Foundation for Innovative New Diagnostics India

(FIND India)

Advertised Tender Enquiry (ATI)

Bid Document
for

Procurement for Supply, Installation and Commissioning of Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System and related services for Drug-resistant Tuberculosis (DR-TB) centers across India

Bid Ref. No.:
SAMS/FIND/Proc/Equipment/ATI/19/2023
dt. 02/04/2024

(Procurement Agency)

Strategic Alliance Management Services P. Ltd.
B-18, Sector-06, NOIDA, Gautam Budh Nagar (U.P.)- 201301
Email: procurement@samsconsult.com, Website: www.samsconsult.com

Checklist for bidders for submission in Proposal

(Bidders need to submit below filled and signed checklist mandatorily and provide all the required documents along with the technical proposal)

Sl. No.	Documents to be submitted along with Technical Proposal	Page No.	Remarks (if any)/ Yes/ No
1	**Documents required for Preliminary examination**		
i.	that the bid is signed, as per the requirements listed in the Bidding Documents		
ii.	that the bid is signed by authorized signatory		
iii.	the bid is valid for the period, specified in the Bidding Documents,		
iv.	that the bid is accompanied by due Bid Security Amount (BG/FDR/ RTGS transaction details),		
v.	Bidder agreed to terms and conditions of bid including delivery period		
vi.	Bidder has agreed to submit unconditional Bid and give the required performance security as mentioned in the bid document		
vii.	whether any other conditions specified in the Bidding Documents are fulfilled.		
viii.	The Bidder is eligible to supply the goods required under this bid as per basic eligibility specified under ITB para 5 above.		
2	**Documents required for Technical Evaluation**		
i	Letter of Technical Bid as per Form provided in **Section VI – Bidding Forms**,		
ii	Bid Security declaration furnished in accordance with **ITB Para 19**,		
iii	Bidder Information Form as per Form provided in Section VI: Bidding Forms, along with following supporting documents a) Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.3. b) Organizational chart, a list of Board of Directors, and the beneficial ownership. c) GSTIN Registration Certificate d) Copies of audited financial statements of accounts (including balance sheet/profit and loss account/auditor's reports/ IT returns) / or financial statement certified by the auditor of the Supplier for last three financial years 2020-21,2021-22 and 2022-23).		
iv	Documents establishing the compliance of Goods in accordance with ITB Para 16, 1) Technical Specification Compliance Form (Technical Compliance Sheet) as per Form provided in Section VI: Bidding Forms, along with necessary certifications and technical catalogue / brochure/ data sheet.		
v	the documentary evidence that the Goods conform to the technical specifications and standards specified in Section V - Schedule of Requirements		
vi	Documents establishing bidders' qualification in accordance with ITB Para 17.2, - The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction that the Bidder meets each of the qualification criterion specified in Section IV - Qualification and Evaluation Criteria.		
vii	Manufacturer's Authorization, in case bid is submitted by an Agent, as per Form given in **Section VI: Bidding Forms**,		
viii	Details of Implementation Plan and timelines for project as per **Section VI – Bidding Forms, including the following:-**		

	a) the initial assessment of sites for finalizing the requirement, b) procurement and delivery of fixtures, c) commission and subsequent maintenance services, d) existing service delivery network which can also provide UVGI maintenance services d) Manufacturing capabilities (number of fixtures produced per month) Timelines to be provided as a Gantt Chart for execution of the entire project. Bidder is expected to share a detailed plan along with the bid which shall be reviewed as part of the technical evaluation. Prospective Bidders will also be required to make a Presentation on the same.		
ix	Proforma for Performance Statement (for a period of last five years) as per format given in Section VI: Bidding Forms along with supporting documents such as a) Purchase Order (signed & stamped) and Certificate of installation (signed & stamped) from all the sites issued in the last 5 years for ; - installation - for installation and maintenance during warranty period - maintenance services beyond the warranty period, - Copy of invoices - Proof of Payment received from Purchasers - Documentary evidence (Client's certificate) in support of satisfactory completion of contract b) Successful Demonstration and user feedback from any site within India where the vendor has installed Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection Systems		
x	Proforma for other Details of Bidder, Manufacturer and its Bank as per format given in **Section VI: Bidding Forms**,		
xi	Bidder firm's Certificate of Incorporation/ Registration, Article and Memorandum of Association or any such registration document,		
xii	Authorization Letter issued by Competent authority on bidder firms letter head / official stationary along with the Copy of Resolution of Board of Directors (in case bidder is a company)		
xiii	Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above		
xiv	Organizational chart, a list of Board of Directors, and the beneficial ownership.		
xv	Self-attested copy of GSTIN registration,		
xvi	Copy of PAN Card		
3	Any other document **as required in the BDS**		
i.	**Documents required for Financial Evaluation (separate folder)**		
ii.	Letter of Financial Bid as per Form provided in **Section VI – Bidding Forms**,		
iii.	Price Schedule prepared in accordance with **ITB Para 14**,		

Section I - Notice Inviting Bids

for

Procurement for Supply, Installation and Commissioning of Upper UVGI systems and related services for Nodal DRTB Centres Across India

Bid Ref. No.: SAMS/FIND/Proc/Equipment/ATI/19/2023 Dt: 02/04/2024

1. Strategic Alliance Management Services Pvt. Ltd. (SAMS) has been engaged by "Foundation for Innovative New Diagnostics India" (FIND India), New Delhi (a not-for-profit Company created under Section 8 (Indian) Companies Act, 2013) for providing procurement consultancy services for equipment, goods, works and services for TB Laboratories established across India under National Tuberculosis Elimination Programme (NTEP), Ministry of Health and Family Welfare, Govt. of India.

2. SAMS hereby invites bids from eligible and qualified bidders for the supply and installation of **total of 880 numbers of Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System** and related services to be supplied at various consignees as per details given in the bid document. A brief description of the items required is as under:-

Sl. No.	Description of item to be procured	Quantity (nos.)
1	Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System and related services with 1 year of comprehensive warranty + 4 years of comprehensive maintenance services This also includes initial assessment for UVGI requirement and installation plan, which will be to be carried out along with relevant stakeholders from FIND India, SAMS and institute.	880

The selected bidder(s) shall be required to visit the respective mentioned sites for assessment of actual number of UVGI fixtures requirement based on the site feasibility and UV dosage required to create a killing/ UV disinfection zone and they have to submit the design/ layout of the facility showing the placement of UVGI along with the required quantities and the related work that they need to carry out at the site. The above criteria needs to be taken into account at the time of submission of the unit cost.

3. Bidding will be conducted through the 'Advertised Tender Enquiry' method and procedures as set out in the 'General Financial Rule – 2017' and Manual for Procurement of Goods (updated till June, 2022) issued by the Department of Expenditure, Ministry of Finance, Govt. of India (latest update).

4. To ensure uninterrupted and timely supplies, the Purchaser reserves the right to split the contract quantity between qualified Bidders. The purchaser reserves the right to split the order amongst minimum of two qualified bidders for tendered product in the ratio of 70:30 with 70% of the order given to lowest evaluated bidder (L1) and the balance 30% to the 2nd lowest bidder (L-2), if agrees to match the amount of L-1 bidder. In case of an increase in quantities (during the currency of the Contract) the order may be split between three qualified bidders in the ratio of 50:30:20 with 50% order to L1, 30% order to L2 and 20% order to L3, if L-2 and L-3 agrees to match the price of L-1 Bidder. Please refer Clause 36-Award Criteria of Section II-ITB of this document.

5. Bidders are required to submit an Earnest Money Deposit (EMD) / Bid Security Amount of Rs. 10,00,000/- (Indian Rupees Ten Lakhs only) in the form of BG/FDR or through RTGS as per further details given in the instruction to bidders.

6. The Bid Document can be freely downloaded from the website www.samsconsult.com starting from **10.00 AM on 02/04/2024.** Bidders shall be solely responsible for checking the above website for any addendum/amendment issued subsequent to publication of this NIB and take the same into consideration while preparing and submitting their bids.

7. Bidders' representatives are invited to attend an offline/in-person (physical) **pre-bid meeting at 11.00 AM on 12/04/2024** at the address mentioned above. Please note that non-attendance at the pre-bid meeting will not be the cause of the disqualification of bidders. Bidders can also participate in an online pre-bid meeting through skype link https://join.skype.com/phrb7W3Drkz0 at the scheduled time and date of pre-bid meeting. Bidders who are unable to attend the pre-bid meeting (online or offline) can send their written requests for clarification, if any up to 05.00 PM on **11/04/2024** at email procurement@samsconsult.com.

8. **Bids must be submitted in hard copies on or before 03:00 PM on 24/04/2024 by Bidders at the office of Purchaser.**

9. **The Technical Bids will be opened on the same day at 04.00 PM in the presence of the bidders representatives, who choose to attend the technical bid opening meeting. Late bids will be rejected.**

Sanjay Rastogi

Director, SAMS

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Section II - Instructions to Bidders

A. GENERAL

1. Introduction

1.1 In connection with the Notice Inviting Bids (NIB) for Procurement of Goods, Equipment and related services as **specified in the Section III - Bid Data Sheet (BDS)**, the Purchaser **as specified in the BDS**, has issued these Bidding Documents for the supply of Goods, Equipment and related services **as specified in Section V - Schedule of Requirements**.

1.2 This Section provides the relevant information as well as instructions to assist prospective bidders in preparation and submission of bids. It also includes the mode and procedure to be adopted by the Purchaser for receipt and opening as well as scrutiny and evaluation of bids and subsequent placement of award of contract.

1.3 Before preparing the bid, and submitting the same to the Purchaser, the bidder should read and examine all the terms & conditions, instructions etc. contained in the Bidding Documents. Failure to provide required information or to comply with the instructions incorporated in this Bidding Documents may result in rejection of bids submitted by bidders.

1.4 The bidder shall bear all costs and expenditure incurred and/or to be incurred by it in connection with its bid including preparation, mailing and submission of its bid and subsequently processing the same. The Purchaser shall, in no case be responsible or liable for any such cost, expenditure etc. regardless of the conduct or outcome of the bidding process.

2. Language of Bids

2.1 Bid submitted by the bidder and all subsequent correspondences and documents relating to the bid exchanged between the bidder and the Purchaser, shall be written in English language. However, the language of any printed literature furnished by the bidder in connection with its bid may be written in any other language, provided the same is accompanied by a self-certified English translation and, for purposes of interpretation of the bid, the English translation shall prevail**.**

3. Code of Integrity

3.1 The Purchaser and all officers or employees of the purchaser, whether involved in the procurement process or otherwise, or Bidders and their representatives or consultants or service providers participating in a procurement process or other persons involved, directly or indirectly in any way in a procurement process shall maintain an unimpeachable standard of integrity.

3.2 The Purchaser and Bidders to uphold the Code of Integrity, which prohibits officers or employees of the Purchaser or a person participating in a procurement process, in respect of the following:

(i) any offer, solicitation or acceptance of any bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process,,

(ii) any omission, including a misrepresentation that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation,,

(iii) any collusion, bid rigging or anti-competitive behaviour to impair the transparency, fairness and progress of the procurement process,,

(iv) improper use of information shared between the Purchaser and the bidders with an intent to gain unfair advantage in the procurement process or for personal gain,,

(v) any financial or business transactions between the bidder and any officer or employee of the Purchaser, who are directly or indirectly related to tender or execution process of contract,,

(vi) any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process,,

(vii) any obstruction of any investigation or audit of a procurement process,,

(viii) making false declaration or providing false information for participation in -
a) tender process or to secure a contract,,

b) disclosure of Conflict of Interest,,

c) disclosure by the bidder of any previous transgressions with any entity in India or any other country during the last three years or of any debarment by any other Procuring Entity.

3.3 In case of any breach of the Code of Integrity by a bidder or a prospective bidder, the Purchaser after giving a reasonable opportunity of being heard, may take appropriate measures including –

a) exclusion of the bidder from the procurement process,,

b) calling off of pre-contract negotiations and forfeiture or encashment of bid security,,

c) forfeiture or encashment of any other security or bond relating to procurement,,

d) recovery of payments made by the Purchaser along with interest thereon at bank rate,,

e) cancellation of the relevant contract and recovery of compensation for loss incurred by the Purchaser,,

f) debarment of the bidder from participation in any future procurements of Purchaser for a period not exceeding three years.

4. Conflict of Interest

4.1 Conflict of Interest for the Purchaser or its personnel and bidders is considered to be a situation in which a party has interests that could improperly influence that performance of its duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.

4.2 Purchaser describes the situations in which a Purchaser or its personnel may be considered to be in Conflict of Interest include, but are not limited to the following -

a) Conflict of Interest occurs when the private interests of Purchaser or its personnel, such as personal, non-official, extra- professional or other relationships or personal financial assets, interfere or appear to interfere with the proper performance of its professional functions or obligations as a procurement official,,

b) within the procurement environment, a Conflict of Interest may arise in connection with such private interests as personal investments and assets, political or other social activities and affiliations while in the service of the Purchaser, employment after retirement from service or of relatives or the receipt of a gift that may place the Purchaser or its personnel in a position of obligation,,

c) Conflict of Interest also includes the use of assets of the Purchaser including human, financial and material assets, or the use of the office of the Purchaser or knowledge gained from official functions for private gain or to prejudice the position of someone the Purchaser or its personnel does not favour,,

d) Conflict of Interest may also arise in situations where the Purchaser or any of its personnel is seen to benefit directly or indirectly or allow a third party, including family, friends or someone they favour, to benefit directly or indirectly from the decision or action of the Purchaser,

4.3 The situations in which bidders participating in a procurement process or their representatives may be considered to be in Conflict of Interest include, but are not limited to the following –

a) If they or their personnel or representatives or agents have any relationship or financial or business transactions or interests with any official of the Purchaser that are directly or indirectly involved in or related to the procurement process or execution of contract,

b) If they receive or have received any direct or indirect subsidy from any other bidder,

c) If they have the same legal representative for purposes of the bid,

d) If they have a relationship with each other, directly or through common third parties that puts them in a position to have access to information about or influence on the bid of another,

e) If they participate in more than one bid in the same bidding process,

f) If they have controlling partners in common,

g) If a bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the subject matter of procurement of the bidding process or were involved in such preparation in any way,

4.4 In the 'Letter of Technical Bid' to be submitted by the bidder, as per format given in **Section VI - Bidding Forms**, all bidders shall provide a signed statement that the bidder is neither associated nor has been associated directly or indirectly with the consultant or any other entity that has prepared the design, specifications and other documents for the subject matter of procurement or is being proposed as Project Manager for the contract,

4.5 In case of a holding company having more than one independently manufacturing unit or more than one unit having common business ownership or management, only one unit shall be allowed to submit bid or quote to prevent any Conflict of Interest. Similar restrictions shall apply to closely related sister or subsidiary companies. Such bidders must proactively declare such sister or subsidiary company or common business or management units in similar lines of business,

4.6 In cases of agents quoting in offshore procurements on behalf of their principal manufacturers, one agent shall not represent two manufacturers or quote on their behalf in a particular bid enquiry to prevent any Conflict of Interest.

5. Eligible Bidders and Goods

5.1 Bidder shall be a private entity, government-owned entity or, any combination of these having a formal intent and legal competency to enter into an agreement or contract and are registered under respective Act and Jurisdiction in India or any other country with which India has not banned trade relations.

5.2 Bidder should not have a Conflict of Interest as prescribed and specified in ITB Para 4, which materially affects fair competition.

5.3 In addition, any bidder participating in the procurement process shall –

(i) have fulfilled his obligation to pay such of the tax payable to the Central Government or the State Government or any local authority,

(ii) not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons,

(iii) not have, and their directors and officers have not been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings,

(iv) not be debarred by any Procuring Entity under the State / UT Government, the Central Government, Autonomous body, Authority by whatever name called under them, UNOPS, UNDP, SAMS or GFATM as on the date of opening of bids.

5.4 All goods to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term "origin" used in this clause means the place where the goods are mined, grown, produced, or manufactured or from where the related services are arranged and supplied.

5.5 Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. Where applicable, evidence of valid registration by the Competent Authority shall be attached, failing which their bids shall be rejected. The Competent Authority for the purpose of this clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). More details may be found in the Office Memorandum (O.M.) Ref. F.No.6/18/2019-PPD dated 23/7/2020 issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Govt. of India. Further, A contractor shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority in India. Bidders are required to certify about compliance of above requirement in the Letter of Technical Bid: Bidding FORMs of section -VI of the Bid Document to the above effect. If such a certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

5.6 In the 'Letter of Technical Bid' to be submitted by the bidder, as per format given in **Section VI - Bidding Forms**, all bidders shall provide a signed statement that the bidder fulfils the eligibility requirements given in ITB Para 5,

6. Bidders' Qualification

6.1 Bidders should substantially meet the qualification criteria as stipulated in the **Section IV - Evaluation and Qualification Criteria**.

6.2 Bidders should fill and submit the "Proforma for Performance Statement (for a period of last five years)" provided in **Section VI - Bidding Forms** to provide relevant information and documents in support of fulfilment of bidder's qualification, along with its bid.

B. BIDDING DOCUMENTS

7. Content of Bidding Documents

7.1 The Bidding Documents shall include the following Sections, which should be read in conjunction with any Amendment issued in accordance with ITB Para 10.

- Section I Notice Inviting Bids (NIB)
- Section II Instructions to Bidders (ITB)
- Section III Bid Data Sheet
- Section IV Evaluation and Qualification Criteria
- Section V Schedule of Requirements
- Section VI Bidding Forms
- Section VII General Conditions of Contract (GCC)
- Section VIII Special Conditions of Contract (SCC)
- Section IX Contract Forms

7.2 Unless downloaded directly from the Purchaser's website **as specified in the BDS**, Purchaser shall not be responsible for the correctness of the Bidding Documents, responses to requests for clarification, the Minutes of the Pre-bid meeting, if any, or Amendment(s) to the Bidding Documents in accordance with ITB Para 10.

7.3 Bidders are expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.

8. Clarifications of Bidding Documents

8.1 A Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address **specified in the BDS**. The Purchaser will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of bids as **specified in the BDS.**

8.2 The Purchaser shall also promptly publish brief description of the enquiry but without identifying its source and its response at its website as **specified in the BDS**.

8.3 Should the clarification result in changes to the essential elements of the Bidding Documents, the Purchaser shall amend the Bidding Documents following the procedure given under ITB Para 10.

9. Pre-Bid Meeting

9.1 In order to provide response to any doubt regarding Bidding Documents, or to clarify issues, a pre-bid meeting may be scheduled, **if specified in the BDS**.

9.2 During the pre-bid meeting, the clarification sought by representative of prospective bidders shall be responded appropriately. However, they shall be asked to submit their written request by close of business on the next working day. The Purchaser shall publish written response to such requests for clarifications, without identifying its source. In case required, amendment(s), in terms of ITB Para 10 below shall be issued, which shall be binding on all prospective bidders.

10. Amendments to Bid Documents

10.1 At any time prior to the deadline for submission of bids, the Purchaser may, pursuant to ITB Para 8 and 9 and for any reason deemed fit, amend or modify the Bidding Documents by issuing Amendment(s).

10.2 Such Amendment(s) will be published on Purchaser's website **as specified in the BDS** and the same shall be binding on all prospective Bidders.

10.3 In order to give reasonable time to prospective bidders to take necessary action in preparing their bids, the Purchaser may, at its discretion extend the deadline for the submission of bids and other allied time frames, which are linked with that deadline.

10.4 Any bidder who has downloaded the Bidding Documents should check the Amendment(s), if any, issued on the Purchaser's website. The Purchaser shall not be responsible in any manner if prospective Bidders miss any Amendment(s) published on Purchaser's website.

C. PREPARATION OF BIDS

11. Documents Comprising the Bid

11.1 The bidder shall submit bids (hard copies) in two envelopes - one envelope containing the Technical Bid and the other the Financial Bid. The Bid shall comprise the following:

Technical Bid:

i) Letter of Technical Bid as per Form provided in **Section VI – Bidding Forms**,
ii) Bid Security Amount furnished in accordance with **ITB Para 19**,
iii) Bidder Information Form as per Form provided in **Section VI: Bidding Forms**,
iv) Technical Compliance Sheet as per Form provided in **Section VI: Bidding Forms,**
v) Documents establishing the compliance of Goods in accordance with **ITB Para 16**,
vi) Documents establishing bidders' qualification in accordance with **ITB Para 17.2**,
vii) Manufacturer's Authorization, in case bid is submitted by an Agent or dealer, as per Form given in **Section VI: Bidding Forms**,
viii) Proforma for Performance Statement (for a period of last five years) as per format given in **Section VI: Bidding Forms** along with supporting documents,
ix) Proforma for other Details of Bidder, Manufacturer and its Bank as per format given in **Section VI: Bidding Forms**,
x) Bidder firm's Certificate of Incorporation/ Registration, Article and Memorandum of Association or any such registration document,
xi) Self-attested copy of GSTIN registration,
xii) Any other document **as required in the BDS**

Financial Bid:

i) Letter of Financial Bid as per Form provided in **Section VI – Bidding Forms**,
ii) Price Schedule prepared in accordance with **ITB Para 14**,

12. Letter of Technical Bid, Financial Bid and Price Schedule

12.1 The Letter of Technical Bid, Letter of Financial Bid and Price Schedule shall be prepared as per the Forms furnished in **Section VI: Bidding Forms**. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled-in with the information requested.

13. Alternative Bids

13.1 Unless otherwise **specified in the BDS**, alternative bids shall not be considered.

14. Bid Prices

14.1 The prices quoted by the Bidder in the Price Schedule shall conform to the requirements specified below.

14.2 Equipment thereunder must be listed and priced separately in the Price Schedule. The price quoted shall correspond to 100% of the items.

14.3 The price to be quoted in the 'Letter of Financial Bid' in accordance with ITB Para 12.1 shall be the total price of the bid.

14.4 The price quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and shall not be subject to variation on any account, **unless otherwise specified in the BDS**. The bid submitted with adjustable price quotation shall be treated as nonresponsive and shall be rejected.

14.5 The price shall be quoted as specified in the Form of Price Schedule given in **Section VI - Bidding Forms**. The dis-aggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered. Prices shall be entered in the following manner:

(i) the unit and total price of the Goods on DDP (Delivered Duty Paid) – Consignee Location basis,

(ii) the price of related services as specified in Section V - Schedule of Requirements,

(iii) Goods and Services Tax (GST) payable on the Goods and related services if the contract is awarded

15. Bid Currency

15.1 The bidder should submit its quote in Indian Rupees only.

15.2 Bids, where prices are quoted in any other currency shall be treated as nonresponsive and rejected.

16. Documents establishing the compliance in respect of Goods

16.1 To establish the conformity of the Goods to the Bidding Documents, the Bidder shall furnish as part of its Bid, **Technical Compliance Sheet** as per Form provided in **Section VI: Bidding Forms** and the documentary evidence that the Goods conform to the technical specifications and standards specified in **Section V - Schedule of Requirements**.

16.2 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods, demonstrating substantial responsiveness of the Goods to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the **Section V - Schedule of Requirements.**

16.3 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section V - Schedule of Requirements.

17. Documents establishing the eligibility and Qualification of the Bidder

17.1 To establish Bidder's eligibility in accordance with ITB Para 5, Bidders shall complete the Letter of Technical Bid, included in **Section VI - Bidding Forms.**

17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction that the Bidder meets each of the qualification criterion specified in **Section IV - Qualification and Evaluation Criteria**.

