mm pipe - 2.5m, 76mm pipe – 3meter)</p>
<b>8.3</b>	<p>Painting</p>
	<p>All the pipes from manifold/plant upto the outlets should be painted with two coats of synthetic enamel paint and colour codification should be as per standards followed and with consultation with competent authorities of the Institute.</p>
<b>9</b>	<p><b>GAS OUTLETS</b></p>
	<p>Terminal Units (Gas Outlets) with probes/Adaptors for O<sub>2</sub>, N<sub>2</sub>O, Compressed Air 4, Air 7, AGSS, Vacuum &amp; CO<sub>2</sub> (CO<sub>2</sub> can be optional depending on the requirement)</p>
	<p>The Medical gas outlets shall conform to HTM 02-01/ NFPA 99 C/EN/DIN/ ISO 7396-1. Front Loading Type Terminal Outlets should be designed to dispense medical gases (or an inlet for medical vacuum) to the secondary equipment (flow meters, Suction regulators, etc.) at the point of use and is gas specific so that secondary devices cannot be “attached” to the wrong gas. When not in use the gas in a non-flowing state within the Outlet (Terminal unit) sealed by “O” ring. The adapter when inserted pushes the poppet inside and the gas starts flowing and sealing is ensured by the “O” ring or a seat. The Outlets are Quick Connect Type and gas specificity is accomplished by "Pin indexing." The outlets should have following features:</p>

	<ul style="list-style-type: none"> <li>• Push to insert and press-to-release mechanism for probes.</li> </ul>
	<ul style="list-style-type: none"> <li>• Allows plugging of probes from front.</li> </ul>
	<ul style="list-style-type: none"> <li>• Self-sealing valve on disengaging the probe (Quick disconnect)</li> </ul>
	<ul style="list-style-type: none"> <li>• Smooth quite action.</li> </ul>
	<ul style="list-style-type: none"> <li>• Non return valve for on line servicing/ repairing</li> </ul>
	<ul style="list-style-type: none"> <li>• Indexed to eliminate inter-changeability of gas services</li> </ul>
	<ul style="list-style-type: none"> <li>• Color-coded gas specific front plate</li> </ul>
	<ul style="list-style-type: none"> <li>• Totally leak proof, safe &amp; easy to operate</li> </ul>
	<ul style="list-style-type: none"> <li>• Configurations possible: surface, flush &amp; Bead-head.</li> </ul>
	<ul style="list-style-type: none"> <li>• Outlets should be comply with ISO standards.</li> </ul>
	<ul style="list-style-type: none"> <li>• All outlets should have respective labels (i.e.O2 / N2O / CO2 / Air4 / Air7/Vacuum/AGSS/etc.) displayed accordingly.</li> </ul>
<b>10</b>	<b>AREA VALVE SERVICE UNIT</b>
	Area valve service units should fully comply and meet with HTM 02-01/NFPA 99C/EN/DIN/ISO7396-1. It should provide a zone isolation facility for use either in an emergency or for maintenance purpose The Area Valve Service Unit should incorporate a ball valve in a lockable box with emergency access. It should be reliable and easy to operate, easy purge, sample & pressure testing and emergency supply system.
	Medical gas/vacuum services should be fixed copper, piped to and from their respective area valve service units. A color coded service identity label should be fitted behind the valve handle. The unit should provide a zone isolation facility. Gas Flow direction should be indicated.
	The box shall be made from extruded aluminium to prevent corrosion. All wetted parts (except seals and gaskets) should be brass or copper. Each unit assembly should be factory tested for gas tightness. Rubber pipe grommets should be provided to ensure any leaking gas does not escape from the unit into a wall cavity. All visible aluminum surfaces should be powder coated.
<b>11</b>	<b>ALARM SYSTEM</b>
<b>11.1</b>	<b>Master Alarm (Digital)</b>
	Complies with HTM 02-01 / NFPA 99C/EN/DIN/ ISO 7396-1 Standards.
	Each Master Alarm should be modular in design and be fitted with required number of master alarm modules. The master alarms should be capable to monitor minimum 40 Point.
	Each point represents an alarm condition that the source equipment might have. When an alarm condition exists, a red light flashes and the audible alarm sounds. If several alarm conditions occur simultaneously, the most recent alarm light should flash, while the other alarm lights should remain lit. When an alarm condition is created, an audible alarm should be actuated. A dry contact module should be available to interface with a building management system.
	The box material should be of gauge steel of requisite thickness and equipped with mounting brackets. <b>The emissions from alarms should conform with applicable standards.</b>