18. Period of validity of Bids

18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Purchaser in accordance with ITB Para 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. A Bidder may refuse the request

without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid.

18.3 The Bidder who agrees to the extension of the period of validity of bids so requested by the Purchaser shall also extend the period of validity of bid securities submitted by them or submit new bid security to cover the extended period of validity of their bids. A bidder whose bid security is not extended or new bid securities not submitted shall be considered to have refused the request to extend the period of validity of its bids and rejected as non-responsive. The decision of the Purchaser will be final and binding in this regard.

19. Bid Security

19.1 Bidders shall furnish as part of their bid, a Bid Security/ Earnest Money Deposit (EMD) of Rs. 10,00,000/- (Rupees Ten Lakhs only), in the form of FDR/ BG/ DD in the favour of Strategic Alliance Management Services Pvt. Ltd., payable at Noida. EMD can also be deposited online through RTGS as per details given below:

Name of Bank : Kotak Mahindra Bank
Account Name: Strategic Alliance Management Services Pvt Ltd.
Account No. 9447736992
IFSC : KKBK0000181
Branch: Sector 18 Noida

19.2 For FDR/BG (pledged in the name of Strategic Alliance Management Services Pvt. Ltd., Noida) if opted for, originals should reach the SAMS office within 2 days of the submission deadline. Any delay by post or courier shall not be entertained.

19.3 The Original copy of EMD receipt (of any form) should be enclosed along with the Original Technical bid.

19.4 Any bid not accompanied by Bid Security Amount as specified in ITB Para 19.1 above shall be rejected by the Purchaser as non-responsive.

19.5 No interest shall be payable by the Purchaser for the sum deposited as earnest money deposit.

19.6 The EMD of the unsuccessful bidders would be returned back within one month of signing of the contract.

19.7 The EMD shall be forfeited by the Purchaser in the following events:

(a) When the bidder withdraws or modifies its bid during the validity of bids as specified in the Letter of Bid, or

(b) when the bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity, (i) fail or refuses to execute the Contract, or (ii) fail to furnish the Performance Security, if required in accordance with the Bid Documents.

(c) If the bidder tries to influence the evaluation process.

19.8 In case of MSME, Bidders shall furnish as part of their bid, a Bid Security Declaration as per the format provided in Section VI – Other Standard Forms

19.9 The Micro and Small Enterprise (MSE) bidders, registered with MSME or those

registered with NSIC or are registered with Central Purchase Organisation or the concerned Ministry or Department or Startups as recognised by Department of Industrial Policy & Promotion (DIPP) are exempted from submission of bid security. In such case, bidder should submit copy of MSME or National small industries corporation (NSIC) registration and documents showing exemption from submission of bid security, in lieu of bid security.

20. Format and Signing of Bids

20.1 The Bidder shall submit the bids as specified in ITB 11.

20.2 The Technical Bid and original of the Financial Bid shall be typed or written in ink with all pages serially numbered and signed by the bidder or a person duly authorized to sign on behalf of the bidder in token of acceptance of the terms and conditions of the Bidding Documents. This authorization shall consist of a written confirmation **as specified in the BDS** which shall be attached to the Bid.

20.3 Any corrections in the bid such as interlineations, erasures, or overwriting shall be valid only if they are duly signed or initialled by the person signing the bid.

D. SUBMISSION AND OPENING OF BIDS

21. Submission of Bids

21.1 Bidders may submit their bids by post or by hand or drop in the box earmarked by the Purchaser. Bids so submitted shall enclose the original and one copy of the Technical Bid in separately sealed envelopes duly marked as “ORGINAL” and “COPY” and original of Financial Bid duly marked as “ORIGINAL” in separately sealed envelope. The envelopes containing the original and the copies of Technical Bid and original of Financial Bid shall then be enclosed in one single sealed outer envelope. **A SOFT VERSION OF THE TECHNICAL BID SHALL ALSO BE PROVIDED IN A READABLE FORMAT IN A PEN DRIVE.**

21.2 The inner and outer envelopes shall bear the following :

a) name and complete address along with the mobile, telephone number and email address of the Bidder,
b) complete postal address of the Purchaser,
c) specific identification mark / Bid Ref. No. and subject matter of procurement,
d) a warning ‘not to open before the time and date for bid opening’ as indicated in the Bidding Documents

21.3 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility about its consequences viz. misplacement or premature opening of the bid

22. Deadline for Submission of Bids

22.1 Bids must be submitted before the given deadline and no later than the date and time **specified in the BDS**.

22.2 The date of submission and opening of bids shall not be extended except when –

a) Adequate number of bids have not been received within the given time and the Purchaser is of the opinion that further bids are likely to be submitted if time is extended, or
b) the Bidding Documents are required to be substantially modified because of discussions in pre-bid meeting or otherwise and the time for preparations of bids by the prospective bidders appears to be insufficient for which such extension is required.

22.3 In cases where the time and date of submission of bids is extended, an amendment to the Bidding Documents shall be issued in accordance with ITB Para 10, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline extended

22.4 If the due date for submission of bids declared as non-working day, the bids shall be received and opened at the same time and hour on the next working day.

23. Late Bids

23.1 Bidder will not be able to submit bids after closing of the deadline (date and time) for the submission of the bid as specified in the BDS.

24. Withdrawal, Substitution and Modification of Bids

24.1 A bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by the bidder or his representative authorized in writing and such letter of authority shall be enclosed with the bid. The corresponding substitution or modification of the bid contained in sealed envelopes as required must accompany the written notice. Such written notice shall be –

a) submitted in accordance with the Bidding Documents with the envelope clearly marked as “Withdrawal – Technical Bid / Financial Bid,” “Substitution – Technical Bid / Financial Bid,” or “Modification – Technical Bid/ Financial Bid” as applicable, and
b) received by the officer authorized to receive the bids prior to the last time and date fixed for receiving of bids.

24.2 Bids requested to be withdrawn shall be returned unopened to the bidders.

24.3 No bid shall be withdrawn, substituted, or modified after the time and date fixed for submission of bids as specified in the BDS.

25. Opening of Bids

25.1 The Purchaser will open all bids, in the presence of Bidders representatives who choose to attend at the time, on the date, and at the place specified in the **Key Bidding information.** Bidders' representatives shall sign the attendance sheet as proof of their attendance. The bidders who are not able to attend bid opening may choose to attend bid opening remotely using Skype call setup by SAMS.

25.2 The Technical Bid shall be opened at the first instance **at 03.30 PM on DD/MM/YYYY.** During the Technical Bid opening, the Bid opening official(s) will read the salient features of the bids like Bid Security Declaration and any other special features of the bids, as deemed fit by the bid opening official(s).

25.3 The Purchaser will prepare minutes of the technical bid opening at the end of the opening session, including, as a minimum: the name of the Bidder, the presence or absence of a bid security etc. The minutes should be distributed to all Bidders who attended the meeting and will also be uploaded on Purchasers website.

25.4 After the technical evaluation of bids are completed, the Purchaser shall notify those Bidders whose Bids are found non-responsive at technical evaluation stage and their Financial Bids will not be opened.

25.5 The Purchaser shall simultaneously notify in writing those Bidders that have qualified during technical evaluation stage and inform them of the date, time and location for the opening of the Financial Bids. The opening date should allow the Bidders sufficient time to make arrangements for attending the opening. The Bidder's attendance at the opening of the Financial Bids is optional and is at the Bidder's choice.

25.6 The Financial Bids shall be opened by the Purchaser in the presence of the representatives of those Bidders found qualified during technical evaluation stage. These Financial Bids shall then be opened, and the total prices read aloud and recorded. Copies of the record shall be sent to all Bidders who have submitted their Bids.

E. EVALUATION AND COMPARISON OF BIDS

26. Confidentiality

26.1 Information relating to the evaluation of bids and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with the bidding process until information on Contract Award is communicated to all Bidders

26.2 Any effort by a Bidder to influence the Purchaser in the evaluation or contract award decisions may result in the rejection of its Bid.

26.3 Notwithstanding ITB Para 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.

27. Preliminary Examination of Bids

27.1 The Bid Evaluation Committee constituted by the Purchaser shall conduct a preliminary scrutiny of the opened bids at the beginning to assess the prima-facie responsiveness and record its findings thereof particularly in respect of the following:

(a) that the bid is signed, as per the requirements listed in the Bidding Documents,
(b) that the bid is signed by authorised signatory
(c) the bid is valid for the period, specified in the Bidding Documents,
(d) that the bid is accompanied by due Bid Security declaration,
(e) Bidder agreed to terms and conditions of bid including delivery period
(f) that the bid is unconditional and that the bidder has agreed to give the required performance security, and
(g) whether any other conditions specified in the Bidding Documents are fulfilled.
(h) The Bidder is eligible to supply the goods required under this bid as per basic eligibility specified under ITB para 5 above.

28. Clarification of Bids

28.1 To assist in the examination, evaluation, comparison and qualification of the bids, the Bid Evaluation Committee may, at its discretion, ask any bidder in writing for clarification by a specific date regarding its bid specifically therein that if the bidder does not comply or respond by that date his bid shall be liable to be rejected. The request of the Committee for clarification and the response of the bidder thereto shall be in writing. Depending on the outcome, such bids shall be ignored or considered further,

28.2 Any clarification submitted by a bidder with regard to his bid that is not in response to a request by the Committee specifically shall not be considered,

28.3 No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Committee in the evaluation of the financial bids,

28.4 No substantive change to qualification information or to a submission, including changes aimed at making an unqualified bidder, qualified or an unresponsive submission, responsive shall be sought, offered or permitted under any circumstances,

28.5 All communication generated as above shall be included in the record of the procurement proceedings.

29. Immaterial Non-conformities in Bids

29.1 The Bid Evaluation Committee may waive non-conformities in the bid that do not constitute a material deviation, reservation or omission and deem the bid to be responsive,

29.2 The Bid Evaluation Committee may request the bidder to submit necessary information or documents which are historical in nature like audited statements of accounts, GSTIN Registration Certificate, etc. within a reasonable period of time. Failure of the bidder to comply with the request within the given time shall result in the rejection of its bid,

29.3 The Bid Evaluation Committee may rectify immaterial non-conformities or omissions on the basis of the information or documentation received from the bidder under ITB Para 29.2.

30. Determination of Technical Responsiveness

30.1 The Bid Evaluation Committee constituted by the Purchaser shall determine the responsiveness of a bid to the Bidding Documents based on the contents of the bid submitted by the Bidder,

30.2 A bid shall be deemed to be substantially responsive if it meets the requirements of the Bidding Documents without any material deviation, reservation, or omission where: -

(a) “deviation” is a departure from the requirements specified in the Bidding Documents,
(b) “reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents, and
(c) “omission” is the failure to submit part or all of the information or documentation required in the bidding documents.

30.3 A “material deviation, reservation, or omission” is one that,

(a) If accepted, shall:-
    (i) effect in any substantial way the scope, quality, or performance of the subject matter of procurement specified in the Bidding Documents, or
    (ii) limit in any substantial way, inconsistent with the Bidding Documents, the rights of the Purchaser or the obligation of the Bidder under the proposed contract, or
(b) if rectified shall unfairly affect the competitive position of other Bidders presenting responsive bids,

30.4 The Bid Evaluation Committee shall examine the technical aspects of the bid in particular to confirm that all requirements of Bidding Documents have been met without any material deviation, reservation or omission,

30.5 The Bid Evaluation Committee shall regard a bid as responsive if it conforms to all requirements set out in the Bidding Documents, or contains minor deviations that do not materially alter or depart from the characteristics, terms, conditions and other requirements set out in the Bidding Documents, that is, there is no material deviation, or if it contains errors or oversights that can be corrected without any change in the substance of the bid,

30.6 Bids that are not responsive or contain any material deviation shall be rejected. Bids declared as non-responsive shall be excluded from any further evaluation.

31. Nonconformities, Errors and Omissions

31.1 Provided that a Bid is substantially responsive, the Bid Evaluation Committee may waive any nonconformities in the Bid.

31.2 Provided that a bid is substantially responsive, the Purchaser or authorised representative may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

31.3 Provided that a bid is substantially responsive, the Bid Evaluation Committee shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component.

32. Qualification of the Bidder

32.1 The Purchaser shall determine to its satisfaction whether the Bidder meets the qualifying criteria **specified in Section IV - Evaluation and Qualification Criteria**

32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Para 17

32.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Purchaser/ Evaluation Committee shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.

33. Financial Evaluation and Comparison of Bids

33.1 In order to evaluate Financial Bids, the Purchaser shall consider the following:

(a) evaluation will be done for Items, as **Section IV – Evaluation and Qualification Criteria ,** and the Bid Price as quoted in accordance with ITB Para 14.
(b) price adjustment for correction of arithmetic errors in accordance with ITB 34
(c) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 31
(d) the additional evaluation factors are specified in **Section IV: Evaluation and Qualification Criteria**

33.2 The Purchaser shall compare the evaluated prices of all substantially responsive bids established in accordance with ITB 33 to determine the lowest evaluated bid. The comparison shall be on the basis of DDP (place of final destination) prices, together

with prices for any required installation, training, commissioning and other services. The evaluation of a bid will include and take into account IGST / SGST / CGST payable on the Goods and related services if the contract is awarded to the Bidder.

34. Correction of Arithmetical Errors

34.1 Provided that the Bid is substantially responsive, the Bid Evaluation Committee shall correct arithmetical errors in the following cases, namely:

(a) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Committee there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected,

(b) if there is an error in a calculation of the total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected, and

(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

34.2 If the price bid is ambiguous leading to two equally valid total price amounts, the bid shall be treated as non-responsive and rejected.

34.3 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB Para 34.1, shall result in the rejection of the Bid.

35. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids

35.1 The Purchaser reserves the right to accept or reject any bid, and to cancel / annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the Bidders for which the Purchaser shall keep record of clear and logical reasons properly for any such action / recall of bidding process. In case of cancellation / annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

F. AWARD OF CONTRACT

36. Award Criteria

36.1 The Purchaser shall award the Contract to the Bidder whose bid has been accepted after evaluation of bids.

36.2 If required for the purpose of maintaining uninterrupted and timely supplies, the Purchaser reserves the right to split the quantity as given in 'Schedule of Requirements' or quantity decided at the time of award of contract between qualified

bidders/suppliers. The purchaser reserves the right to split the order amongst minimum of two qualified bidders for tendered product in the ratio of 70:30 with 70% of the order will be given to lowest evaluated bidder (L1) and the balance 30% to the 2nd lowest bidder (L-2), if the L2 bidder agrees to match the financial quote of L-1 bidder. In case of increase in quantities (during the currency of the Contract) the order may be split between three qualified bidders in the ratio of 50:30:20 with 50% order to L1, 30% order to L2 and 20% order to L3, if L-2 and L-3 agrees to match the price of L-1 Bidder.

The splitting of order will be done based on the Technical Capability and presence of the selected bidder in the particular region and the decision of Purchaser will be final in this regard." *(disclaimer- In view of the above of splitting of order/ region wise distribution among bidders, the ratio of distribution may or may not be exactly 70:30 or 50:30:20 (minor variation may happen to ensure that one particular site goes to one bidder only for ease of execution of work at site)*

37. Purchaser's Right to vary Quantities at the time of Award as well as during the validity of the Contract.

37.1 At the time the Contract is awarded and till the validity of the contract, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section V, Schedule of Requirements, provided this does not exceed the percentages **specified in the BDS,** and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.

38. Notification of Award / Letter of Acceptance

38.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the “Letter of Acceptance”) shall specify the sum that the Purchaser will pay the Supplier in consideration of the supply of Goods (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”).

38.2 Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.

38.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after Notification of Award in accordance with ITB Para 38.1, requests in writing the grounds on which its bid was not selected.

39. Performance Security

39.1 Within twenty-eight (28) days of the receipt of Letter of Acceptance from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, using the Performance Security Form included in **Section IX: Contract Forms**, or another Form acceptable to the Purchaser.

39.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose bid is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

39.3 The validity of the performance security shall be for a period of 45 days beyond the date of completion of all contractual obligations.

40. Signing of Contract

40.1 Promptly after notification of Award, the Purchaser shall send the successful Bidder the Contract Agreement.

40.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.

Section III – Bid Data Sheet (BDS)

The following specific data for the goods and related services to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB

ITB Para Reference	Particulars
	A. General
ITB 1.1	The reference number of the Notice Inviting Bids (NIB) is: ***SAMS/FIND/Proc/Equipment/ATI/19/2023*** The Purchaser is: Strategic Alliance Management Services Pvt. Ltd, B-18, Sector-06, NOIDA Gautam Budh Nagar (U.P.)- 201301
ITB 7.2	http://www.samsconsult.com/FIND.aspx
	B. Bidding Documents
ITB 8.1	The Purchaser's address for the purpose of any clarification is: Strategic Alliance Management Services Pvt. Ltd, B-18, Sector-06, NOIDA Gautam Budh Nagar (U.P.)- 201301 *E-mail: procurement@samsconsult.com* *Phone:* 0120-4161355, 56, 57 Requests for clarification should be received by the Purchaser no later than: 05.00 PM **11/04/2024**
ITB 8.2	http://www.samsconsult.com/FIND.aspx
ITB 9.1	Pre-Bid Meeting shall be scheduled on hybrid mode (online & offline): **Yes** as per the details mentioned below:- Time, date, venue and name of contact for pre-bid meeting are specified as under: Time and Date: **11.00 AM on 12/04/2024** Name of contact person: **Mr. Dinesh Kumar, Sr. Manager** (**Procurement)** Contact Details: **Mobile: 8800257774,** **e-mail: kumard@samsconsult.com**, **procurement@samsconsult.com** Address of Venue: Strategic Alliance Management Services Pvt. Ltd, B-18, Sector-06, NOIDA Gautam Budh Nagar (U.P.)- 201301 The prospective bidders who wish to join the online meeting may do so using the below-mentioned link:- https://join.skype.com/phrb7W3Drkz0
ITB 10.2	http://www.samsconsult.com/FIND.aspx
	C. Preparation of Bids
ITB 11.1 (xii)	The Bidder shall submit the following additional documents in its Bid: **None**
ITB 13.1	Alternative Bids ***shall not be*** considered.

ITB 14.4	The price quoted by the bidder shall be **fixed** during the Bidder's performance of the Contract and shall not be subject to variation on any account, **except for GST, payable on Goods and related services**.
ITB 18.1	The bid validity period shall be ***120 days after the deadline for bid submission.***
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of**:** **(1) Copy of Resolution of Board of Directors** **(2) Authorization Letter issued by Competent authority on bidder firms letter head / official stationary**
	D. Submission and Opening of Bids
ITB 22.1	Purchaser's address for bid submission is: ***Strategic Alliance Management Services Pvt. Limited (SAMS), B-18, Sector-6, Noida, G.B. Nagar, Uttar Pradesh – 201031.*** The deadline for Bid Submission is: **03.00 PM on 24/04/2024.**
ITB 25.1	The bid opening shall take place at ***Strategic Alliance Management Services Pvt. Limited (SAMS), B-18, Sector-6, Noida, G.B. Nagar, Uttar Pradesh – 201031.*** The date and time for Bid opening is: **04.00 PM on 24/04/2024.** The prospective bidders who wish to join the online meeting may do so using the below-mentioned link:- https://join.skype.com/qby8TUTFm6y9
	F- Award of Contract
ITB 37.1	The maximum percentage by which quantities may vary is: **±30%** ***(plus/ minus Thirty percent)***

Section IV – Evaluation and Qualification Criteria

This Section contains all the criteria that the Purchaser shall use to evaluate a bid and qualify the Bidders in accordance with ITB 30 and 32. No other factors, methods or criteria shall be used.

Evaluation (ITB 32 & ITB 33.1)

The Purchaser shall use the Least Cost Selection (LCS) Selection) criteria and methodologies listed in this Section to evaluate Bids. By applying the criteria and methodologies as listed below, the Purchaser shall determine the Most Advantageous Bid.

A – Minimum Eligibility Criteria

1. Bidder should be in continuous business of manufacturing / supplying the similar Goods as specified in the bid during last five years prior to bid opening. Similar goods refers to **Upper UVGI Disinfection System.**

2. In order to qualify, the bidder, should have achieved an average annual turnover of Rs. 7,00,00,000/- (Rs. Seven Crores) during last three financial years (2020-21,2021-22 and 2022-23**)**

3. Substantially responsive and conforms to the technical specifications for Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System ***(refer detailed technical specifications given in Section V – Schedule of Requirements).*** Bidder needs to submit their bid as per the Technical Specification Compliance Form given in Section VI – Bidding Forms along with the catalogue, certification as mentioned in the technical specifications and test reports of UVGI system

4. In case Bidder is non-manufacturer, Bidder needs to submit the Authorization Certificate from the manufacturer (OEM certificate) which shall be valid at least on the date of bid opening (Refer attached format regarding OEM Certification). The non-manufacturer Bidder shall represent one Manufacturer only. Also, one Manufacturer Bidder needs to authorize only one bidder for the said procurement.

Bids not adhering to the above minimum requirements shall not be taken up for further stage of evaluation.

Documentary Evidence

The Bidder shall furnish the following documentary evidence to demonstrate that it fulfills the minimum criteria related to experience and technical capacity, as above:

a) Details of past experience in support of qualification requirement given in para A 1 above including past performance of the Goods offered and on those of similar nature within the past five years, details of current contracts in hand and other commitments

(as per form given in **Section VI, Bidding Forms- Performance Statement Form). Bidders need to submit copy of contracts/ purchase orders for showing experience of similar goods.**

c) Valid Manufacturer Authorization Certificate.

d) In support of the financial capability/ turnover criteria, bidder should submit copies of audited financial statements of accounts (including balance sheet/profit and loss account/auditor's reports/ IT returns) certified by the auditor of the Bidder for last three financial years (2020-21, 2021-22 and 2022-23).

B. **Technical Evaluation**

After preliminary scrutiny of bids in accordance with ITB Para 27 as well as compliance with the minimum eligibility criteria above, Bidder's shall be assessed for their qualification for the UVGI fixtures as quoted by them against the scoring criteria given below:

Sl. No.	Technical Criteria	Marks
I	Experience of installation and maintenance of Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection Systems a) Installation – **10 Marks** b) Installation and maintenance during warranty period- 1**5 Marks** **c)** Installation and maintenance services during warranty period and maintenance services beyond the warranty period – **20 Marks** Documents to be provided: - - For 1a – Copy of purchase order/signed and stamped certificate of installation issued by the user/e-mail confirmation/ /any other relevant document. - For 1b – Copy of purchase order/signed and stamped certificate of installation and maintenance services issued by the user//e-mail confirmation/any other relevant document - For 1c –In addition to 1a & 1b, the additional copy of AMC/ CMC contract and/or proof of maintenance services beyond the warranty period	**20**
II	Total nos. of Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection Systems installed in the last 5 years: - - Up to 50 – 15 Marks - 51 – 100 – 20 Marks - 101 – 200 – 25 Marks - More than 200 – 30 Marks Purchase Order and signed and stamped certificate of installation from all the sites issued in the last 5 years	**30**
III	Successful Demonstration and user feedback from any site within India where the vendor has installed Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection Systems **USER FEEDBACK (10 MARKS)**	**30**

Sl. No.	Technical Criteria	Marks
	User feedback on Installation, commissioning, user training and maintenance services during the warranty period of Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection Systems **Good-10 marks, Satisfactory-5 marks** **TECHNICAL DEMONSTRATION (20 MARKS)** • Safety test including radiation dose at 6 feet height being ≤ 0.2 µW/cm^2 needs to be performed during the technical demonstration. - Measurement of the intensity of the UV Lamps shall be measured using a calibrated UV light meter at the time of technical demonstration. **Safety test:- Pass-10 marks, Fail – 0 marks** • Efficacy Test (emit UV light radiation intensity of at least 15 mW/ m^3 area in the upper irradiated zone to ensure minimal inactivation) to be performed during the technical demonstration. **Efficacy test:- Pass-10 marks, Fail – 0 marks** Calibrated UV meter, Radiometer/ Optometer and other required tools will be brought by the vendor.	
IV	Implementation Plan and timelines for project including : • the initial assessment of sites for finalizing the requirement, • procurement and delivery of fixtures, • commission and subsequent maintenance services, • existing service delivery network which can also provide UVGI maintenance services • Manufacturing capabilities (number of fixtures produced per month) Timelines to be provided as a Gantt Chart for execution of the entire project Bidder is expected to share a detailed plan along with the bid which shall be reviewed as part of the technical evaluation. Prospective Bidders will also be required to make a Presentation on the same.	**20**
	TOTAL:	**100**

Technical Evaluation:- The minimum marks for qualifying the technical stage of evaluation is **50 marks**. The price bids of such proposals not scoring this minimum mark shall not be taken up for further stage of financial evaluation.

C. Financial Evaluation

- Financial evaluation: Quotations that are found to be technically qualified shall be evaluated based on the lowest price with related services and applicable comprehensive 1 year warranty as specified in the bid document.

- Apart from the above, Bidders must provide the CMC rates for additional four (4) years. The CMC rates for additional four years should be inclusive of all taxes/GST (INR) which will not be a part of the financial evaluation criteria. **However, in case of extension at that time, these rates would be considered for extension.**

Section V – Schedule of Requirements

A. List of Goods and Equipment required:

Sl. No.	Description of item to be procured	Quantity (nos.)
1	Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System and related services with 1 year of comprehensive warranty + 4 years of comprehensive maintenance services This also includes initial assessment for UVGI requirement and installation plan, which will carried out along with relevant stakeholders from FIND India, SAMS and institutes.	880

NOTE:

1. The Consignee list of 880 UVGI fixtures is provided here. The contract will be awarded upfront for Supply, Installation and Commissioning of Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) with one-year comprehensive warranty.

2. Kindly refer to the detailed Technical Specifications for Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System as laid down under this Section i.e. Section V – Schedule of Requirements**.**

3. The selected bidder(s) are required to visit the respective mentioned sites for assessment of actual number of UVGI fixtures requirement based on the site feasibility and UV dosage required to create a killing/ UV disinfection zone and they have to submit the design/ layout of the facility showing the placement of UVGI along with the required quantities and work they need to carry out at the site. Hence, the above criteria needs to be taken into account at the time of submission of the unit cost.

4. Although, there would be a separate vendor/contract for civil work/renovation, however, minor civil works *(Anti-UVGI reflection painting, electrical plug points as mentioned in Technical Specifications)* required for UVGI will have to be done by the supplier of UVGI.

Related Services:

Comprehensive Warranty and comprehensive maintenance services of UVGI:

- The UVGI assembly shall be guaranteed against unsatisfactory performance and/ or break down due to defective design, workmanship, or material for a period of **one year** from the date of commissioning at the site**.** The equipment or components or any part thereof or consumable items like (UV Lamp, louvers, fixtures, electrical components etc.), so found defective/required for routine replacement during the guarantee/ warranty/CMC period shall be forthwith repaired or replaced free of cost to the entire satisfaction of the site.

- Supplier to arrange periodic preventive maintenance and breakdown service visit as under:-

- **1st visit :** Periodic inspection and cleaning of UV lamp to be carried out within 3 months during the warranty period.
- **2nd visit:** Preventive maintenance should be done on each UVGI assembly within 6 months of the warranty period. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety test to be done on similar manner as during the commissioning process.
- **3rd visit:** Periodic inspection and cleaning of UV lamp to be carried out within 9 months of the warranty period.
- **4th visit:** Yearly Preventive maintenance should be done on each UVGI assembly with replacement of new UV lamp. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety tests are to be done on similar manner as during the commissioning process. UV lamp of the same wattage and specification to be replaced after every 9000 hours or within 12 months or whichever occurs earlier. The ineffective lamps to be taken out of the facility and to be disposed as per guidelines.

- All the safety log sheet and the test certification report to be maintained and handover to the respective sites after completion of preventive maintenance.
- Sufficient spare part should be available readily for early resolution of the UVGI system, in case of breakdown.

Consignee-wise Quantity Distribution of Upper room air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System:

Sl. No.	State	Name of DRTB centre	Total UVGI required
1	Andhra Pradesh	GHCCD Vizag	2
2	Andhra Pradesh	GHCCD/ IDH), Guntur	2
3	Assam	LGB Chest Hospital, Birubari, Guwahati	11
4	Assam	Silchar Medical College, Cachar	8
5	Bihar	ANMMCH, Gaya	17
6	Bihar	Darbhanga Medical College and Hospital, Darbhanga	13
7	Bihar	IGIMS, Patna	21
8	Chhattisgarh	Bheemrao Ambedkar Hospital & JNMC, Raipur	10
9	Chhattisgarh	Chattisgarh Institute of Medical Sciences, Bilaspur	6
10	Chhattisgarh	Government Medical College Hospital Ambikapur(Sarguja)	8
11	Delhi	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	88
12	Gujarat	BJ Medical College, Ahemdabad	6
13	Gujarat	GMERS Medical College, Patan	20
14	Gujarat	Sayaji Rao Shinde Government Hospital, Vadodara	23
15	Himachal Pradesh	Dr. Rajendra Prasad Government Medical College	6
16	J&K	Government Chest Disease Hospital, Jammu	17
17	J&K	Govt. Chest Disease Hospital, Srinagar	14
18	Kerala	GMC, Trivandrum	3
19	Kerala	Govt Med Col Kozhikode	3
20	Ladakh	SNM Hospital, Leh	32
21	Madhya Pradesh	Government TB Hospital, Nowgong, Chatarpur	9
22	Madhya Pradesh	Manorama Raje Tuberculosis Hospital, Indore	12
23	Madhya Pradesh	R. D. Gardi Medical College, Ujjain	8
24	Madhya Pradesh	Regional Institute of Respiratory Disease, Bhopal	16
25	Madhya Pradesh	Victoria Hospital, Jabalpur	9
26	Maharashtra	Government Medical College, Aurangabad	6
27	Maharashtra	Government Medical College, Miraj	15
28	Maharashtra	Government Medical College, Nagpur	7
29	Maharashtra	Rajiv Gandhi Medical College, Thane	10
30	Manipur	JNIMS, IMPHAL	10
31	Meghalaya	REID Provincial Chest Hospital, Shillong	8
32	Mizoram	District TB Center, Aizawl	9
33	Odisha	MKCG Medical College & Hospital,Ganjam(Odisha)	15
34	Odisha	S.C.B Medical College & Hospital,Cuttack	22
35	Odisha	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	12
36	Punjab	GGSMCH, Faridkot	20
37	Punjab	TB HOSPITAL, PATIALA	9
38	Punjab	TB sanatorium, Government Medical College, Amritsar	5
39	Rajasthan	Institute of respiratiory disease, Jaipur	23
40	Rajasthan	Jawahar Lal Nehru Medical College, Ajmer	13
41	Rajasthan	New Medical College, Kota	18
42	Rajasthan	Rabindranath Tagore Medical College, Udaipur	23
43	Rajasthan	S P Medical College, Bikaner	9
44	Sikkim	STNM Hospital, Gangtok	6
45	Tamilnadu	Coimbatore Medical College Hospital, Coimbatore	5
46	Tamilnadu	Rajaji Govt Hospital & MMC, Madurai	6
47	Tamilnadu	Thanjavur Medical college,Thanjavur	6
48	Tamilnadu	Tirunelveli Medical College and TB & Chest Hospital, Tirunelveli	9
49	Telangana	Government Chest Hospital - Erragadda, Hyderabad	14
50	Tripura	Agartala Medical College and GBP Hospital, Agartala	17

Sl. No.	State	Name of DRTB centre	Total UVGI required
51	Uttar Pradesh	Baba Raghav Das medical college, Gorakhpur	4
52	Uttar Pradesh	Badri Das Gauri Dutt Government TB Hospital, Basti	9
53	Uttar Pradesh	BHU, Varanasi	16
54	Uttar Pradesh	Deen Dayal Upadhyay District Hospital, Moradabad	4
55	Uttar Pradesh	Dr. Murari Lal Chest Hospital, Kanpur	13
56	Uttar Pradesh	JNMC & Hospital, Aligarh	6
57	Uttar Pradesh	King George's Medical University Nodal TB centre Lucknow	9
58	Uttar Pradesh	Lala Lajpat Rai Memorial Medical College, Meerut	15
59	Uttar Pradesh	Maharana Pratap District Hospital Bareilly	12
60	Uttar Pradesh	Maharani Laxmibai Medical College, Jhansi	5
61	Uttar Pradesh	MMG Hospital, Ghazibad	10
62	Uttar Pradesh	Saifai medical college, Etawah	5
63	Uttar Pradesh	SNMC & Hospital, Agra	13
64	Uttar Pradesh	SR HOSPITAL, MLN MC, PRAYAGRAJ	9
65	Uttar Pradesh	TB HOSPITAL, TELIYARGANJ	25
66	West Bengal	Burdwan Medical collage & Hospital ,Burdwan	6
67	West Bengal	Murshidabad medical college & Hospital, Murshidabad	2
68	West Bengal	R.G. Kar MC, Kolkata	45
69	West Bengal	St. Joseph's Hospital, Medinipur	4
70	West Bengal	T. B. Hospital, Jalpaiguri	7
		Total	**880**

Consignee-wise Area/ size of each Site/ Room where UVGI Disinfection System planned

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
1	GHCCD Vizag	Andhra Pradesh	18.5	18.8	10.6	347.8	3686.7	104.395152	Bronchoscopy	2
2	GHCCD/ IDH), Guntur	Andhra Pradesh	28.0	22.0	11.5	616.0	7084.0	200.5965413	DRTB Ward (Male)	2
3	LGB Chest Hospital, Birubari, Guwahati	Assam	41.0	20.0	11.0	820.0	9020.0	255.4179563	Female DR TB Wards	4
	LGB Chest Hospital, Birubari, Guwahati	Assam	41.0	20.0	11.0	820.0	9020.0	255.4179563	Male DR TB Wards	4
	LGB Chest Hospital, Birubari, Guwahati	Assam	20.0	13.0	10.0	260.0	2600.0	73.6	TB OPD	1
	LGB Chest Hospital, Birubari, Guwahati	Assam	28.0	26.0	10.0	728.0	7280.0	206.1466432	Registration, Patient waiting area	2
4	Silchar Medical College, Cachar	Assam	25.0	20.0	14.0	500.0	7000.0	198.2179262	Male DR TB Wards	2
	Silchar Medical College, Cachar	Assam	25.0	20.0	14.0	500.0	7000.0	198.2179262	Female DR TB Wards	2
	Silchar Medical College, Cachar	Assam	80.0	70.0	13.0	1040.0	72800.0	2061.466432	Registration waiting area	4
5	ANMMCH, Gaya	Bihar	61.8	41.5	11	2564.7	28211.7	798.8663812	General Registration	5
	ANMMCH, Gaya	Bihar	41.3	32.8	11	1354.64	14901.04	421.9504639	TB OPD Waiting Area	6
	ANMMCH, Gaya	Bihar	23.7	19.8	10.8	469.26	5068.008	143.5100051	DRTB Ward room-1	2
	ANMMCH, Gaya	Bihar	15	19.8	10.8	297	3207.6	90.82911715	DRTB Ward room-2	2
	ANMMCH, Gaya	Bihar	23.7	19.8	10.8	469.26	5068.008	143.5100051	DS TB Ward	2
6	Darbhanga Medical College and Hospital, Darbhanga	Bihar	22	20	13	440	5720	161.9723626	Male DR TB Ward	2
	Darbhanga Medical College and Hospital, Darbhanga	Bihar	22	20	13	440	5720	161.9723626	Female DR TB Ward	2
	Darbhanga Medical College and Hospital, Darbhanga	Bihar	20	15	13	300	3900	110.4357017	TB OPD	1
	Darbhanga Medical College and Hospital, Darbhanga	Bihar	50	30	13	1500	19500	552.1785087	Registration waiting area	8
7	IGIMS, Patna	Bihar	53.0	20.0	13.0	1060.0	13780.0	390.2061461	OPD Waiting area	5
	IGIMS, Patna	Bihar	32.0	20.0	9.5	640.0	6080.0	172.1664273	Female DR TB Wards	3
	IGIMS, Patna	Bihar	55.0	32.0	9.5	1760.0	16720.0	473.4576752	Male DR TB Wards	8
	IGIMS, Patna	Bihar	18.0	14.0	11.5	252.0	2898.0	82.1	Bronchoscopy	1
	IGIMS, Patna	Bihar	14.0	14.0	8.2	196.0	1607.2	45.5	DRTB OPD	1
	IGIMS, Patna	Bihar	20.0	10.0	8.2	200.0	1640.0	46.4	OPD 1	1
	IGIMS, Patna	Bihar	19.5	18.6	8.2	362.7	2974.1	84.21826615	OPD 2	2
8	Bheemrao Ambedkar Hospital & JNMC, Raipur	Chhattisgarh	35.0	17.9	10.3	624.8	6434.9	182.2167841	Male DR TB Ward	3
	Bheemrao Ambedkar Hospital & JNMC, Raipur	Chhattisgarh	35.9	17.9	10.3	640.8	6600.4	186.9023586	Female DR TB Ward	3
	Bheemrao Ambedkar Hospital & JNMC, Raipur	Chhattisgarh	27.6	28.5	10.7	786.6	8416.6	238.3321374	TB OPD Waiting area	4
9	Chattisgarh Institute of Medical Sciences, Bilaspur	Chhattisgarh	43.6	26.0	12.3	1133.6	13920.6	394.1877213	Male & Female DR TB Wards	5
	Chattisgarh Institute of Medical Sciences, Bilaspur	Chhattisgarh	20.0	14.5	9.5	290.0	2755.0	78.0	Registration area	1
10	Government Medical College Hospital Ambikapur(Sarguja)	Chhattisgarh	23	20	12.3	460	5658	160.2167181	Male DR TB Ward	2
	Government Medical College Hospital Ambikapur(Sarguja)	Chhattisgarh	20	16	12.3	320	3936	111.4551082	Female DR TB Ward	2
	Government Medical College Hospital Ambikapur(Sarguja)	Chhattisgarh	97	7.9	12.3	766.3	9425.49	266.9001545	corridor area (OPD +X ray +DMC)	4
11	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	23	24	10	552	5520	156.3089932	OPD hall	3
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	13.8	18.8	10.7	259.44	2776.008	78.6077927	ODD 6	1
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	96.8	21.7	10.1	2100.56	21215.656	600.7604765	M12 MDR WARD Part 1	9
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	112	21	10	2352	23520	666.012232	M12 MDR WARD Part 2	10
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	96.8	21.7	10.1	2100.56	21215.656	600.7604765	M1 DSTB WARD Part 1	9
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	112	21	10	2352	23520	666.012232	M1 DSTB WARD Part 2	10
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	96.7	20.9	11.9	2021.03	24050.257	681.0274382	F11 DRTB WARD	9
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	96.7	20.9	11.9	2021.03	24050.257	681.0274382	F12 DRTB WARD	9
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	96.7	20.9	11.9	2021.03	24050.257	681.0274382	F7 DRTB WARD	9
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	96.7	20.9	11.9	2021.03	24050.257	681.0274382	F8 DRTB WARD	9

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	48	22.8	12	1094.4	13132.8	371.879483	TRIAL WARD 1	5
	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	Delhi	48	22.8	12	1094.4	13132.8	371.879483	TRIAL WARD 2	5
12	BJ Medical College, Ahemdabad	Gujarat	42.9	20.8	11.4	892.32	10172.448	288.0516496	TB Suspect Ward	5
	BJ Medical College, Ahemdabad	Gujarat	20.6	13.7	11.5	282.22	3245.53	91.90317515	Bronchoscopy	1
13	GMERS Medical College, Patan	Gujarat	75.2	62.2	11.3	4677.44	52855.072	1496.688966	DSTB Male & Female Ward	20
14	Sayaji Rao Shinde Government Hospital, Vadodara	Gujarat	57	38.9	11.8	2217.3	26164.14	740.8859388	DRTB Male & Female Ward	10
	Sayaji Rao Shinde Government Hospital, Vadodara	Gujarat	58.2	44.6	11.8	2595.72	30629.496	867.3307397	DSTB Male & Female Ward	11
	Sayaji Rao Shinde Government Hospital, Vadodara	Gujarat	19.3	18.8	14.2	362.84	5152.328	145.8976816	Bronchoscopy	2
15	Dr. Rajendra Prasad Government Medical College	Himachal Pradesh	35.6	40	10.9	1424	15521.6	439.5227662	OPD Registration area	6
16	Government Chest Disease Hospital, Jammu	J&K	60.0	23.0	11.0	1380.0	15180.0	429.8497314	Male DR TB Ward	6
	Government Chest Disease Hospital, Jammu	J&K	60.0	23.0	11.0	1380.0	15180.0	429.8497314	Female DR TB Ward	6
	Government Chest Disease Hospital, Jammu	J&K	34.0	18.0	10.0	612.0	6120.0	173.2991012	Registration Waiting Area	3
	Government Chest Disease Hospital, Jammu	J&K	40.0	7.0	10.0	280.0	2800.0	79.28717048	OPD Waiting cum Passage area	2
17	Govt. Chest Disease Hospital, Srinagar	J&K	49.0	19.0	10.0	931.0	9310.0	263.6298418	Male DR TB Ward	4
	Govt. Chest Disease Hospital, Srinagar	J&K	15.0	19.0	10.0	285.0	2850.0	80.7	MALE & FEMALE DRTB WARD Extn 1	1
	Govt. Chest Disease Hospital, Srinagar	J&K	15.0	19.0	10.0	285.0	2850.0	80.7	MALE & FEMALE DRTB WARD Extn 2	1
	Govt. Chest Disease Hospital, Srinagar	J&K	14.0	12.0	10.0	168.0	1680.0	47.6	OPD 1	1
	Govt. Chest Disease Hospital, Srinagar	J&K	14.0	12.0	10.0	168.0	1680.0	47.6	OPD 2	1
	Govt. Chest Disease Hospital, Srinagar	J&K	14.0	12.0	10.0	168.0	1680.0	47.6	OPD 3	1
	Govt. Chest Disease Hospital, Srinagar	J&K	74.0	10.0	10.0	740.0	7400.0	209.5446648	OPD Waiting Area	3
	Govt. Chest Disease Hospital, Srinagar	J&K	40.0	10.0	10.0	400.0	4000.0	113.2673864	RADIOLOGY WAITING AREA	2
18	GMC, Trivandrum	Kerala	30.0	20.0	10.0	600.0	6000.0	169.9010796	Bronchoscopy	3
19	Govt Med Col Kozhikode	Kerala	19.7	11.0	9.7	216.7	2102.0	59.5	Bronchoscopy Unit-1	1
	Govt Med Col Kozhikode	Kerala	16.8	22.7	8.7	381.4	3317.8	93.95053979	Bronchoscopy Unit-2	2
20	SNM Hospital, Leh	Ladakh	62.5	16.5	8.8	1031.3	9075.0	256.9753829	Common Waiting Area 1	4
	SNM Hospital, Leh	Ladakh	62.5	39.9	19.8	2493.8	49376.3	1398.179697	Common Waiting Area 2	22
	SNM Hospital, Leh	Ladakh	15.7	12.4	9.2	194.7	1791.1	50.7	TB OPD	1
	SNM Hospital, Leh	Ladakh	47.0	23.9	9.2	1123.3	10334.4	292.6364868	OPD Waiting Area	5
21	Government TB Hospital, Nowgong, Chatarpur	Madhya Pradesh	100.0	21.8	14.0	2180.0	30520.0	864.2301582	Male & Female DR TB Wards	9

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
22	Manorama Raje Tuberculosis Hospital, Indore	Madhya Pradesh	37.7	11.8	12.3	444.9	5471.8	154.9434983	Male DR TB Ward	2
	Manorama Raje Tuberculosis Hospital, Indore	Madhya Pradesh	21.7	41.0	11.9	889.7	10587.4	299.8026312	Female DS TB Ward	4
	Manorama Raje Tuberculosis Hospital, Indore	Madhya Pradesh	21.7	41.0	11.9	889.7	10587.4	299.8026312	Male DS TB Ward	4
	Manorama Raje Tuberculosis Hospital, Indore	Madhya Pradesh	18.6	21.2	11.0	394.3	4337.5	122.8248885	Bronchoscopy	2
23	R. D. Gardi Medical College, Ujjain	Madhya Pradesh	23.4	21.8	11.0	510.1	5611.3	158.8948877	Female DR TB Ward	2
	R. D. Gardi Medical College, Ujjain	Madhya Pradesh	57.4	22.2	11.0	1274.3	14017.1	396.9195041	Male DR TB Wards	6
24	Regional Institute of Respiratory Disease, Bhopal	Madhya Pradesh	107.7	32.5	10.8	3500.3	37802.7	1070.453257	Male & Female DR TB Wards	15
	Regional Institute of Respiratory Disease, Bhopal	Madhya Pradesh	21.0	13.8	12.6	289.8	3651.5	103.4	Bronchoscopy	1
25	Victoria Hospital, Jabalpur	Madhya Pradesh	35.0	30.3	12.8	1060.5	13574.4	384.3842025	Male & Female DR TB Wards	5
	Victoria Hospital, Jabalpur	Madhya Pradesh	34.8	29.7	15.5	1033.6	16020.2	453.6409796	Male DS TB Wards	4
26	Government Medical College, Aurangabad	Maharashtra	83.0	109.3	33.8	9071.9	306630.2	8682.800903	Registration waiting area	6
27	Government Medical College, Miraj	Maharashtra	24.4	10.8	10.7	263.5	2819.7	79.8	Registration Room	1
	Government Medical College, Miraj	Maharashtra	26.1	23.1	10.7	602.9	6451.1	182.6758568	Registration waiting area	3
	Government Medical College, Miraj	Maharashtra	34.5	24.5	10.9	845.3	9213.2	260.889479	OPD1	4
	Government Medical College, Miraj	Maharashtra	36.8	28.5	10.9	866.4	11431.9	323.715925	Male DRTB Ward	4
	Government Medical College, Miraj	Maharashtra	37.1	20.3	10.9	753.1	8209.1	232.4563068	Female DR TB Ward	3
28	Government Medical College, Nagpur	Maharashtra	79.7	20.3	10.4	1617.9	16826.3	476.4667365	DS TB Wards	7
29	Rajiv Gandhi Medical College, Thane	Maharashtra	43.0	21.0	12.9	903.0	11675.8	330.6215544	Female DR TB Ward	4
	Rajiv Gandhi Medical College, Thane	Maharashtra	43.0	30.0	12.9	1290.0	16679.7	472.3165062	Male DR TB Ward	6
30	JNIMS, IMPHAL	Manipur	111.4	47.4	11.1	5280.4	58612.0	1659.7069	OPD & Waiting area	9
	JNIMS, IMPHAL	Manipur	17.5	15.1	9.7	263.6	2556.4	72.39017774	Bronchoscopy	1
31	REID Provincial Chest Hospital, Shillong	Meghalaya	44.0	20.0	11.5	880.0	10120.0	286.5664876	Male DR TB Ward	4
	REID Provincial Chest Hospital, Shillong	Meghalaya	44.0	20.0	11.5	880.0	10120.0	286.5664876	Female DR TB Ward	4
32	District TB Center, Aizawl	Mizoram	50.0	32.0	10.6	1600.0	16960.0	480.2537183	Male & Female DR TB Wards	4
	District TB Center, Aizawl	Mizoram	64.0	45.0	11.0	2880.0	31680.0	897.0777003	OPD Complex (All sections in one hall with half partition)	5
33	MKCG Medical College & Hospital,Ganjam(Odisha)	Odisha	34.8	22.95	10.5	798.66	8385.93	237.4630934	Female DR TB Ward	3
	MKCG Medical College & Hospital,Ganjam(Odisha)	Odisha	34.8	22.95	10.5	798.66	8385.93	237.4630934	Male DR TB Ward	3
	MKCG Medical College & Hospital,Ganjam(Odisha)	Odisha	32.3	19.2	9.3	620.16	5767.488	163.317073	Female DS TB Ward	3