	Master alarm management system should be designed to display alarm conditions from the source supply units indicating the broad status of the source equipment and manifolds as well as the master distribution status from the source supplies. Depending on the alarm priority, a visual and audible alarm should be initiated to indicate an alarm condition.
	Each panel shall display and/or input up to forty point alarms. Panel should be ready to use with BMS system.
	The master alarm must be able to monitor the following source alarm conditions.
	· Oxygen Source Empty/Fault
	· Oxygen Cylinder Bank Empty/Fault
	· Oxygen Emergency Bank Empty/Fault
	· Air Compressor Faulty/Operation
	· Vacuum Pump Faulty/Operational
	· Vacuum Deficiency Vacuum Reservoir
	· And Other MGPS Signals & Alarms
	Bidder shall be responsible for all cabling from local alarm panels to master alarm panel .
	Master alarm should be integrated with BMS/HIS
<b>11.2</b>	<b>Medical Gas Area Alarm</b>
	The medical gas central alarms should be capable of monitoring up to 5 medical gas services (As specified in BOQ of respective institute) by means of pressure sensors which detect deviations from the normal operating limits of either pressure or medical vacuum. The area alarm should have a digital display of pressures. The medical gas area alarm should fully satisfy the HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 requirements.
	An audible warning should sound simultaneously with any failure indication and a mute facility should be provided. "
	Note: The bidder may offer combined unit of AVSU & alarm, bidder has to match the quantity of AVSU/Alarm whichever is higher
<b>12</b>	<b>Line Isolation Valves</b>
	The Lockable line valves must degreased and complete valve with stuffed pipe & fittings, factory tested and complies with HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 standard.
<b>13</b>	<b>Supply of O2 Cylinders – Class D Type</b>
	Should be as per BIS/IS/ASME Standard
<b>14</b>	<b>Supply of N2O Cylinders – Class D Type</b>
	Should be as per BIS/IS/ASME Standard
<b>15</b>	<b>Horizontal/ Vertical Bed Head Panel</b>

	It shall confirm to HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1. The design should be approved by the respective institute before installation and it is responsibility of the bidder after getting order they have to discuss with respective institute and finalized the Bed Head Panel (Vertical/Horizontal) as per site condition.
	It should have following features:-
	Efficient, Safe & Robust design in extruded aluminium section.
	Smooth curved surfaces, and choice of base colour and fascia plates.
	Unit should have integrated rail system to mount accessories
	The headwall system should be constructed of aluminium extrusions joined together to form a carcass to suit the particular application. Unit should be factory assembled for electrical and mechanical components.
	Segregation of services i.e. Low voltage supplies, High Voltage supply and Medical gases should be maintained with 2 tier/2 channel arrangements.
	Front fascia plate should be removable individually to access for respective service.
	It should have one rail for mounting Accessories.
	Each bed-head unit shall be supplied with electrical and electrical outlets pre-fitted, wired and certified. (Wired up to the distribution box provided with leakage protection & proper earthing arrangements)
	Note: Gas Outlets quantities are already taken in consideration of quantities of respective outlets in BOQ
	Should have per unit as under :
	Oxygen – 2
	Vacuum – 2
	Medical Air-1
	Holder for vacuum collection jar –1
	Nurse call switch – 1 (not in the scope of MGPS Vendor only space for same has to provide)
	Infusion pump mount pole with adapter for mounting at least two infusion pumps
	5 /15A combined Electrical outlets – 8 Nos. or more
	RJ-45 socket/ Ethernet -01
	Two spare spaces
	Monitor Bracket
<b>16</b>	High pressure tubes for O2, N2O, Compressed Air,& Vacuum
	It should be colour coded for individual services i.e. white for Oxygen, Blue for N2O and Yellow for Vacuum, Black for air. Antistatic rubber tube should be as per ISO standards. It should be CE marked/UL Listed. (The 200m Hose- Gas wise requirement should be taken from respective institute before supply total lengths should be 200m inclusive of all type. If institute requires more than payment will be made on actual basis as per finalized BOQ rate)

17	Electrical Wiring with Electrical Panels –
	All wiring inside the Manifold Room and Plant room required for MGPS equipment and General electrification. Institute will provide one point supply only. Other are under the scope of bidder. All the work should be as per BIS standard and material used should be reputed make only.
20	Site Modification –
	<b>i. Bidder should be responsible for antistatic ironite/cota/any heavy duty flooring in the manifold room and thickness of flooring not less than 1 inch.</b>
	iii. Bidder should be responsible for all necessary arrangements for the installation of Medical Air plant, Vacuum Plant & AGSS Plant.
21	Manufacturer Authorization
	The bidder should submit a mandatory letter of authority from the manufacturer, with name of the manufacturing company for major products quoted by them such as:
1	Nitrous oxide system
2	Medical Air plant (package unit) including electrical control panel
3	Medical Vacuum Plant (Package unit)
4	Duplex AGSS System
5	Gas outlet points/ Terminal units with probe
6	Medical gas alarm panel
7	Copper Pipes
8	Line Isolation Valves

**End Volume IV**