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
	MKCG Medical College & Hospital,Ganjam(Odisha)	Odisha	32.3	19.2	9.3	620.16	5767.488	163.317073	Male DS TB Wards	3
	MKCG Medical College & Hospital,Ganjam(Odisha)	Odisha	31.6	19	9.7	600.4	5823.88	164.9139166	FEMALE REGISTRATION & WAITING AREA	3
34	S.C.B Medical College & Hospital,Cuttack	Odisha	32	19.7	9.5	630.4	5988.8	169.5839309	Female DR TB Ward	3
	S.C.B Medical College & Hospital,Cuttack	Odisha	32	19.7	9.5	630.4	5988.8	169.5839309	Male DR TB Ward	3
	S.C.B Medical College & Hospital,Cuttack	Odisha	53.6	21.2	8.5	1136.32	9658.72	273.5044926	Female DS TB Ward	5
	S.C.B Medical College & Hospital,Cuttack	Odisha	52.6	20.6	9.3	1083.56	10077.108	285.3519214	Male DS TB Wards	5
	S.C.B Medical College & Hospital,Cuttack	Odisha	22	20.9	9.5	459.8	4368.1	123.6908176	OPD Waiting area	2
	S.C.B Medical College & Hospital,Cuttack	Odisha	21.7	14	9.3	303.8	2825.34	80.00471937	Bronchoscopy	1
	S.C.B Medical College & Hospital,Cuttack	Odisha	48.8	5.9	19.5	287.92	5614.44	158.9832362	RADIOLOGY WAITING AREA	1
	S.C.B Medical College & Hospital,Cuttack	Odisha	19.9	18.6	10.6	370.14	3923.484	111.1006946	RADIOLOGY WAITING AREA	2
35	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	Odisha	22.8	21.9	10	499.32	4993.2	141.3916784	Female DR TB Ward	2
	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	Odisha	23	21.9	10	503.7	5037	142.6319563	Male DR TB Ward	2
	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	Odisha	22	12	11	264	2904	82.23212253	Room No. 16 (OPD 1)	1
	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	Odisha	22	18.6	11.3	409.2	4623.96	130.935966	Room No. 16 (OPD 2)	2
	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	Odisha	75	7.6	13.2	570	7524	213.0559538	Room No. 16 (OPD 1&2) OPD waiting area	2
	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	Odisha	61.7	10.7	13.9	660.19	9176.641	259.8535355	RADIOLOGY WAITING AREA	3
36	GGSMCH, Faridkot	Punjab	21	21	11	441	4851	137.3650229	Male DR TB Ward	2
	GGSMCH, Faridkot	Punjab	21	21	11	441	4851	137.3650229	Female DR TB Ward	2
	GGSMCH, Faridkot	Punjab	15	14	11.5	210	2415	68.38518454	TB OPD 1 (Room no 7)	1
	GGSMCH, Faridkot	Punjab	21	14	11.5	294	3381	95.73925835	TB OPD 2 (Room no 4)	1
	GGSMCH, Faridkot	Punjab	21	14	11.5	294	3381	95.73925835	TB OPD 3 (Room no 15)	1
	GGSMCH, Faridkot	Punjab	15	14	11.5	210	2415	68.38518454	TB OPD 4 (Room no 8)	1
	GGSMCH, Faridkot	Punjab	30	30	11.5	900	10350	293.0793623	Registration and OPD waiting area	4
	GGSMCH, Faridkot	Punjab	15	14	11.5	210	2415	68.38518454	TB Lab	1
	GGSMCH, Faridkot	Punjab	21	15	11.5	315	3622.5	102.5777768	Bronchoscopy	1
	GGSMCH, Faridkot	Punjab	21	21	11	441	4851	137.3650229	Male DS TB Ward	2
	GGSMCH, Faridkot	Punjab	31	21	11	651	7161	202.7769385	Female DS TB Ward	3
	GGSMCH, Faridkot	Punjab	21	11	11	231	2541	71.95310721	XDR ward	1

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
37	TB HOSPITAL, PATIALA	Punjab	61.6	30.5	11.7	1878.8	21982.0	622.4597893	DR TB Ward	8
	TB HOSPITAL, PATIALA	Punjab	17.8	14.9	12.7	265.2	3368.3	95.4	Bronchoscopy	1
38	TB sanatorium, Government Medical College, Amritsar	Punjab	55.0	19.0	14.9	1045.0	15591.4	441.4992821	Male & Female DR TB Ward	5
39	Institute of respiratory disease, Jaipur	Rajasthan	60.0	25.0	13.0	1500.0	19500.0	552.1785087	Female DR TB Ward	7
	Institute of respiratory disease, Jaipur	Rajasthan	54.0	23.0	13.0	1242.0	16146.0	457.2038052	Male DR TB Ward	5
	Institute of respiratory disease, Jaipur	Rajasthan	60.0	38.0	13.0	2280.0	29640.0	839.3113332	DS TB Ward	10
	Institute of respiratory disease, Jaipur	Rajasthan	21.0	19.0	10.0	399.0	3990.0	113.0	Bronchoscopy	1
40	Jawahar Lal Nehru Medical College, Ajmer	Rajasthan	22.0	20.0	14.0	440.0	6160.0	174.4317751	Male DR TB Ward	2
	Jawahar Lal Nehru Medical College, Ajmer	Rajasthan	22.0	20.0	14.0	440.0	6160.0	174.4317751	Female DR TB Ward	2
	Jawahar Lal Nehru Medical College, Ajmer	Rajasthan	42.0	37.0	14.0	1554.0	21756.0	616.0613146	OPD	7
	Jawahar Lal Nehru Medical College, Ajmer	Rajasthan	14.0	13.0	11.0	182.0	2002.0	56.7	Bronchoscopy	1
	Jawahar Lal Nehru Medical College, Ajmer	Rajasthan	14.0	18.0	11.0	252.0	2772.0	78.5	Bronchoscopy	1
41	New Medical College, Kota	Rajasthan	58	24	12	1392	16704	473.0046056	DR TB Ward	6
	New Medical College, Kota	Rajasthan	75	24	12	1800	21600	611.6438866	DS TB Ward	8
	New Medical College, Kota	Rajasthan	28.6	26.6	11.5	760.76	8748.74	247.7367285	OPD	3
	New Medical College, Kota	Rajasthan	24	15	11.5	360	4140	117.2317449	Bronchoscopy	1
42	Rabindranath Tagore Medical College, Udaipur	Rajasthan	120.0	28.0	14.0	3360.0	47040.0	1332.024464	Female DS TB Ward	8
	Rabindranath Tagore Medical College, Udaipur	Rajasthan	120.0	28.0	14.0	3360.0	47040.0	1332.024464	Male DS TB Ward	8
	Rabindranath Tagore Medical College, Udaipur	Rajasthan	33.0	10.0	14.0	330.0	4620.0	130.8238313	Waiting area (OPD + Registration)	2
	Rabindranath Tagore Medical College, Udaipur	Rajasthan	25.0	33.0	14.0	825.0	11550.0	327.0595782	Waiting area (inside)	4
	Rabindranath Tagore Medical College, Udaipur	Rajasthan	24.0	20.0	11.0	480.0	5280.0	149.5	Bronchoscopy	1
43	S P Medical College, Bikaner	Rajasthan	70.0	25.0	12.0	1750.0	21000.0	594.6537786	Male & Female DR TB Ward	8
	S P Medical College, Bikaner	Rajasthan	14.0	19.0	11.0	266.0	2926.0	82.9	Bronchoscopy	1
44	STNM Hospital, Gangtok	Sikkim	51.8	13.3	11.9	688.4	8157.8	231.003191	Male & Female DR TB Ward	4
	STNM Hospital, Gangtok	Sikkim	26.0	18.0	9.5	468.0	4446.0	125.8967	OPD	2
45	Coimbatore Medical College Hospital, Coimbatore	Tamilnadu	50.0	11.0	15.0	550.0	8250.0	233.6139845	RADIOLOGY WAITING AREA	2
	Coimbatore Medical College Hospital, Coimbatore	Tamilnadu	24.0	20.0	11.8	480.0	5676.0	160.7264213	OPD	2
	Coimbatore Medical College Hospital, Coimbatore	Tamilnadu	22.0	10.0	13.0	220.0	2860.0	81.0	Bronchoscopy	1

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
46	Rajaji Govt Hospital & MMC, Madurai	Tamilnadu	39.9	8.6	10.3	343.1	3534.3	100.0814202	DRTB WARD Corridor	2
	Rajaji Govt Hospital & MMC, Madurai	Tamilnadu	18.5	18.5	11.2	342.3	3833.2	108.5441364	DRTB ward	2
	Rajaji Govt Hospital & MMC, Madurai	Tamilnadu	35.9	17.9	11.2	640.8	7177.1	203.2336326	DS TB Ward	2
47	Thanjavur Medical college,Thanjavur	Tamilnadu	28.6	24.4	10.3	697.8	7180.8	203.3368645	Male DR TB Ward	3
	Thanjavur Medical college,Thanjavur	Tamilnadu	28.6	24.4	10.3	697.8	7180.8	203.3368645	Female DR TB Ward	3
48	Tirunelveli Medical College and TB & Chest Hospital, Tirunelveli	Tamilnadu	18	17.5	11	315	3465	98.11787347	Female DR TB Ward	2
	Tirunelveli Medical College and TB & Chest Hospital, Tirunelveli	Tamilnadu	35	17.5	11	612.5	6737.5	190.784754	Male DR TB Ward	3
	Tirunelveli Medical College and TB & Chest Hospital, Tirunelveli	Tamilnadu	19.2	10.8	11.28	207.36	2339.0208	66.23369319	TB & C F WARD	1
	Tirunelveli Medical College and TB & Chest Hospital, Tirunelveli	Tamilnadu	32.9	17.9	11	588.91	6478.01	183.4368154	TB & C M WARD	3
49	Government Chest Hospital - Erragadda, Hyderabad	Telangana	37.0	29.0	9.6	1073.0	10300.8	291.6861735	Female DR TB Ward	5
	Government Chest Hospital - Erragadda, Hyderabad	Telangana	94.0	21.0	9.3	1974.0	18358.2	519.8463333	HIV+ TB ward	9
50	Agartala Medical College and GBP Hospital, Agartala	Tripura	46	40	10.5	1840	19320	547.0814763	DR TB Ward	8
	Agartala Medical College and GBP Hospital, Agartala	Tripura	20	19	10.5	380	3990	112.9842179	Female DS TB Ward	2
	Agartala Medical College and GBP Hospital, Agartala	Tripura	20	19	10.5	380	3990	112.9842179	Male DS TB Wards	2
	Agartala Medical College and GBP Hospital, Agartala	Tripura	36	15	10.5	540	5670	160.5565202	Registration & OPD waiting area	2
	Agartala Medical College and GBP Hospital, Agartala	Tripura	15	12	10.5	180	1890	53.51884007	TB OPD 1	1
	Agartala Medical College and GBP Hospital, Agartala	Tripura	20	15	10.5	300	3150	89.19806679	TB OPD 2	1
	Agartala Medical College and GBP Hospital, Agartala	Tripura	24	14	10.5	336	3528	99.9018348	Bronchoscopy	1
51	Baba Raghav Das medical college, Gorakhpur	Uttar pradesh	22.0	15.8	10.9	347.6	3788.8	107.2880011	Female DR TB Ward	2
	Baba Raghav Das medical college, Gorakhpur	Uttar Pradesh	22.0	15.8	10.9	347.6	3788.8	107.2880011	Male DR TB Ward	2
52	Badri Das Gauri Dutt Government TB Hospital, Basti	Uttar Pradesh	51.4	23.8	16.0	1223.3	19573.1	554.2490365	Male DR TB Ward	5
	Badri Das Gauri Dutt Government TB Hospital, Basti	Uttar Pradesh	38.1	23.8	16.0	906.8	14508.5	410.8344026	Female DR TB Ward	4
53	BHU, Varanasi	Uttar Pradesh	40.0	23.0	11.0	920.0	10120.0	286.5664876	Male DR TB Ward	4
	BHU, Varanasi	Uttar Pradesh	40.0	23.0	11.0	920.0	10120.0	286.5664876	Female DR TB Ward	4
	BHU, Varanasi	Uttar Pradesh	45.0	24.0	9.0	1080.0	9720.0	275.239749	Registration waiting area	5
	BHU, Varanasi	Uttar Pradesh	14.0	12.0	11.0	168.0	1848.0	52.3	Bronchoscopy	1
	BHU, Varanasi	Uttar Pradesh	24.0	11.0	11.0	264.0	2904.0	82.2	OPD 1	1
	BHU, Varanasi	Uttar Pradesh	12.0	12.0	10.0	144.0	1440.0	40.8	OPD 2	1

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
54	Deen Dayal Upadhyay District Hospital, Moradabad	Uttar Pradesh	23.0	21.0	13.0	483.0	6279.0	177.8014798	Male DR TB Ward	2
	Deen Dayal Upadhyay District Hospital, Moradabad	Uttar Pradesh	23.6	21.5	13.0	507.4	6596.2	186.7835835	Female DR TB Ward	2
55	Dr. Murari Lal Chest Hospital, Kanpur	Uttar Pradesh	14.5	21.0	13.0	304.5	3958.5	112.1	OPD (TB +General chest)-1	1
	Dr. Murari Lal Chest Hospital, Kanpur	Uttar Pradesh	14.5	22.5	13.0	326.3	4241.3	120.0988256	OPD (TB +General chest)-2	2
	Dr. Murari Lal Chest Hospital, Kanpur	Uttar Pradesh	50.0	21.0	13.0	1050.0	13650.0	386.5249561	Male DR TB Ward	5
	Dr. Murari Lal Chest Hospital, Kanpur	Uttar Pradesh	50.0	21.0	13.0	1050.0	13650.0	386.5249561	Female DR TB Ward	5
56	JNMC & Hospital, Aligarh	Uttar Pradesh	21.6	20.7	8.9	447.1	3979.4	112.6831532	Demonstration Centre OPD (TB OPD)	2
	JNMC & Hospital, Aligarh	Uttar Pradesh	27.0	19.9	9.5	537.3	5104.4	144.5390959	Male DR TB Ward	2
	JNMC & Hospital, Aligarh	Uttar Pradesh	27.0	19.7	9.5	531.9	5053.1	143.0864417	Female DR TB Ward	2
57	King George's Medical University Nodal TB centre Lucknow	Uttar Pradesh	25.0	16.0	13.9	400.0	5556.0	157.3283997	OPD -1	2
	King George's Medical University Nodal TB centre Lucknow	Uttar Pradesh	17.8	40.0	11.8	712.0	8387.4	237.5035865	Male DR TB Ward	3
	King George's Medical University Nodal TB centre Lucknow	Uttar Pradesh	17.8	40.0	11.8	712.0	8387.4	237.5035865	Female DR TB Ward	3
	King George's Medical University Nodal TB centre Lucknow	Uttar Pradesh	28.6	11.6	10.1	331.8	3350.8	94.88340998	Bronchoscopy	1
58	Lala Lajpat Rai Memorial Medical College, Meerut	Uttar Pradesh	25.6	21.0	11.2	536.8	6011.7	170.2327265	4th floor female ward 1 DRTB	3
	Lala Lajpat Rai Memorial Medical College, Meerut	Uttar Pradesh	25.0	21.0	11.2	525.0	5880.0	166.503058	4th floor male ward 1 DRTB	3
	Lala Lajpat Rai Memorial Medical College, Meerut	Uttar Pradesh	118.0	10.0	11.0	1180.0	12980.0	367.5526689	OPD Waiting area	6
	Lala Lajpat Rai Memorial Medical College, Meerut	Uttar Pradesh	21.0	28.0	11.0	588.0	6468.0	183.1533638	Registration area (F)	3
59	Maharana Pratap District Hospital Bareilly	Uttar Pradesh	20.0	22.0	11.5	440.0	5060.0	143.2832438	Female DR TB Ward	2
	Maharana Pratap District Hospital Bareilly	Uttar Pradesh	22.0	40.0	11.5	880.0	10120.0	286.5664876	Male DR TB Ward	4
	Maharana Pratap District Hospital Bareilly	Uttar Pradesh	20.0	22.0	11.5	440.0	5060.0	143.2832438	DS TB Ward	2
	Maharana Pratap District Hospital Bareilly	Uttar Pradesh	60.0	12.0	13.8	720.0	9936.0	281.3561878	RADIOLOGY WAITING AREA	4
60	Maharani Laxmibai Medical College, Jhansi	Uttar Pradesh	46.0	19.5	11.7	896.5	10471.6	296.5223284	Male DR TB Ward	4
	Maharani Laxmibai Medical College, Jhansi	Uttar Pradesh	18.8	19.5	11.7	366.4	4279.7	121.2	Female DR TB Ward	1
61	MMG Hospital, Ghazibad	Uttar Pradesh	71.7	7.8	12.0	559.3	6711.1	190.0377556	WAITING AREA NEAR Radiology and OPD 2	4
	MMG Hospital, Ghazibad	Uttar Pradesh	16.7	12.6	10.2	210.3	2145.0	60.7	OPD 2 NEAR XRAY ROOM	1
	MMG Hospital, Ghazibad	Uttar Pradesh	20.0	12.1	12.0	241.6	2899.1	82.1	OPD 1 NEAR TB WARD	1
	MMG Hospital, Ghazibad	Uttar Pradesh	44.0	20.0	12.0	880.0	10560.0	299.0259001	Male & Female DR TB Ward	4
62	Saifai medical college, Etawah	Uttar Pradesh	63.8	19.8	11.2	1263.2	14148.3	400.6349009	New Proposed DRTB Male/Female ward & TB-LAB	5

Site No.	Name of DRTB centre	State	Facility Length (in feet)	Facility Width (in feet)	Facility Height (in feet)	Total facility area (in sqft)	Total facility volume (in cubic feet)	Total facility volume (in cubic meter)	Facility Name	Required quantity
63	SNMC & Hospital, Agra	Uttar Pradesh	13.9	13.9	15.8	193.2	3052.7	86.4	OPD	1
	SNMC & Hospital, Agra	Uttar Pradesh	38.0	22.0	11.0	836.0	9196.0	260.4017213	Male DS TB Ward	4
	SNMC & Hospital, Agra	Uttar Pradesh	39.9	23.0	15.9	917.7	14591.4	413.183285	Female DS TB Ward	4
	SNMC & Hospital, Agra	Uttar Pradesh	41.5	20.0	12.0	830.0	9960.0	282.0357921	MDR DRTB WARD	4
64	SR HOSPITAL, MLN MC, PRAYAGRAJ	Uttar Pradesh	52.0	32.7	13.2	1700.4	22445.3	635.5795507	DR TB Ward	7
	SR HOSPITAL, MLN MC, PRAYAGRAJ	Uttar Pradesh	25.2	21.2	11.0	534.2	5876.6	166.4079134	DS TB Ward	2
65	TB HOSPITAL, TELIYARGANJ	Uttar Pradesh	83.5	18.9	13.9	1578.2	21936.3	621.1664173	DR TB Ward	7
	TB HOSPITAL, TELIYARGANJ	Uttar Pradesh	92.9	46.4	17.7	4310.6	76296.9	2160.487953	Male DS TB Ward	12
	TB HOSPITAL, TELIYARGANJ	Uttar Pradesh	108.2	33.8	13.7	3657.2	50103.1	1418.76157	Female DS TB Ward	6
66	Burdwan Medical collage & Hospital ,Burdwan	West Bengal	17	18.6	11.4	316.2	3604.68	102.0731706	Female DR TB Ward	1
	Burdwan Medical collage & Hospital ,Burdwan	West Bengal	20	18.6	11.3	372	4203.6	119.0326964	Male DR TB Ward	1
	Burdwan Medical collage & Hospital ,Burdwan	West Bengal	22.6	22.2	11.3	501.72	5669.436	160.5405495	Female DS TB Ward	2
	Burdwan Medical collage & Hospital ,Burdwan	West Bengal	25	22	11.3	550	6215	175.9892016	Male DS TB Ward	2
67	Murshidabad medical college & Hospital, Murshidabad	West Bengal	19.7	19.5	11.1	384.15	4264.065	120.7448745	Male DS TB Wards	2
68	R.G. Kar MC, Kolkata	West Bengal	38.14	16.5	11.3	629.31	7111.203	201.3668445	Registration area	4
	R.G. Kar MC, Kolkata	West Bengal	25.18	14.8	10.08	372.664	3756.45312	106.3709068	OPD	2
	R.G. Kar MC, Kolkata	West Bengal	44.56	26.16	10.08	1165.6896	11750.15117	332.7272282	OPD Waiting area	5
	R.G. Kar MC, Kolkata	West Bengal	156.625	21.28	10.08	3332.98	33596.4384	951.3451925	Medical OPD Waiting Area	16
	R.G. Kar MC, Kolkata	West Bengal	43.8	19.8	10.8	867.24	9366.192	265.2210221	DSTB Ward male-1	4
	R.G. Kar MC, Kolkata	West Bengal	24.5	19.8	10.8	485.1	5239.08	148.3542247	DSTB Ward female-1	2
	R.G. Kar MC, Kolkata	West Bengal	35.3	19.8	10.8	698.94	7548.552	213.751189	DSTB Ward male-2 (Partition-1)	4
	R.G. Kar MC, Kolkata	West Bengal	28.9	19.8	10.8	572.22	6179.976	174.9974324	DSTB Ward male-2 (Partition-2)	3
	R.G. Kar MC, Kolkata	West Bengal	28.8	19.8	10.8	570.24	6158.592	174.3919049	DSTB Ward female-2	3
	R.G. Kar MC, Kolkata	West Bengal	19.5	13.9	10.8	271.05	2927.34	82.89303773	Bronchoscopy	1
	R.G. Kar MC, Kolkata	West Bengal	19.5	11.2	10.8	218.4	2358.72	66.79151241	Thoracoscopy	1
69	St. Joseph's Hospital, Medinipur	West Bengal	25.1	19.4	10.2	486.94	4966.788	140.6437739	Male DR TB Ward	2
	St. Joseph's Hospital, Medinipur	West Bengal	25.1	20.5	10.2	514.55	5248.41	148.6184209	Female DR TB Ward	2
70	T. B. Hospital, Jalpaiguri	West Bengal	24.3	17.7	13.5	430.1	5806.5	164.421345	DRTB (female) 2	2
	T. B. Hospital, Jalpaiguri	West Bengal	56.0	19.0	13.5	1064.0	14364.0	406.7431846	DRTB (female) 1	5

B. Delivery & Completion Schedule

The delivery, installation, commissioning and validation should be completed within **150 days** (from the date of issue of the Notification of Award (NOA).

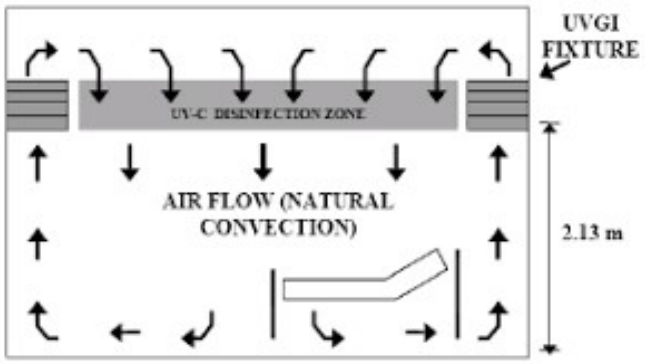
Consignee Address and Contacts Details:
(Detailed address of all the consignees will be shared at the time of Notification of Award of Contract)

C. Technical Specifications

Upper room air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System Technical Specifications

Description:

UVGI is capable of inactivating various bacteria, virus, fungi, and spores so that they are unable to replicate the cells. Upper room air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System are designed specifically for upper air irradiation to control the spread of airborne microorganisms in hospitals, DR-TB Wards, clinics, offices, etc. While deploying them care should be taken for minimising the UV exposure to persons in the lower portion of that room. UVGI fixtures are suspended from ceilings or mounted on walls. The lamp fixture is equipped with louvers to direct the radiation horizontally and away from the lower part of the room, covering the entire cross-sectional area of the upper room at a height above head level for air disinfection. Disinfection is achieved through the rapid dilution of contaminated lower room air with clean irradiated upper room air.



Basic Specifications of Upper room air UVGI disinfection system:

- The UVGI system shall be suitable to operate with 230 V ± 15%, 50Hz single phase AC Supply. The power supply shall be made available near to the UVGI assembly.
- The UVGI system shall be installed either wall mounted, or ceiling mounted with louvers that direct UVC energy above contact level with occupants, ensuring that they are ideal for air disinfection in occupied rooms.
- The base of the lamp is shielded to direct the radiation upward and outward to create an intense zone of UVGI in the upper air while minimizing the level of UVGI in the lower (occupied) portion of the room or area.
- Irradiation: The UVGI system and fixtures are to be installed in sufficient quantity and in such an arrangement to provide an equal distribution of UVC energy on the room.
- The upper room air UVGI assembly should emits UV light radiation intensity of at least **15 mW/ m^3** of area in the upper irradiated zone to ensure minimal inactivation as per US Department Of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC) recommendations on UV Light radiation intensity (Annex 1) and accordingly the selection of the UVGI fixtures to be made. The quantity required and the placement of the UVGI fixtures should be calculated to achieve full irradiation of the entire face area of the room.

- Max Intensity at eye level (~6ft height) measured from ground level should be **≤ 0.2 µW/cm^2.** This is basis the following guidelines /recommendations:
    - Guidelines on Airborne infection control in healthcare and other settings of **NTEP, MoHFW, GoI 2010** (Annex 2A)
    - The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (**ISHRAE**) ISHRAE -**Position Paper** on the use of technologies associated with UVGI for AIC with particular emphasis on SARS CoV2 virus published in **August 2021** (Annex 2A),
    - Environmental Control for Tuberculosis: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by **US DHHS, CDC** and National Institute for Occupational Safety and Health **(NIOSH)** published in March 2009 (Annex 2C)

UV Lamps specifications:

The UV lamps shall meet following criteria:

- The lamp shall produce **UV-C of 254nm** wavelength required to achieve the required parameters as per NETP guidelines on AIC in healthcare and other settings 2010 (Annex 3A).
- UV lamps shall be fabricated out of special high transmission Quartz glass with low amount of mercury (i.e., 5 mg or less) and shall have high output, hot cathode. They shall produce minimum 95% of their energy at 254 nm. Material safety data sheets (MSDS) should be provided from the lamp manufacturer.
- The effective life of lamp shall be guaranteed for minimum **9000 hours** with full intensity of operation (ref: US DHHS, CDC and NIOSH guidelines published in March 2009 Annex 3B).
- The electronics ballast should be solid state electronic, preheat or rapid start or program start circuit type, shall be high power factor, Sound Rating A and shall have harmonic distortion in accordance with ANSI/ ASHRAE standards and have a total harmonic distortion of less than 10%. See reference below:
    - 2016 ASHRAE handbook- HVAC Systems and Equipment 17.4 (Annex 3C) and
    - Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by US DHHS, CDC and NIOSH published in March 2009 (Annex 3B).

Assembly/ Fixtures Details:

- Housings shall be made of robust materials (stainless steel or aluminum or any equivalent), with units having suitable electrical connectors to simplify wiring.
- All the housing which includes components like electronic power source, sockets, louvers, reflectors, UV lamp, etc. should be capable of withstanding UV radiation.
- Should have louvers coated with non-reflective material (anodized) to optimize UV performance.
- Reflector shall be made up of aluminum and may be parabolic in shape.
- The UVGI system and fixtures are to be installed as per the design and arrangement to provide a uniform distribution of UVC energy on the upper room area.
  Ref: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by US DHHS, CDC and National Institute for Occupational Safety and Health (NIOSH) published in March 2009 (Annex 4)

Certificates:

- The supplier shall provide manufacturer's test certificates for main items like UV lamp, ballast, etc. The factory performance test certificate shall include details such as no ozone emission or

other secondary contaminations, output performance of 254 nm +/-1 nm, performance output with estimated life span, etc.

- The supplier must provide valid UV lamp performance acceptance certificate from a **NABL** (National Accreditation Board for Testing & Calibration Laboratories) accredited testing labs like The Central Institute of Road Transport (**CIRT**) or Underwriter laboratories (**UL**) certification indicating the rated output for the UV lamp.

Installation:

- Only (qualified) service technicians who have received training on the installation and placement of UVGI lamp fixtures should install the systems and their certification should be available including at the time of installation.
- The UVGI system shall be installed either wall mounted, or ceiling mounted with adjustable louvers that direct UVC energy above contact level with occupants, ensuring that they are ideal and safe for air disinfection in occupied rooms.
- The installation must be done in the manner such that no direct human eye contact with the UV occurs during regular operation.
- All the physical structures such as wall, ceiling fan, switch sockets, split AC, etc. which fall in the UV radiation zone must be anti UV reflection painted (like titanium oxide containing paint).
- Dedicated ON/OFF switch and sockets should be provided for each UVGI fixtures. Voltage and plugs to be adapted to meet the country requirements. The line cord / Power cord supplied with the equipment shall be of acceptable durability, length, and current carrying capacity complying with Indian Standards.
- The ON/OFF switch to be located in the same area below the Upper UVGI fixtures and at a reachable height.
- Proper and suitable earthing connections to be made for the UVGI system.

Testing and commissioning:

- The intensity of the UV Lamps across the room shall be measured using a NABL calibrated UV light meter at the time of commissioning installation. UV meter will be brought by the vendor.
- Safety test including radiation dose at 6 feet height being ≤ 0.2 µW/cm^2 needs to be performed during the commissioning process. Radiometer/ Optometer will be brought by the vendor.
- Efficacy Test (emit UV light radiation intensity of at least 15 mW/ m^3 area in the upper irradiated zone to ensure minimal inactivation) – UVC-irradiance needs to be performed.
- The UV intensity should be checked every time the system is uninstalled **and reinstalled**.
- Proper safety and operational training i.e., daily use, safety precautions, periodic maintenance, and follow up of breakdown, PM/calibration services and replacement of lamp, etc. shall be imparted to the hospital personals/ contract staff and shall be documented.
- One set of Manufacturer catalogues, Test certificates, etc. and System Operation and Maintenance Manuals shall be submitted to the site.

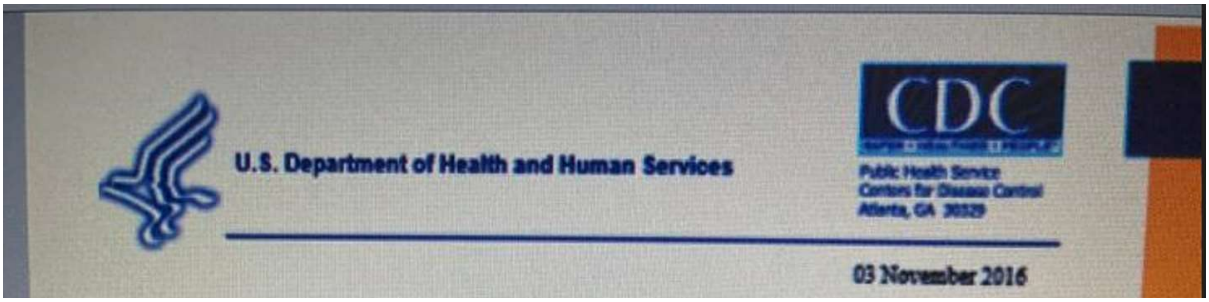
Comprehensive Warranty and comprehensive maintenance services of UVGI:

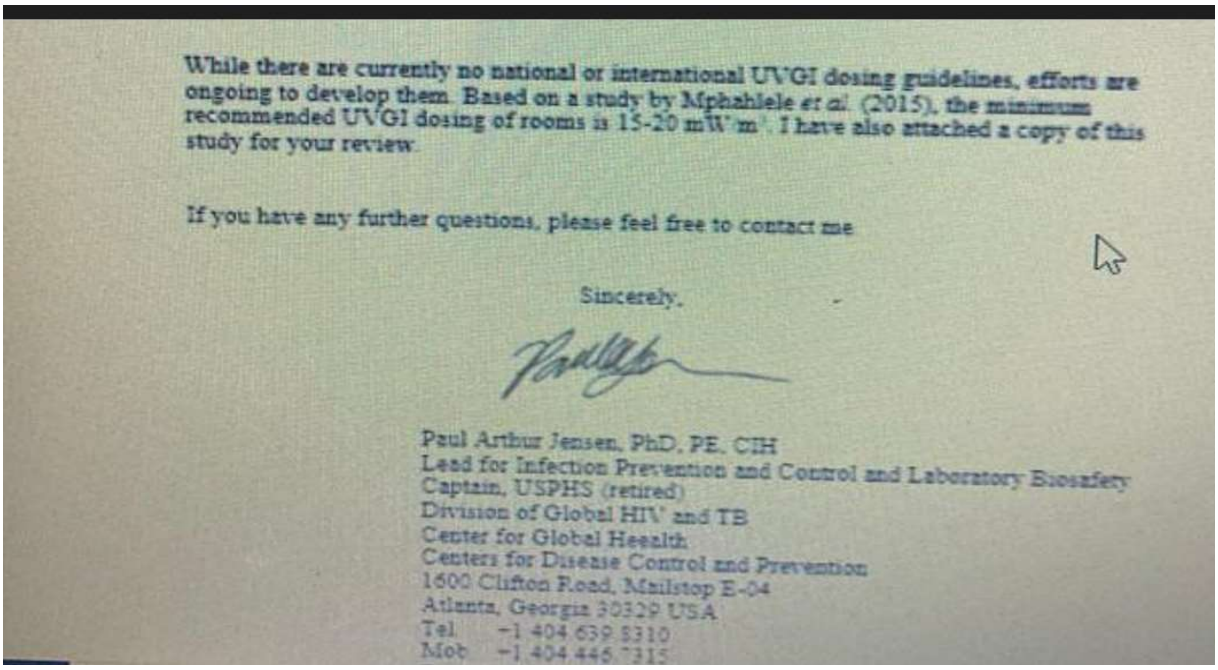
- The UVGI assembly shall be guaranteed against unsatisfactory performance and/ or break down due to defective design, workmanship, or material for a period of **one year** from the date of commissioning at the site. The equipment or components or any part thereof or consumable items like (UV Lamp, louvers, fixtures, electrical components etc.), so found defective/required

for routine replacement during the guarantee/ warranty/CMC period shall be forthwith repaired or replaced free of cost to the entire satisfaction of the site.

- Supplier to arrange periodic preventive maintenance and breakdown service visit as under:-
    - **1st visit :** Periodic inspection and cleaning of UV lamp to be carried out within 3 months during the warranty period.
    - **2nd visit:** Preventive maintenance should be done on each UVGI assembly within 6 months of the warranty period. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety test to be done on similar manner as during the commissioning process.
    - **3rd visit:** Periodic inspection and cleaning of UV lamp to be carried out within 9 months of the warranty period.
    - **4th visit:** Yearly Preventive maintenance should be done on each UVGI assembly with replacement of new UV lamp. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety tests are to be done on similar manner as during the commissioning process. UV lamp of the same wattage and specification to be replaced after every 9000 hours or within 12 months or whichever occurs earlier. The ineffective lamps to be taken out of the facility and to be disposed as per guidelines.
- All the safety log sheet and the test certification report to be maintained and handover to the respective sites after completion of preventive maintenance.
- Sufficient spare part should be available readily for early resolution of the UVGI system, in case of breakdown

Annex 1: CDC (US DHHS) recommendations on UV Light radiation intensity:





While there are currently no national or international UVGI dosing guidelines, efforts are ongoing to develop them. Based on a study by Mphahlele *et al.* (2015), the minimum recommended UVGI dosing of rooms is 15-20 mW/m^2. I have also attached a copy of this study for your review.

If you have any further questions, please feel free to contact me.

Sincerely,

Paul Arthur Jensen, PhD, PE, CIH
Lead for Infection Prevention and Control and Laboratory Biosafety
Captain, USPHS (retired)
Division of Global HIV and TB
Center for Global Health
Centers for Disease Control and Prevention
1600 Clifton Road, Mailstop E-04
Atlanta, Georgia 30329 USA
Tel +1 404 639 8310
Mob +1 404 446 7315

Annex 2 A: Guidelines on Airborne infection control in healthcare and other settings of NTEP, MoHFW, GoI 2010

Guidelines on Airborne Infection Control in Healthcare and Other Settings

April 2010
Directorate General of Health Services
Ministry of Health & Family Welfare
Nirman Bhawan, New Delhi

UVGI Safety Considerations

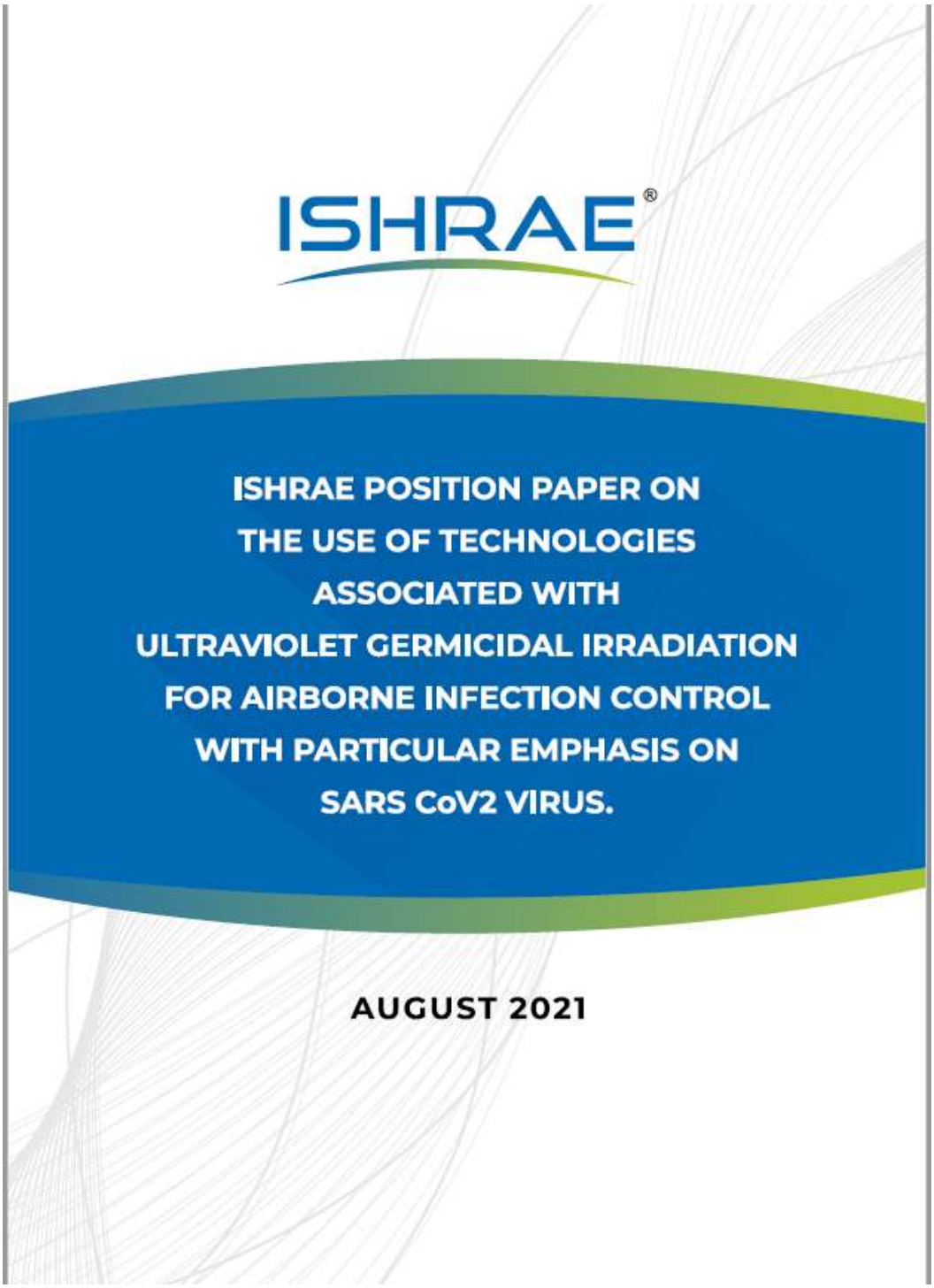
Overexposure to UVGI can cause painful but transient dermatitis or keratoconjunctivitis, similar to that caused by sun overexposure. The 8-hour exposure dose limit (threshold limit value) for germicidal UV is 6.0 mJ/cm^2. This translates to 0.2 uW/cm^2 of measured UV intensity at eye level for areas where exposure will be constant everyday, such as the head of the patient's bed. In other areas where persons would be present only transiently, such as hallways, the intensity could be up to 2.0 uW/cm^2

The only way to tell if an installation is safe is to measure radiation levels in the occupied part of the room. Measurements should be made at numerous locations and elevations where people may be exposed for long time periods. For example, in an inpatient ward, readings should be taken at the heads of beds as well as the center and corners of the room.

Planning a UVGI installation

Specific suggestions for planning UVGI installations are given in **Appendix 5**. In general, one rule of thumb is to install the required number of fixtures necessary to achieve continuous, uniform upper-air exposure. Some sources have suggested approximately 30 W UV lamp power for every 200 ft^2 (19 m^3) of floor area, though this rule of thumb would be adjusted based on local building features. UVGI fixtures should usually not be open, directed at the ceiling, unless the area is one where persons will not be continuously exposed, like a corridor. Open upper air bulb installations frequently create high reflectivity, and tend to accumulate dust easily on the bulb, requiring frequent cleaning and maintenance.

Annex 2B: ISHRAE -Position Paper on the use of technologies associated with UVGI for AIC with particular emphasis on SARS CoV2 virus (August 2021)



3.3 UVC UPPER AIR DISINFECTION:

Upper zone irradiation units are proven to be highly effective in Hospitals and such other applications, and UV-C lamps disinfect the air coming in its range either through normal convection currents or through mechanical air flows. The lamp holder will be equipped with a set of baffles which are designed to deflect practically all the radiation emitted by the lamps to the top portion of the room. The design of the unit and its installation will be such that leakage of UV radiation into the occupied zone should be validated with in ACGIH [k] limits (0.1µw/cm^2 for broadband UV or 0.2µw/cm^2 for UV-C at a wavelength of 254 nm). This will determine how much of UV lights can be safely installed within the space.

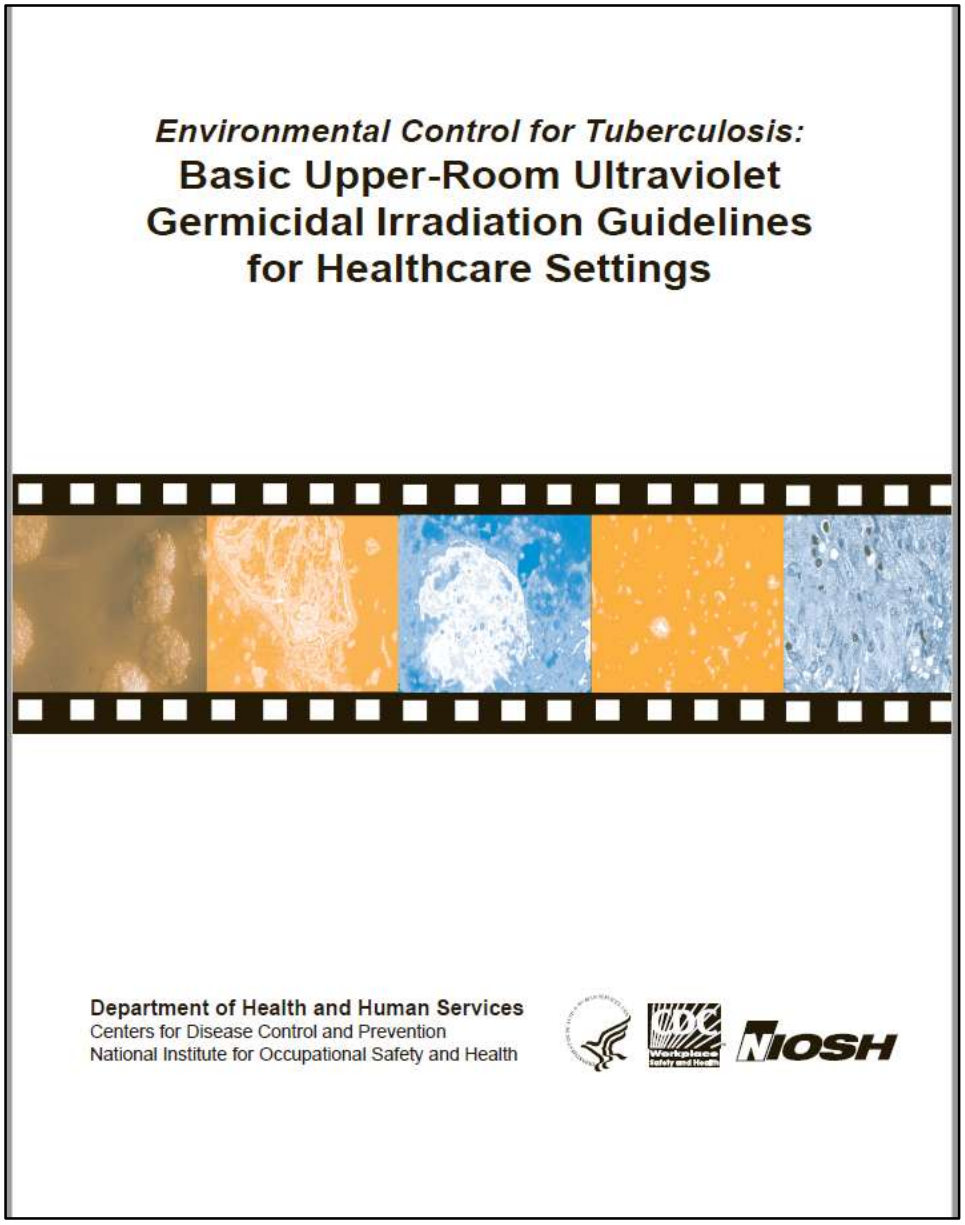
3.3 .1 INSTALLATION/ MAINTENANCE:

The fixtures mounted in occupied spaces should be at a minimum height of 2.15m from floor level.

- Requires low UV-reflectivity of walls and ceilings
- Ventilation should maximize air mixing.
- Use supplemental fans where air movement is insufficient.

Cleaning of lamps and replacement of lamps should be as detailed in Section 3.1.1.

Annex 2C: Environmental Control for Tuberculosis: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by DEPARTMENT OF HEALTH AND HUMAN SERVICES, Centers for Disease Control and Prevention and National Institute for Occupational Safety and Health (March 2009)



DISCLAIMER

ORDERING INFORMATION

To receive documents or other information about occupational safety and health topics, contact NIOSH at

Telephone: **1–800–CDC–INFO** (1–800–232–4636)
TTY: 1–888–232–6348
E-mail: cdcinfo@cdc.gov
or visit the NIOSH Web site at **www.cdc.gov/niosh**.

For a monthly update on news at NIOSH, subscribe to NIOSH eNews by visiting **www.cdc.gov/niosh/eNews**.

DHHS (NIOSH) Publication No. 2009–105

March 2009

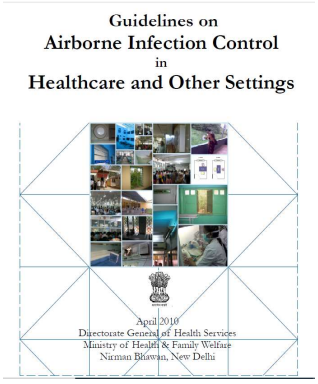
[2007]. The CDC/NIOSH recommended exposure limit (REL) is designed to protect workers against eye and skin injury. Detailed examples for calculating the REL at different UV wavelengths are provided in the CDC/NIOSH [NIOSH 1972] criteria document.

Based on the CDC/NIOSH REL, the maximum recommended exposure to UV is 6 mJ/cm^2 at 254 nm for a daily 8 h work shift. The ACGIH threshold limit value (TLV) at 254 nm is 6 mJ/cm^2 in an 8 h period. These recommended exposures correspond to a maximum recommended irradiance of 0.2 $\mu W/cm^2$ for 8 h exposure to UVGI at a wavelength of 254 nm. The ACGIH TLV also stipulates that these values should be used as a guide for control of exposure to continuous sources for exposure durations equal to or greater than 0.1 seconds.

Upper-room UVGI system designers have used 0.2 $\mu W/cm^2$ as the maximum lower (occupied) room irradiance [First et al. 2005; Nardell et al. 2008] to limit the irradiance level in the lower room to the 8 h REL. Some researchers [First et al. 2005; Nardell et al. 2008] believe this limits the irradiation level in the upper room thereby decreasing the potential effectiveness of the system. Many workers move around during the course of their work and may not be exposed to a single irradiance level during their work shifts [CDC 2005a; First et al. 2005; Nardell et al. 2008].

The recommended permissible exposures for various times to UVGI at 254 nm are provided in Table 1. Recommended exposures for work shifts of greater than 8 h in a 24 h period can be calculated using the formula provided in Table 1 and noted by permissible exposure times (PET). The recommended levels should not be used for photosensitive persons, persons concomitantly exposed to systemic or topical photosensitizing agents, or persons who have had the lens of the eye removed during cataract surgery. Workers exposed to UVGI above the REL require the use of personal protective clothing and equipment to protect their eyes and skin.

Annex 3 A: UVGI wavelength (Guidelines on Airborne infection control in healthcare and other settings of NTEP, MoHFW, GoI 2010)



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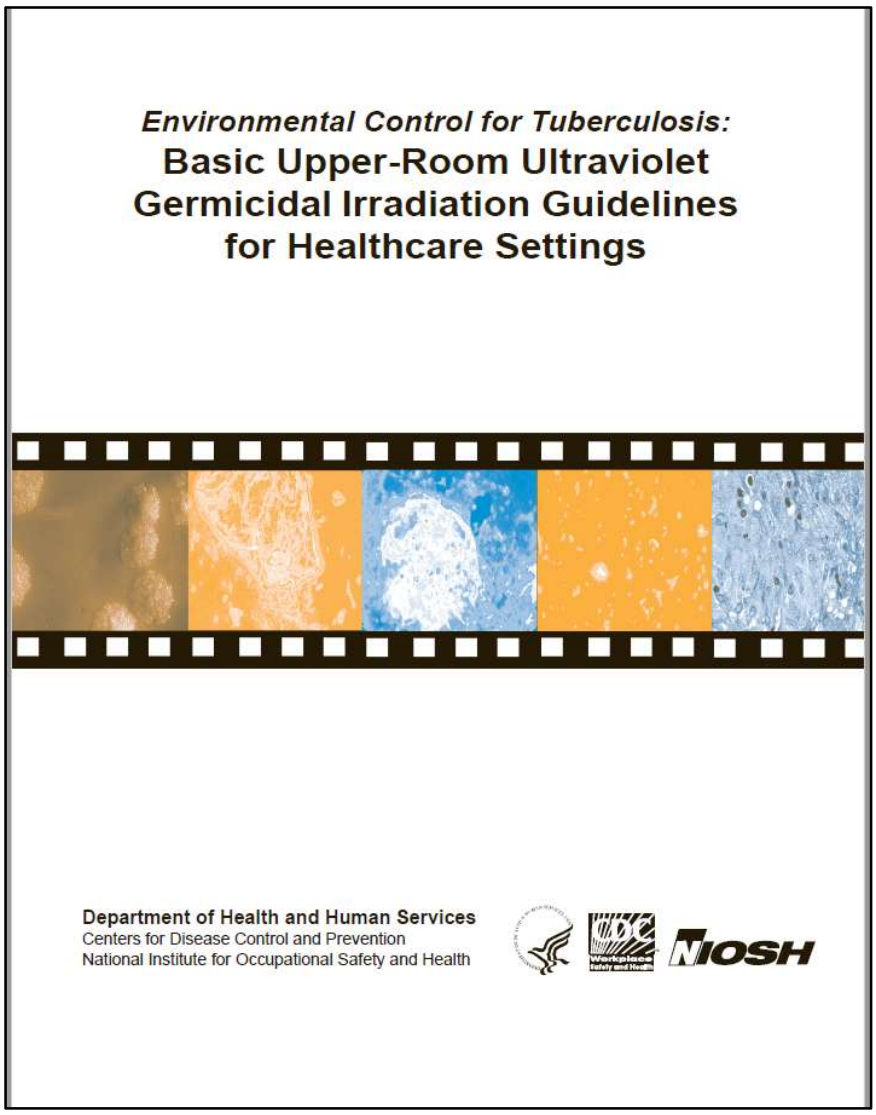
- Maintenance is critical, and should include cleaning with spirit at least twice-monthly (or more frequently in dusty environments) and periodic bulb replacements. If the UVGI is not maintained, it may become ineffective, providing a false sense of security to staff and patients. If maintenance and prompt bulb replacement with the correct product cannot be guaranteed, than UVGI should not be used.
- Installations should seek to irradiate the maximal air volume with the highest intensity UV, while keeping staff and patient exposure to less than 6.0 mg/cm^2 over an 8-hour period.
- Avoid installations that directly irradiate patients or have bulbs routinely visible.
- No obstruction should be placed be between the UV bulb and the air that it is supposed to irradiate; e.g. transparent plastic bulb covers will absorb all UV radiation at germicidal wavelengths.

Ultraviolet germicidal irradiation (UVGI) uses a type of radiation that has been shown to kill or inactivate M. tuberculosis in air. UVGI is maximally germicidal at a wavelength of 254nm (UV-C, or short-wavelength UV). This sort of UV radiation differs from the longer wavelength UV in sunlight (UV-A and UV-B), in that UV-C penetrates poorly.

UV-C UVGI devices may be sometimes less expensive than structural alteration of the facility for ventilation purposes. Several studies have shown that a well-designed and maintained UVGI upper room system can disinfect Mycobacterium (or surrogate test organisms), with an efficiency of 10–20 equivalent air changes per hour. It has been estimated that when an average UVGI intensity of 10 µW/cm2 is present, 63% of airborne tuberculosis germs that arrive in that "kill zone" will be killed in 24 seconds, and 99% will be killed in 2 minutes.

30

Annex 3B: UVGI Lamp specifications- Environmental Control for Tuberculosis: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by US DHHS, CDC and NIOSH in March 2009



4.1.1 Other Considerations

UV lamps are potentially hazardous since they emit UV-C radiation, contain mercury, and may cause cuts or lacerations if broken. Therefore, in accordance with 29 CFR† 1910.1200, material safety data sheets (MSDS) should be requested from the lamp manufacturer and be readily available to workers. The MSDS should provide information about the hazards associated with UV lamps, health effects, and precautions for safe handling and disposal.

If a lamp is broken at the worksite, at a minimum, hand and eye protection should be used for clean up. Clean up should only be performed by trained workers. The waste from the broken lamp should be disposed of as hazardous waste in the same manner as that indicated below for lamp disposal. To reduce potential mercury exposure to persons near broken lamps and since all lamps must eventually be discarded, each lamp should contain only a relatively low amount of mercury (i.e., 5 mg or less).

UV lamps require a ballast to operate. The ballast provides a high initial voltage to initiate the discharge and then quickly limits the lamp current to sustain the discharge safely. Most lamp manufacturers recommend one or more ballasts to operate their lamps. The ballasts recommended by the manufacturer should be used for each lamp type [Philips 2006; VanOsdell and Foarde 2002].

UV lamp ballasts that cause harmonic distortion may affect sensitive electronic equipment in healthcare facilities. Therefore, new or replacement ballasts should be solid state electronic and have a total harmonic distortion of less than 10% and comply with all Federal Communications Commission (FCC) rules and regulations, Title 47 CFR Part 18 for nonconsumer equipment. Electronic preheat ballasts provide the proper conditions for long lamp life, especially if the lamps are switched off and on frequently. The average lamp life will be longer if a UVGI system is only used intermittently. [Philips 2006].

4.1.2 Lamp Life

Several manufacturers of UV lamps consider 8,000 h or 9,000 h to be the effective lamp life for UVGI lamps made for upper-room systems [GE 2005; Osram 2005; Philips 2006]. The average effective life of a lamp decreases the more frequently it is turned on/off and may decrease relative to the difference between the ambient temperature of the lamp and the temperature at which the rated average lamp life was determined [Philips 2006].

Periodic replacement (e.g., on a yearly basis) of all (or a group) of UV lamps at one time may be more cost effective than spot replacement considering the time spent by maintenance personnel. Therefore, for many upper-room UVGI systems, group lamp replacement once a year would help to ensure an effective level of UV irradiation and may be cost effective.

†*Code of Federal Regulations*. See CFR in references.

Annex 3C: UVGI Lamp specifications: 2016 ASHRAE handbook- HVAC Systems and Equipment 17.4

ozone-producing wavelength of 185 nm is filtered out. Quartz glass (hard) can be used to produce UV lamps either with the 253.7 nm output wavelength or with both the 185 and 253.7 nm output wavelengths by changing its transmission properties with internal glass coatings.

To maintain UV output over time, the inside of the glass/quartz tube can also be coated with a special protective layer to slow down the decrease of UV transmission over time.

Mercury can be present in UV lamps as a pure metal or as an amalgam. The amount of mercury is always (slightly) overdosed because some mercury will be chemically bound during the life of the lamp. The actual amount of mercury in the lamp varies, depending on the application, but it can be very small (less than 5 mg). An amalgam is used in lamps having a higher wall temperature because of their higher design working currents. The amalgam keeps the mercury pressure constant over a certain temperature range, providing more stable UV output over that range.

UV-C Lamp Ballasts

All gas discharge lamps, including UV lamps, require a ballast or electronic power supply to operate. The ballast provides a high initial voltage to initiate the discharge, and then rapidly limits the lamp current to safely sustain the discharge. Most lamp manufacturers recommend a particular ballast to operate their lamps, and the American National Standards Institute (ANSI) publishes recommended lamp input specifications for all ANSI type lamps. This information, together with operating conditions such as line voltage, number of switches, etc., allows users to select the proper ballast. Ballasts are designed to operate a unique lamp type; however, typical modern electronic ballasts often adequately operate more than one length, number, or even type of lamp.

It is strongly advised to use the recommended ballast for each lamp type because less than optimum conditions will affect the lamp's starting characteristics, UV-C output, and operating life.

Circuit Type and Operating Mode. Ballasts and electronic power supplies for low-pressure mercury lamps are designed according to the following primary lamp operation modes:

- In **preheat**, lamp electrodes are heated before beginning discharge, and no auxiliary power is applied across the electrodes during operation.
- In **rapid start**, lamp electrodes are heated before and during operation. The ballasts have special secondary windings to provide the proper low voltage to the electrodes during operation. The advantages include smooth starting, longer lamp life, and dimming capabilities.
- **Program start** ballasts incorporate starting steps. The first step applies voltage to electrodes until they are heated to an optimal temperature. The second step applies a lower voltage across the electrodes, thus igniting them with a minimal loss of the filaments' emissive material. This minimal loss ideally equates to a longer lamp life.
- **Instant-start** ballasts do not heat the electrodes before operation. Ballasts for instant-start lamps are designed to provide a relatively high starting voltage (compared to preheat and rapid-start lamps) to initiate discharge across the unheated electrodes. They are not recommended for cold-air applications or if frequent switching is needed.

Preheat mode is more efficient than rapid start, because separate power is not required to continuously heat the electrodes. Electronic ballasts with preheat or program start offer smooth starting, long life, and good switching behavior.

Instant-start operation is more energy efficient than rapid or program start, but output is generally lower and lamp life can be shorter when lamps are frequently switched on and off.

Energy Efficiency. UV lamps convert roughly 30 to 40% of the input power to UV output. Additionally, some of the power supplied into a UV lamp/ballast system produces waste heat energy. There are two primary ways to improve efficiency of a UV lamp/ballast system:

- Use ballasts with a high power factor
- Operate lamp(s) with designed electrical power supplies (recommended)

Newer, more energy-efficient electronic ballasts improve lamp/ballast system efficacy.

Electronic ballasts operate lamps at high frequency (typically more than 20 kHz), allowing the lamps to convert power to UV more efficiently than if operated by electromagnetic ballasts (60 Hz). For example, lamps operated on electronic ballasts can produce over 10% more UV output than if operated on electromagnetic ballasts at the same power input levels.

Power Factor. The ballast power factor is a measure of the actual output for a specific lamp/ballast system relative to the rated output measured with reference ballast under ANSI test conditions (open air at 77°F). It is not a measure of energy efficiency. However, a high power factor ballast does a better job at correcting electrical waveform distortions to deliver current to a lamp in a more energy-efficient manner. For new equipment, high ballast factors are generally the best choice, because fewer lamps and ballasts are needed to reach the system's required UV output.

Audible Noise. Because electronic high-frequency ballasts have smaller magnetic components, they typically have a lower sound rating and should not emit perceptible hum. Most electronic ballasts are A-rated for sound.

EMI/RFI. Because they operate at high frequency, electronic ballasts may produce electromagnetic interference (EMI), which can affect any operating frequency, or radiofrequency interference (RFI), which applies only to radio and television frequencies. This interference could affect the operation of sensitive electrical equipment, such as system controls, televisions, or medical equipment. Good-quality electronic ballasts should incorporate features necessary to maximize protection for the operating environment and to operate well within regulatory limits.

Inrush Current. All electrical devices, including ballasts, have an initial current surge that is greater than their steady-state operating current. National Electrical Manufacturers Association (NEMA) *Standard* 410 covers worst-case ballast inrush currents. All circuit breakers and light switches are designed for inrush currents. The electrical system should be designed with this issue in mind.

Total Harmonic Distortion (THD). Harmonic distortion occurs when the wave-shape of current or voltage varies from a pure sine wave. Except for a simple resistor, all electronic devices, including electromagnetic and electronic ballasts, contribute to power line distortion. For ballasts, THD is generally considered the percent of harmonic current the ballast adds to the power distribution system. ANSI *Standard* C82.11 for electronic ballasts specifies a maximum THD of 32%. However, most electric utilities now require that the THD of electronic ballasts be 20% or less.

Dimming. Unlike incandescent lamps, a UV lamp can only be dimmed when its electrode temperature is maintained while the lamp arc current or voltage is reduced.

Electronic dimming ballasts alter the output power to the lamps in the ballast itself, driven by a low-voltage signal into the driver circuit. This allows control of one or more ballasts independent of the electrical distribution system. With dimming electronic ballast systems, a low-voltage control network can be used to group ballasts into arbitrarily sized control zones. Dimming range differs greatly; most electronic dimming ballasts can vary output levels between 100% and about 10% of full output, but ballasts are also available that operate lamps down to 1% of full output.

lamp's starting characteristics, UV-C output, and operating life.

Circuit Type and Operating Mode. Ballasts and electronic power supplies for low-pressure mercury lamps are designed according to the following primary lamp operation modes:

- In **preheat**, lamp electrodes are heated before beginning discharge, and no auxiliary power is applied across the electrodes during operation.
- In **rapid start**, lamp electrodes are heated before and during operation. The ballasts have special secondary windings to provide the proper low voltage to the electrodes during operation. The advantages include smooth starting, longer lamp life, and dimming capabilities.
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the same power input levels.

Power Factor. The ballast power factor is a measure of the actual output for a specific lamp/ballast system relative to the rated output measured with reference ballast under ANSI test conditions (open air at 77°F). It is not a measure of energy efficiency. However, a high power factor ballast does a better job at correcting electrical waveform distortions to deliver current to a lamp in a more energy-efficient manner. For new equipment, high ballast factors are generally the best choice, because fewer lamps and ballasts are needed to reach the system's required UV output.

Audible Noise. Because electronic high-frequency ballasts have smaller magnetic components, they typically have a lower sound rating and should not emit perceptible hum. Most electronic ballasts are A-rated for sound.

electrical system should be designed with this issue in mind.

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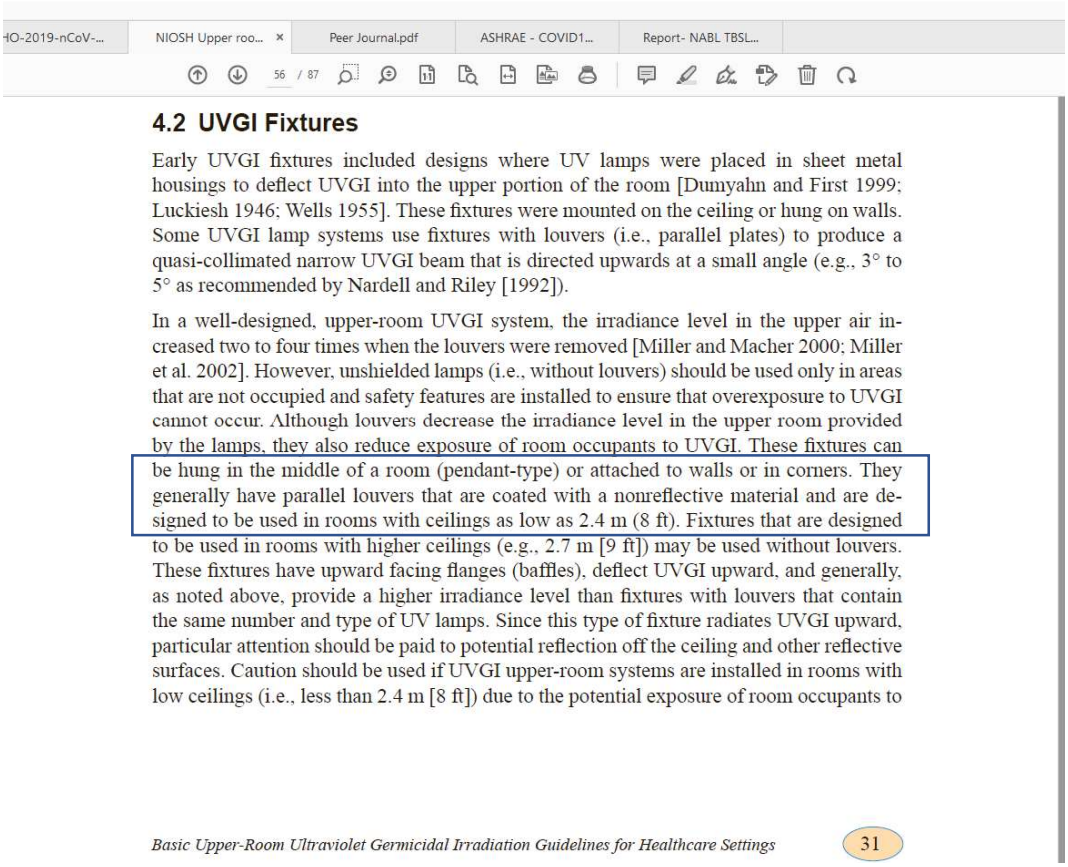
Dimming. Unlike incandescent lamps, a UV lamp can only be

Annex 4: UVGI Fixture Specifications: Environmental Control for Tuberculosis: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by US DHHS, CDC and NIOSH in March 2009



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4.2 UVGI Fixtures

Early UVGI fixtures included designs where UV lamps were placed in sheet metal housings to deflect UVGI into the upper portion of the room [Dumyahn and First 1999; Luckiesh 1946; Wells 1955]. These fixtures were mounted on the ceiling or hung on walls. Some UVGI lamp systems use fixtures with louvers (i.e., parallel plates) to produce a quasi-collimated narrow UVGI beam that is directed upwards at a small angle (e.g., 3° to 5° as recommended by Nardell and Riley [1992]).

In a well-designed, upper-room UVGI system, the irradiance level in the upper air increased two to four times when the louvers were removed [Miller and Macher 2000; Miller et al. 2002]. However, unshielded lamps (i.e., without louvers) should be used only in areas that are not occupied and safety features are installed to ensure that overexposure to UVGI cannot occur. Although louvers decrease the irradiance level in the upper room provided by the lamps, they also reduce exposure of room occupants to UVGI. These fixtures can be hung in the middle of a room (pendant-type) or attached to walls or in corners. They generally have parallel louvers that are coated with a nonreflective material and are designed to be used in rooms with ceilings as low as 2.4 m (8 ft). Fixtures that are designed to be used in rooms with higher ceilings (e.g., 2.7 m [9 ft]) may be used without louvers. These fixtures have upward facing flanges (baffles), deflect UVGI upward, and generally, as noted above, provide a higher irradiance level than fixtures with louvers that contain the same number and type of UV lamps. Since this type of fixture radiates UVGI upward, particular attention should be paid to potential reflection off the ceiling and other reflective surfaces. Caution should be used if UVGI upper-room systems are installed in rooms with low ceilings (i.e., less than 2.4 m [8 ft]) due to the potential exposure of room occupants to

Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings 31

UVGI [Dumyahn and First 1999]. Several fixtures used in upper-room UVGI systems are shown in Figure 4. Figure 4A shows pendulum and wall-mount louvered units made from stainless steel. These units are 61 cm (24 in.) in length and 20 cm (7.9 in.) in height. The unit comes in two widths (11.4 cm [4.5 in.] or 22.9 cm [9 in.]) and has a nominal output of either 25 W (8.5 W UV-C) or 50 W (17 W UV-C). The rated average effective life of the UV lamps used in these units is 8,000 h. Figure 4B shows a ceiling pendant fixture made from aluminum. It is 30.5 cm (12 in.) in height, and has a diameter of 45.7 cm (18 in.). The fixture has concentric black louvers with 0.6 cm (0.25 in.) spacing. Depending on the lamps used, the fixture provides up to 72 W (22 W UV-C) and has an irradiation zone of approximately 360°. Figure 4C shows a ceiling-mounted fixture designed for ceilings of 2.7 m (9 ft) or greater. It is made from steel and comes in either 45.7 cm (18 in.) or 91.4 cm (36 in.) lengths. It provides up to 72 W (22 W UV-C) nominal output and the lamp's average effective life is rated at 8,000 h (an average of approximately 20% UV output depreciation).

4.3 System Installation

Since 1950, several articles have described the number and location of UVGI fixtures

Section VI – Bidding Forms

Letter of Technical Bid

The Bidder must prepare the Letter of Technical Bid on its letterhead clearly showing the Bidder's complete name and address.

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

Date: **[insert date (as day, month and year) of Bid Submission]**

Bid Ref. No.: **[*insert number of bidding process*]**

To: **[*insert complete name of Purchaser*]**

(a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB 10),

(b) We meet the eligibility requirements and have no Conflict of Interest in accordance with ITB 4,

(c) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods:**[*insert table giving brief description of the Goods, Equipment and Related Services*]**,

(d) Our bid shall be valid for a period fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period,

(e) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents,

(f) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.3(e), other than alternative bids submitted in accordance with ITB 13,

(g) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not debarred by any Procuring Entity under the State / UT Government, the Central Government, Autonomous body, Authority by whatever name called under them, UNOPS, UNDP, SAMS or GFATM as on the date of opening of bids,

(h) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any activities which is in contravention of the Code of Integrity proscribed in ITB Para 3 of the Bidding Documents,

(i) We hereby certify that we are neither associated nor has been associated directly or indirectly with the consultant or any other entity that has prepared the design, specifications and other documents for the subject matter of procurement or is being proposed as Project Manager for the contract

(j) We hereby certify that we have fulfilled our obligations to pay all such taxes as payable to the Central Government or the State Government or any local authority,

(k) We hereby certify that we are not insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons,

(l) We hereby certify that our directors and officers have not been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings,

(m) I/We hereby declare that we have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries. I/We certify that our Organization _____ (add name and address of registered office of bidder is not from such a country, or if from such a country, has been registered with the Competent Authority and will not subcontract any work to a contractor from such countries unless such contractor is registered with the competent authority (wherever applicable, evidence of valid registration by the Competent Authority shall be attached). I/We hereby certify that our organization fulfils all requirements in this regard and is eligible to be considered.

(n) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

Name of the Bidder _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder _____

Title of the person signing the Bid _____

Signature of the person named above _____

Date signed _____

Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission*]

Bid Ref. No.: *[insert number of bidding process]*

1. Bidder's Name *[insert Bidder's legal name]*
2. Bidder's year of registration: *[insert Bidder's year of registration]*
3. Bidder's Address: *[insert Bidder's legal address]*
4. Bidder's Authorized Representative Information Name: *[insert Authorized Representative's name]* Address: *[insert Authorized Representative's Address]* Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]* Email Address: *[insert Authorized Representative's email address]*
5. Attached are copies of original documents of*[check the box(es) of the attached original documents]* • Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.3. • Organizational chart, a list of Board of Directors, and the beneficial ownership. • GSTIN Registration Certificate • Copies of audited financial statements of accounts (including balance sheet/profit and loss account/auditor's reports/ IT returns) certified by the auditor of the Bidder for last three financial years 2020-21,2021-22 and 2022-23). • Any other document

Proforma for Other Details of Bidder, Manufacturer and its Bank

1. Name & full address of the Manufacturer:

2. (a) Telephone & Fax No Office /Works

(b) Email

3. Location of the manufacturing factory.

4. Name & full address of the Bidder

5. (a) Telephone/Mobile & Fax No Office/Factory/Works

(b) Email

6. Details of two Persons that Purchaser may contact for requests for clarification during bid evaluation:

	1st	2nd
(i) Name: (ii) Tel number (direct): (iii)Mobile No. (iv) Email address		

7. Bank details from where the Bank Guarantee for Bid Security has been issued:

(i) Name and address of the Bank:

(ii) Name of the contact Person

(iii) Phone number/Mobile

(iv) Fax Number

(v) Email address

Signature and seal of the Bidder

ORIGINAL EQUIPMENT MANUFACTURER (OEM)

MANUFACTURER'S AUTHORIZATION LETTER FORMAT

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the ***BDS.****]*

Date: *[insert date (as day, month and year) of Bid Submission]*

Bid Ref. No.: *[insert number of bidding process]*

To: *[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer],* who are official manufacturers of*[insert type of goods manufactured],* having factories at [insert full address of Manufacturer's factories], do hereby authorize *[insert complete name of Bidder]* to submit a bid, the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods],* and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 29 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Proforma for Performance Statement (for a period of last five years)

Name of the Firm_____

Order placed by (full address of Purchaser)	Order No. and Date	Description and quantity of ordered goods	Maintenance Services provided-Yes/No	Value of order	Date of completion of delivery		Remarks indicating reasons for late delivery, if any	Has the supply and installation of goods been satisfactory ?*	Is safety test performed satisfactorily Yes/No	Is efficacy Test performed Satisfactorily Yes/No
					As per contract	Actual				

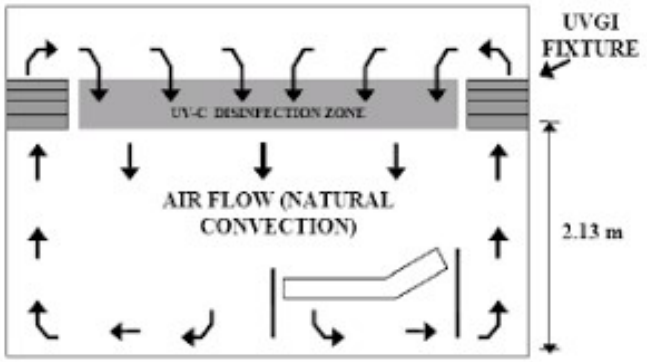
Signature and seal of the Bidder

The Bidder shall also furnish the following documents in connection with their past performance:

i. Copy of Purchase Orders
ii. Copy of Invoices
iii. Proof of Payment received from Purchasers
iv. Documentary evidence (Client's certificate) in support of satisfactory completion of contract

Technical Specification Compliance Form

Bidders must complete the table below (also bidder to provide relevant catalogue/ description/ methodology of installation/ verification/ certificate/ references as appropriate while informing compliance in Bidder's specification column)

Sl. No.	Bid Technical Specification (Main)	Bidder's Specification (technical compliance/ Deviation, if any) **Make: ……** **Model:……**
1	**Description:** UVGI is capable of inactivating various bacteria, virus, fungi, and spores so that they are unable to replicate the cells. Upper room air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System are designed specifically for upper air irradiation to control the spread of airborne microorganisms in hospitals, DR-TB Wards, clinics, offices, etc. While deploying them care should be taken for minimizing the UV exposure to persons in the lower portion of that room. UVGI fixtures are suspended from ceilings or mounted on walls. The lamp fixture is equipped with louvers to direct the radiation horizontally and away from the lower part of the room, covering the entire cross-sectional area of the upper room at a height above head level for air disinfection. Disinfection is achieved through the rapid dilution of contaminated lower room air with clean irradiated upper room air.  	
2	**Basic Specifications of Upper room air UVGI disinfection system:**	
	• The UVGI system shall be suitable to operate with 230 V ± 15%, 50Hz single phase AC Supply. The power supply shall be made available near to the UVGI assembly.	
	• The UVGI system shall be installed either wall mounted, or ceiling mounted with louvers that direct UVC energy above contact level with occupants, ensuring that they are ideal for air disinfection in occupied rooms.	
	• The base of the lamp is shielded to direct the radiation upward and outward to create an intense zone of UVGI in the upper air while	

Sl. No.	Bid Technical Specification (Main)	Bidder's Specification (technical compliance/ Deviation, if any) **Make: ……** **Model:……**
	minimizing the level of UVGI in the lower (occupied) portion of the room or area.	
	• Irradiation: The UVGI system and fixtures are to be installed in sufficient quantity and in such an arrangement to provide an equal distribution of UVC energy on the room.	
	• The upper room air UVGI assembly should emit UV light radiation intensity of at least **15 mW/ m^3** of area in the upper irradiated zone to ensure minimal inactivation as per US Department of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC) recommendations on UV Light radiation intensity (Annex 1) and accordingly the selection of the UVGI fixtures to be made. The quantity required and the placement of the UVGI fixtures should be calculated to achieve full irradiation of the entire face area of the room.	
	• Max Intensity at eye level (~6ft height) measured from ground level should be **≤ 0.2 µW/cm^2.** This is basis the following guidelines /recommendations: o Guidelines on Airborne infection control in healthcare and other settings of **NTEP, MoHFW, GoI 2010** (Annex 2A) o The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (**ISHRAE**) ISHRAE -**Position Paper** on the use of technologies associated with UVGI for AIC with particular emphasis on SARS CoV2 virus published in **August 2021** (Annex 2A), o Environmental Control for Tuberculosis: Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by **US DHHS, CDC** and National Institute for Occupational Safety and Health **(NIOSH)** published in March 2009 (Annex 2C)	
3	**UV Lamps specifications:** The UV lamps shall meet the following criteria:	
	• The lamp shall produce **UV-C of 254nm** wavelength required to achieve the required parameters as per NETP guidelines on AIC in healthcare and other settings 2010 (Annex 3A).	
	• UV lamps shall be fabricated out of special high transmission Quartz glass with low amount of mercury (i.e., 5 mg or less) and shall have high output, hot cathode. They shall produce minimum 95% of their energy at 254 nm. Material safety data sheets (MSDS) should be provided from the lamp manufacturer.	

Sl. No.	Bid Technical Specification (Main)	Bidder's Specification (technical compliance/ Deviation, if any) **Make: ……** **Model:……**
	• The effective life of lamp shall be guaranteed for minimum **9000 hours** with full intensity of operation (ref: US DHHS, CDC and NIOSH guidelines published in March 2009 Annex 3B).	
	• The electronics ballast should be solid state electronic, preheat or rapid start or program start circuit type, shall be high power factor, Sound Rating A and shall have harmonic distortion in accordance with ANSI/ ASHRAE standards and have a total harmonic distortion of less than 10%. See reference below: o 2016 ASHRAE handbook- HVAC Systems and Equipment 17.4 (Annex 3C) and o Basic Upper-Room Ultraviolet Germicidal Irradiation Guidelines for Healthcare Settings published by US DHHS, CDC and NIOSH published in March 2009 (Annex 3B).	
4	**Assembly/ Fixtures Details:**	
	• Housings shall be made of robust materials (stainless steel or aluminum or any equivalent), with units having suitable electrical connectors to simplify wiring.	
	• All the housing which includes components like electronic power source, sockets, louvers, reflectors, UV lamp, etc. should be capable of withstanding UV radiation.	
	• Should have louvers coated with non-reflective material (anodized) to optimize UV performance.	
	• Reflector shall be made up of aluminum and may be parabolic in shape.	
	• The UVGI system and fixtures are to be installed as per the design and arrangement to provide a uniform distribution of UVC energy on the upper room area.	
5	**Certificates:**	
	• The supplier shall provide manufacturer's test certificates for main items like UV lamp, ballast, etc. The factory performance test certificate shall include details such as no ozone emission or other secondary contaminations, output performance of 254 nm +/-1 nm, performance output with estimated life span, etc.	
	• The supplier must provide valid UV lamp performance acceptance certificate from a **NABL** (National Accreditation Board for Testing & Calibration Laboratories) accredited testing labs like The Central Institute of Road Transport (**CIRT**) or Underwriter laboratories (**UL**) certification indicating the rated output for the UV lamp.	

Sl. No.	Bid Technical Specification (Main)	Bidder's Specification (technical compliance/ Deviation, if any) Make: …… Model:……
6	**Installation:**	
	• Only (qualified) service technicians who have received training on the installation and placement of UVGI lamp fixtures should install the systems and their certification should be available including at the time of installation.	
	• The UVGI system shall be installed either wall mounted, or ceiling mounted with adjustable louvers that direct UVC energy above contact level with occupants, ensuring that they are ideal and safe for air disinfection in occupied rooms.	
	• The installation must be done in the manner such that no direct human eye contact with the UV occurs during regular operation.	
	• All the physical structures such as wall, ceiling fan, switch sockets, split AC, etc. which fall in the UV radiation zone must be anti UV reflection painted (like titanium oxide containing paint).	
	• Dedicated ON/OFF switch and sockets should be provided for each UVGI fixtures. Voltage and plugs to be adapted to meet the country requirements. The line cord / Power cord supplied with the equipment shall be of acceptable durability, length, and current carrying capacity complying with Indian Standards.	
	• The ON/OFF switch to be located in the same area below the Upper UVGI fixtures and at a reachable height.	
	• Proper and suitable earthing connections to be made for the UVGI system.	
7	**Testing and commissioning:**	
	• The intensity of the UV Lamps across the room shall be measured using a NABL calibrated UV light meter at the time of commissioning installation. UV meter will be brought by the vendor.	
	• Safety test including radiation dose at 6 feet height being ≤ 0.2 µW/cm^2 needs to be performed during the commissioning process. Radiometer/ Optometer will be brought by the vendor.	
	• Efficacy Test (emit UV light radiation intensity of at least 15 mW/ m^3 area in the upper irradiated zone to ensure minimal inactivation) – UVC-irradiance needs to be performed.	
	• The UV intensity should be checked every time the system is uninstalled **and reinstalled**.	
	• Proper safety and operational training i.e., daily use, safety precautions, periodic maintenance, and follow up of breakdown, PM/calibration services and replacement of lamp, etc. shall be imparted to the hospital personals/ contract staff and shall be documented.	

Sl. No.	Bid Technical Specification (Main)	Bidder's Specification (technical compliance/ Deviation, if any) **Make: ……** **Model:……**
	• One set of Manufacturer catalogues, Test certificates, etc. and System Operation and Maintenance Manuals shall be submitted to the site.	
8	**Warranty and preventive maintenance of UVGI:**	
	• The UVGI assembly shall be guaranteed against unsatisfactory performance and/ or break down due to defective design, workmanship, or material for a period of **one year** from the date of commissioning at the site **and also for an additional 4 years of CMC** period. The equipment or components or any part thereof or consumable items like (UV Lamp, louvers, fixtures, electrical components etc.), so found defective/required for routine replacement during the guarantee/ warranty period shall be forthwith repaired or replaced free of cost to the entire satisfaction of the site.	
	• Supplier to arrange periodic preventive maintenance and breakdown service visit as under:- 1st visit : Periodic inspection and cleaning of UV lamp to be carried out within 3 months during the warranty period. 2nd visit: Preventive maintenance should be done on each UVGI assembly within 6 months of the warranty period. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety test to be done on similar manner as during the commissioning process. 3rd visit: Periodic inspection and cleaning of UV lamp to be carried out within 9 months of the warranty period. 4th visit: Yearly Preventive maintenance should be done on each UVGI assembly with replacement of new UV lamp. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety tests are to be done on similar manner as during the commissioning process. UV lamp of the same wattage and specification to be replaced after every 9000 hours or within 12 months or whichever occurs earlier. The ineffective lamps to be taken out of the facility and to be disposed as per guidelines. by the vendor (and not institute).	
	• All the safety log sheet and the test certification report to be maintained and handover to the respective sites after completion of preventive maintenance.	
	• Sufficient spare part should be available readily for early resolution of the UVGI system, in case of breakdown.	

Details of Implementation Plan and Timelines

The prospective bidder should provide here the following details:-

1. Initial assessment of sites for finalizing the requirement,
2. Procurement and delivery of fixtures,
3. Commission and subsequent maintenance services,
4. Existing service delivery network which can also provide UVGI maintenance services
5. Manufacturing capabilities (number of fixtures produced per month)

NOTE - Timelines to be provided as a Gantt Chart for execution of the entire project. The above details should be a part of the Technical Bid submitted by the Bidder.

Letter of Financial Bid

Form FIN I - Price Bid Form
[to be submitted with Price Bid only]

To,
M/s Strategic Alliance Management Services Pvt. Ltd. (SAMS),
B-18, Sector-6, Noida,
G.B. Nagar – 201301 (U.P.)

Dear Sir,

Subject: Bid for supply, installation, testing and commissioning of **Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System** and related services under the National Tuberculosis Elimination Programme (NTEP)

Bid Ref. No. ……

1. We, [***Name of Bidder***], hereby submit a bid for the above- referenced Goods in response to the above-referenced ITB.

2. We warrant that in preparing and submitting this bid, we have complied with, and are willing to be bound by, any and all of the requirements and provisions of the above-referenced ITB, including the terms and conditions of the Contract as set out in the Bid Documents.

3. Based on the above, our proposed **Total Contract Price is Rs. _____ inclusive of all applicable taxes i.e. GST** (amount in words) and as per FIN-2 Form attached

4. I, the undersigned, certify that I am duly authorized by [***insert name of bidder***] to sign this bid and bind [***insert name of bidder***]:

Name:_____

Title:_____

Date:_____

Signature: _____

Form FIN-2 : Lump sum Contract Price

(To be submitted along with the Financial Bid)

Sl. No.	Description of item to be procured	Quantity (nos.)	*Unit Cost of equipment including delivery on DDP basis, installation, testing and commissioning with 1 year comprehensive warranty (INR)	Total cost (INR)	Applicable taxes/ GST (INR)	Total Cost including taxes/GST (%age and value in INR)
		A	*B*	*C (A*B)*	*D*	*E(C+D)*
1	Upper Room Air Ultraviolet Germicidal Irradiation (UVGI) Disinfection System and related services with 1 year comprehensive warranty	880				

Note :

1. Financial evaluation: Quotations that are found to be technically qualified shall be evaluated based on the lowest price with related services and applicable comprehensive 1 year warranty as specified in the bid document.
2. Apart from the above, Bidders must provide the CMC rates for additional four (4) years**. The CMC rates for additional four years should be inclusive of all taxes/GST (INR) which will not be a part of the financial evaluation criteria. **However, in case of extension at that time, these rates would be considered for extension.**
   Bidders are requested to fill up the price bid form as per the format mentioned above *(if there is any confusion during the submission of financial bid, kindly contact* SAMS Team). The bidder must quote for all the items with 100% quantity. Bidder who does not quote for all items with full quantity will be disqualified.

   Bidders are permitted to quote only one model/make of the UVGI fixture.The selected bidder(s) require to visit the respective mentioned sites for assessment of actual number of UVGI fixtures requirement based on the site feasibility and UV dosage required to create a killing/ UV disinfection zone and they have to submit the design/ layout of the facility showing the placement of UVGI along with the required quantities. Hence, the above criteria needs to be kept in mind while providing the unit cost.

The bidders should submit their quote inclusive of all the related services. Please refer to Section V – Schedule of Requirements for the same.

Annexure 1 to FIN 2

i. **** Bidder must provide the CMC rates for additional four (4) years beyond one (1) year comprehensive warranty inclusive of all taxes/GST (INR) as per the below format.** ***The total price mentioned in the table below should coincide with the Form FIN-2.***

Sl. No.	State	Name of DRTB centre	Total UVGI required	CMC rates for four (4) years after warranty period inclusive of all taxes/GST (In INR)								Grand Total of all 4 years CMC Cost along with GST
				1st Year CMC		2nd Year CMC		3rd Year CMC		4th Year CMC		
				CMC rates for 1st year after warranty period	GST/Tax on 1st year CMC	CMC rates for 2nd year after warranty period	GST/Tax on 2nd year CMC	CMC rates for 3rd year after warranty period	GST/Tax on 3rd year CMC	CMC rates for 4th year after warranty period	GST/Tax on4th year CMC	
1	Andhra Pradesh	GHCCD Vizag	2									
2	Andhra Pradesh	GHCCD/ IDH), Guntur	2									
3	Assam	LGB Chest Hospital, Birubari, Guwahati	11									
4	Assam	Silchar Medical College, Cachar	8									
5	Bihar	ANMMCH, Gaya	17									
6	Bihar	Darbhanga Medical College and Hospital, Darbhanga	13									
7	Bihar	IGIMS, Patna	21									
8	Chhattisgarh	Bheemrao Ambedkar Hospital & JNMC, Raipur	10									
9	Chhattisgarh	Chattisgarh Institute of Medical Sciences, Bilaspur	6									
10	Chhattisgarh	Government Medical College Hospital Ambikapur(Sarguja)	8									
11	Delhi	Rajan Babu Institute of Pulmonary Medicine and Tuberculosis	88									
12	Gujarat	BJ Medical College, Ahemdabad	6									
13	Gujarat	GMERS Medical College, Patan	20									
14	Gujarat	Sayaji Rao Shinde Government Hospital, Vadodara	23									
15	Himachal Pradesh	Dr. Rajendra Prasad Government Medical College	6									
16	J&K	Government Chest Disease Hospital, Jammu	17									
17	J&K	Govt. Chest Disease Hospital, Srinagar	14									
18	Kerala	GMC, Trivandrum	3									
19	Kerala	Govt Med Col Kozhikode	3									
20	Ladakh	SNM Hospital, Leh	32									
21	Madhya Pradesh	Government TB Hospital, Nowgong, Chatarpur	9									
22	Madhya Pradesh	Manorama Raje Tuberculosis Hospital, Indore	12									

Sl. No.	State	Name of DRTB centre	Total UVGI required	CMC rates for four (4) years after warranty period inclusive of all taxes/GST (In INR)								Grand Total of all 4 years CMC Cost along with GST
				1st Year CMC		2nd Year CMC		3rd Year CMC		4th Year CMC		
				CMC rates for 1st year after warranty period	GST/Tax on 1st year CMC	CMC rates for 2nd year after warranty period	GST/Tax on 2nd year CMC	CMC rates for 3rd year after warranty period	GST/Tax on 3rd year CMC	CMC rates for 4th year after warranty period	GST/Tax on4th year CMC	
23	Madhya Pradesh	R. D. Gardi Medical College, Ujjain	8									
24	Madhya Pradesh	Regional Institute of Respiratory Disease, Bhopal	16									
25	Madhya Pradesh	Victoria Hospital, Jabalpur	9									
26	Maharashtra	Government Medical College, Aurangabad	6									
27	Maharashtra	Government Medical College, Miraj	15									
28	Maharashtra	Government Medical College, Nagpur	7									
29	Maharashtra	Rajiv Gandhi Medical College, Thane	10									
30	Manipur	JNIMS, IMPHAL	10									
31	Meghalaya	REID Provincial Chest Hospital, Shillong	8									
32	Mizoram	District TB Center, Aizawl	9									
33	Odisha	MKCG Medical College & Hospital,Ganjam(Odisha)	15									
34	Odisha	S.C.B Medical College & Hospital,Cuttack	22									
35	Odisha	Veer Surendra Sai Institute of Medical Sciences and Research, Burla.	12									
36	Punjab	GGSMCH, Faridkot	20									
37	Punjab	TB HOSPITAL, PATIALA	9									
38	Punjab	TB sanatorium, Government Medical College, Amritsar	5									
39	Rajasthan	Institute of respiratiory disease, Jaipur	23									
40	Rajasthan	Jawahar Lal Nehru Medical College, Ajmer	13									
41	Rajasthan	New Medical College, Kota	18									
42	Rajasthan	Rabindranath Tagore Medical College, Udaipur	23									
43	Rajasthan	S P Medical College, Bikaner	9									
44	Sikkim	STNM Hospital, Gangtok	6									
45	Tamilnadu	Coimbatore Medical College Hospital, Coimbatore	5									
46	Tamilnadu	Rajaji Govt Hospital & MMC, Madurai	6									
47	Tamilnadu	Thanjavur Medical college,Thanjavur	6									

Sl. No.	State	Name of DRTB centre	Total UVGI required	CMC rates for four (4) years after warranty period inclusive of all taxes/GST (In INR)								Grand Total of all 4 years CMC Cost along with GST
				1st Year CMC		2nd Year CMC		3rd Year CMC		4th Year CMC		
				CMC rates for 1st year after warranty period	GST/Tax on 1st year CMC	CMC rates for 2nd year after warranty period	GST/Tax on 2nd year CMC	CMC rates for 3rd year after warranty period	GST/Tax on 3rd year CMC	CMC rates for 4th year after warranty period	GST/Tax on4th year CMC	
48	Tamilnadu	Tirunelveli Medical College and TB & Chest Hospital, Tirunelveli	9									
49	Telangana	Government Chest Hospital - Erragadda, Hyderabad	14									
50	Tripura	Agartala Medical College and GBP Hospital, Agartala	17									
51	Uttar pradesh	Baba Raghav Das medical college, Gorakhpur	4									
52	Uttar pradesh	Badri Das Gauri Dutt Government TB Hospital, Basti	9									
53	Uttar pradesh	BHU, Varanasi	16									
54	Uttar pradesh	Deen Dayal Upadhyay District Hospital, Moradabad	4									
55	Uttar pradesh	Dr. Murari Lal Chest Hospital, Kanpur	13									
56	Uttar pradesh	JNMC & Hospital, Aligarh	6									
57	Uttar pradesh	King George's Medical University Nodal TB centre Lucknow	9									
58	Uttar pradesh	Lala Lajpat Rai Memorial Medical College, Meerut	15									
59	Uttar pradesh	Maharana Pratap District Hospital Bareilly	12									
60	Uttar pradesh	Maharani Laxmibai Medical College, Jhansi	5									
61	Uttar pradesh	MMG Hospital, Ghazibad	10									
62	Uttar pradesh	Saifai medical college, Etawah	5									
63	Uttar pradesh	SNMC & Hospital, Agra	13									
64	Uttar pradesh	SR HOSPITAL, MLN MC, PRAYAGRAJ	9									
65	Uttar pradesh	TB HOSPITAL, TELIYARGANJ	25									
66	West Bengal	Burdwan Medical collage & Hospital ,Burdwan	6									
67	West Bengal	Murshidabad medical college & Hospital, Murshidabad	2									
68	West Bengal	R.G. Kar MC, Kolkata	45									
69	West Bengal	St. Joseph's Hospital, Medinipur	4									
70	West Bengal	T. B. Hospital, Jalpaiguri	7									
Total Qty. required			**880**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Section VII – General Conditions of Contract
Table of Clauses

Section VII. General Conditions of Contract

1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

(a) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
(b) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.
(c) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
(d) "Day" means calendar day.
(e) "Completion" means the fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
(f) "GCC" means the General Conditions of Contract.
(g) Goods may include all articles, material, commodities, electricity, livestock, furniture, fixtures, raw material, spares, instruments, software, machinery, equipment, industrial plant, vehicles, aircraft, ships, railway rolling stock and any other category of goods, whether in solid, liquid or gaseous form, purchased or otherwise acquired for the use of a procuring entity as well as services or works incidental to the supply of goods of the value of services or works or both does not exceed that of the goods themselves.
(h) "Purchaser" means the entity purchasing the Goods, **as specified in the SCC**.
(i) "SCC" means the Special Conditions of Contract.
(j) "Subcontractor" means any person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
(k) "Supplier" means the person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
(l) "Consignee Location" means the place named in the **Schedule of Requirements**.

2. Contract Documents

2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof)

are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Code of Integrity

3.1 The Purchaser and all officers or employees of the purchaser, whether involved in the procurement process or otherwise, or Bidders and their representatives or consultants or service providers participating in a procurement process or other persons involved, directly or indirectly in any way in a procurement process shall maintain an unimpeachable standard of integrity.

3.2 Purchaser prescribes to its personnel and Bidders to uphold the Code of Integrity, which prohibits officers or employees of a bidder or a person participating in a procurement process the following:

(i) any offer, solicitation or acceptance of any bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process,

(ii) any omission, including a misrepresentation that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation,

(iii) any collusion, bid rigging or anti-competitive behaviour to impair the transparency, fairness and progress of the procurement process,

(iv) improper use of information shared between the procuring entity and the bidders with an intent to gain unfair advantage in the procurement process or for personal gain,

(v) any financial or business transactions between the bidder and any officer or employee of the Purchaser, who are directly or indirectly related to tender or execution process of contract,

(vi) any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process,

(vii) any obstruction of any investigation or audit of a procurement process,

(viii) making false declaration or providing false information for participation in -

a) tender process or to secure a contract,

b) disclosure of Conflict of Interest,

c) disclosure by the bidder of any previous transgressions with any entity in India or any other country during the last three years or of any debarment by any other Procuring Entity

3.3 In case of any breach of the Code of Integrity by a bidder or a prospective bidder, as the case may be, the Purchaser after giving a reasonable opportunity of being heard, may take appropriate measures including –

a) exclusion of the bidder from the procurement process,

b) calling off of pre-contract negotiations and forfeiture or encashment of bid security,

c) forfeiture or encashment of any other security or bond relating to procurement,

d) recovery of payments made by the Purchaser along with interest thereon at bank rate,

e) cancellation of the relevant contract and recovery of compensation for loss incurred by the Purchaser,

f) debarment of the bidder from participation in any future procurements from Purchaser for a period not exceeding three years.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.
b) The term DDP and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms **as specified in the SCC** and published by the International Chamber of Commerce in Paris, France**.**

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Non-waiver

(a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

(b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in English language. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by a self-certified accurate translation of the relevant passages in English language**,** in which case, for purposes of interpretation of the Contract, this translation shall govern.

5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

6. Joint Venture or Consortium

6.1 Bidders in the form of Consortium or Joint Venture are not allowed to bid against this tender.

7. Eligibility

7.1 The Supplier and its Subcontractors shall have the nationality of any country with which India has not banned trade relations.

7.2 All Goods to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term "origin" used in this clause means the place where the goods are

mined, grown, produced, or manufactured or from where the related services are arranged and supplied

8. Notices

8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the **address specified in the SCC.** The term "in writing" means communicated in written form with proof of receipt.

8.2 A notice shall be effective from the date of delivery or on the notice's effective date, whichever is later. In case of electronic mode of communication, a notice shall be effective from the time of sending of the electronic communication.

9. Governing Law

9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Union of India.

10 Settlement of Disputes

10.1 The Purchaser and the Supplier shall make every effort to resolve amicably any disagreement or dispute arising between them under or in connection with the Contract.

10.2 Dispute Redress mechanism/ Committees: 2-tier (Procuring entity level headed by the Director, State Redress Committee).

10.3 If, the dispute is not settled through dispute settlement mechanism and if after sixty (60) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration wherever applicable, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC.**

10.4 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree, and

(b) the Purchaser shall not be required to pay the Supplier any monies to the Supplier in respect of the matter related to the arbitration unless otherwise agreed.

11. Inspections and Audit by the Purchaser

11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep, accurate and systematic accounts and records in respect of the Goods in such form and details as will clearly identify relevant time changes and costs.

11.2 The Supplier shall permit, and shall cause its Subcontractors to permit, the Purchaser and/or persons appointed by the Purchaser to inspect the

Supplier's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Purchaser, if requested. The Supplier's and its Subcontractors and consultants' attention is drawn to Clause 3 [Code of Integrity], which provides, inter alia, that acts intended to materially impede the exercise of the Purchaser's inspection and audit rights provided for under this Sub-Clause 11.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Purchaser's prevailing sanctions procedures)

12. Scope of Supply

12.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

13. Delivery and Documents

13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be furnished by the Supplier are specified in the **SCC.**

14. Supplier's Responsibilities

14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.

15 Contract Price

15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the **SCC.**

16. Terms of Payment

16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the **SCC.**

16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and related services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.

16.3 Payments shall be made by the Purchaser, after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it subject to the defect liability as specified in the SCC.

16.4 The payments shall be made to the Supplier under this Contract in Indian Rupees only.

17. Taxes and Duties

17.1 The Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

18. Performance Security

18.1 If required as specified in the SCC, the Supplier shall, within twenty eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the **SCC.**

18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

18.3 The Performance Security if required, shall be denominated in Indian Rupees and shall be in one of the format stipulated by the Purchaser in the **SCC**.

18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than sixty (60) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the **SCC.**

19. Copyright

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party

20. Patent Indemnity

20.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 20.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

(a) the installation of the Goods by the Supplier or the use of the Goods at the Purchaser's Site, and
(b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

20.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 20.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

20.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

20.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

20.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

21. Confidential Information

21.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

21.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

21.3 The obligation of a party under GCC Sub-Clauses 21.1 and 21.2 above, however, shall not apply to information that:

(a) the Purchaser or Supplier need to share with the such institution(s) participating in the financing of the Contract,
(b) now or hereafter enters the public domain through no fault of that party,
(c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party, or
(d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

21.4 The above provisions of GCC Clause 21 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

21.5 The provisions of GCC Clause 21 shall survive completion or termination for whatever reason, of the Contract.

22. Subcontracting

22.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

22.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

23. Specifications and Standards

23.1 Technical Specifications and Drawings

(a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section V, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.
(b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
(c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

24. Packing and Documents

24.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

24.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the **SCC,** and in any other instructions ordered by the Purchaser.

25. Insurance

25.1 Unless otherwise specified in the **SCC,** the Goods supplied under the Contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the **SCC.**

26. Transportation and Incidental Services

26.1 Unless otherwise specified in the **SCC,** responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.

26.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, **specified in SCC:**

(a) performance or supervision of on-site assembly and/or start-up of the supplied Goods,

(b) furnishing of tools required for assembly and/or maintenance of the supplied Goods,

(c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods,

(d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract, and

(e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

26.3 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services

27. Inspections and Tests

27.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods as are specified in the **SCC.**

27.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the **SCC.** Subject to GCC Sub-Clause 27.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

27.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 27.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

27.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

27.5 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.

27.6 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 27.4.

27.7 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 27.5, shall release the Supplier from any warranties or other obligations under the Contract.

28. Liquidated Damages

28.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the **SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the **SCC.** Once the

maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

29. Warranty

29.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

29.2 Subject to GCC Sub-Clause 23.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the state.

29.3 Unless otherwise specified in the **SCC,** the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof, as the case may be, have been delivered to and accepted at the final destination indicated in the **SCC.**

29.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

29.5 Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC,** expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

29.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **SCC,** the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29.7 The payment related to warranty shall be released as specified in the **SCC.**

29.8 The liquidated damages applicable on warranty period shall be as specified in the **SCC.**

30 Limitation of Liability

30.1 Except in cases of criminal negligence or willful misconduct, the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement.

31. Change in Laws and Regulations

31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in India (which shall be deemed to include any change in interpretation or application by the competent authorities) that

subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. Force Majeure

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

33. Change Orders and Contract Amendments

33.1 The Purchaser may at any time order the Supplier through notice in accordance to GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

(a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser,
(b) the method of shipment or packing,
(c) the place of delivery, and
(d) the related services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any related services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

34. Extensions of Time

34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of related services pursuant to GCC Clause 14, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 28, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. Termination

35.1 Termination for Default

(a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:

i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34,

ii) if the Supplier fails to perform any other obligation under the Contract, or

iii) if the Supplier, in the judgment of the Purchaser has engaged in breach of Code of Integrity, as defined in GCC Clause 3, in competing for or in executing the Contract.

(b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods procured by the Purchaser.. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser

35.3 Termination for Convenience.

The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

to have any portion completed and delivered at the Contract terms and prices, and/or

to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

36. Assignment

36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

Section VIII – Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC

GCC 1.1(h)	The Purchaser is: Strategic Alliance Management Services Pvt. Ltd., on behalf of FIND India
GCC 1.1 (l)	The Project Site(s)/Final Destination(s) is **Specified in Schedule of Requirement.**
GCC 4.2 (b)	The version edition of Incoterms shall be *2020*
GCC 8.1	For **notices**, the Purchaser's address shall be: _____ For **notices**, the Supplier's address shall be: _____
GCC 10.3	The rules of procedure for arbitration proceedings pursuant to GCC Clause 10.3 shall be as follows: i) In case of Dispute or difference arising between the Purchaser and a supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996 and as amended upto date. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed in accordance with the provisions of the Arbitration and Conciliation Act 1996. ii) If one of the parties fails to appoint its arbitrator in pursuance of sub clause (a) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the appointment of the Arbitrator shall be made in accordance with the provisions of the Arbitration and Conciliation Act 1996. iii) The venue of Arbitration shall be New Delhi and the language of the arbitration proceedings and that of all councils and communications between the parties shall be English.

	iv) The decision of the majority of arbitrators shall be final and binding upon parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation, etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself. v) The provisions of the Arbitration and Conciliation Act of 1996 along with the Rules herewith and any statutory modification or reenactment thereof shall apply to arbitration proceedings. vi) If a dispute under the Supplier Contract raises the same issues as those in respect of a related dispute with another supplier contract, the Purchaser will have the option of having the arbitration proceedings joined.
GCC 13.1	Details of Documents to be furnished by the Supplier are: (i) One original and two copies of the supplier's commercial invoice in name of Purchaser, indicating the Contract number, Goods description, quantity, unit price, and total amount being claimed. Invoices must be signed in original and must be stamped in case of bidder or individual/ proprietorship firm/ partnership firm/ LLP or must have a common seal in case of Company (as the case may be)." (ii) Two copies of the packing list identifying contents of each package (iii) One original of the manufacturer's Warranty Certificate covering all items supplied, (iv) Original and two copies of Certificate of Inspection furnished to supplier by the nominated agency (where inspection is required), (v) Original and two copies of Internal Test Analysis Report of the Manufacturer for the items offered (vi) Original of supplier's Certificate of Origin covering all items supplied, (vii) Any other/additional procurement-specific documents required for delivery/payment purposes showing delivery up to final destination.
GCC 15.1	The prices charged for the Goods supplied and the related Services performed shall be fixed during the performance of the contract.
GCC 16.1	The payment under this Contract shall be released by the Purchaser after due scrutiny, verification of documents submitted by supplier. Payment shall be made by Electronic clearing systems (ECS) to the Supplier's nominated bank account. The method and conditions of payment to be made to the Supplier shall be as follows:

	[*the clauses below are suggestive, the purchaser may modify as appropriate]* (a) ***On Delivery: Forty (40) percent** of the Contract Price of the Goods delivered to the consignee shall be paid within sixty (60) days of submission of documents specified in SCC Clause 13 above and Consignee Receipt Certificate **as mentioned at Annexure Y1**. (b) **On Successful Installation, commissioning, testing and validation of equipment: Fifty (50) percent** of the Contract Price of Goods received shall be paid within sixty (60) days of receipt of Final Acceptance Certificate issued by the consignee **as mentioned at Annexure Y2**. (c) **On provision of maintenance services: Ten (10) percent** of the Contract Price of the Goods to be released basis successful provision of maintenance services as per the attached formats **as mentioned at Annexure Y3**. Note: The bidder needs to plan for 4 visits during the one year of warranty period, as under: **1st visit:** Periodic inspection and cleaning of UV lamp to be carried out within 3 months during the warranty period. **2nd visit:** Preventive maintenance should be done on each UVGI assembly within 6 months of the warranty period. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety test to be done on similar manner as during the commissioning process. **3rd visit:** Periodic inspection and cleaning of UV lamp to be carried out within 9 months of the warranty period. **4th visit:** Yearly Preventive maintenance should be done on each UVGI assembly with replacement of new UV lamp. Preventive maintenance includes periodic inspection, cleaning, performance testing, Efficacy test, safety test of the UVGI systems. Performance, efficacy, and safety tests are to be done on similar manner as during the commissioning process. UV lamp of the same wattage and specification to be replaced after every 9000 hours or within 12 months or whichever occurs earlier. The ineffective lamps to be taken out of the facility and to be disposed as per guidelines. **Note:** - Liquidated damages as referred to in GCC 28.1 for will be applicable for each stage.
GCC 18.1	Within 28 days after the Supplier's receipt of Notification of Award, the Supplier shall furnish Performance Security to the Purchaser for an amount of **10%** of the contract value, valid for a period of 45 days beyond the date of completion of all contractual obligations.

GCC 18.3	The performance security shall be in the form of a bank guarantee and the named beneficiary shall be **_____ [name of purchaser]**. The bank guarantee shall be issued by a Scheduled Bank in India and in the format provided in the Bidding Documents.
GCC 18.4	The Performance Security will be discharged and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligation, under the contract.
GCC 24.2	Packing Instructions: The Supplier will be required to make separate packages for each Consignee. Each package will be marked with proper paint/indelible ink with the following: *[insert as required]*
GCC 25.1	The insurance shall be in an amount equal to 110 percent of the CIP value of the Goods from "warehouse" to "warehouse" on "All Risks" basis, including war risks and strikes showing purchaser as Beneficiary.
GCC 26.1	The Supplier is required under the Contract to transport the Goods to the specified place of final destination. Transportation to such place of destination, including unloading, insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs are included in the Contract Price.
GCC 26.2	Incidental services to be provided are: As per Section – V Schedule of Requirement – Technical Specifications
GCC 27.1	The Supplier shall conduct tests to confirm that the goods supplied are as per specification and enclose the test and inspection certificate along with supply.
GCC 27.2	The Purchaser or his representative may conduct the Inspections of the facility any time before the award of contract and also conduct Inspection for the Goods any time before or after the dispatch of Goods. Unless the Goods supplied according to the Schedule of Requirements is satisfactorily installed and training on use of the equipment is provided, the Consignee will not issue the Final Acceptance Certificate.

GCC 28.1	The liquidated damages for each stage shall be calculated as under:- ▪ If the Supplier fails to complete Step-1 and Step-2 of the contract (i..e delivery, installation, commissioning, testing and validation of equipment and training to the user) within 150 days of issue of NOA, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, one-half percent (0.5%) per week of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of 10% ▪ If the Supplier fails to complete/provide related services as defined in step-3 of the contract (i..e inspection/preventive maintenance, change of UGVI lamp and repair and maintenance service) within due date as defined as SLA, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, one-half percent (0.5%) per week of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of 10%.
GCC 29.3	In partial modification of the provisions, the warranty period shall remain valid for the period specified in Schedule of Requirements For purposes of the Warranty, the place(s) of final destination(s) shall be: as specified in the schedule of requirement The consignees mentioned in the Schedule of Requirement (Section V)
GCC 29.5	The supplier shall visit each site (as laid down in Section V - technical specifications) for preventive maintenance of equipment. During such visits, shall provide operational training to concerned staff on use of equipment. The Schedule of such visits should be shared with consignee in advance. The manufacturer should be able to provide service of equipment across the State within **1- 2 days** after receipt of breakdown report for the metro location and within **3-5 days** for the non-metro located instruments, failing which a penalty will apply.
GCC 29.7	The balance payment of 10% to be released on annually basis and after deduction of applied LD*, if applicable.*
GCC 35.3	The Notice Period shall be 30 (thirty) days.
GCC 18 and 29.8	During the Warranty period in case of non-compliance of the above, liquidated damages at the rate of 0.5% per non-functional unit (as per Contract Price) per week beyond timeline given above (for metro and non-metro located instruments) shall be imposed and equivalent amount shall be deducted up to a maximum deduction of 10% of the contract price.

Section IX - Contract Form

Contract Agreement

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS AGREEMENT made

the *[insert: **number**]* day of *[insert: **month**]*, *[insert: **year**]*.

BETWEEN

(1) *[insert complete name of Purchaser]*, a *[insert description of type of legal entity, for example, an agency of the Ministry of .... of the Government of { insert name of Country of Purchaser }, or corporation incorporated under the laws of { insert name of Country of Purchaser }]* and having its principal place of business at *[insert address of Purchaser]* (hereinafter called "the Purchaser"), of the one part, and

(2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier"), of the other part :

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services

The Purchaser and the Supplier agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other contract documents.

   (a) the Letter of Acceptance
   (b) the Letter of Technical Bid and Financial Bid
   (c) the Addenda Nos._____ (if any)
   (d) Special Conditions of Contract
   (e) General Conditions of Contract
   (f) the Specification (including Schedule of Requirements and Technical Specifications)
   (g) the completed Schedules (including Price Schedule)
   (h) any other document listed in GCC as forming part of the Contract

3. In consideration of the payments to be made by the Purchaser to the Supplier as specified in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of Union of India on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert identification of official witness]*

Letter of Acceptance

[on letterhead paper of the Purchaser]

. . . . . ***date***. . . . . .

To: ***[insert name and address of the Supplier]***

Subject: ***Contract No.*** . . . . . .

This is to notify you that your Bid dated _____ [insert ***date of bid submitted by the bidder]*** for the execution of _____ *[insert* ***brief description of Goods and related services]*** against Bid Invitation Ref. No. _____ ***(insert Bid Ref. No.]*** is hereby accepted by the Purchaser for the Contract Amount of Rs. _____ *[insert* ***amount in numbers and words]***, as corrected and modified in accordance with the Instructions to Bidders.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, the Performance Security Form included in Section IX, Contract Forms of the Bidding Documents.

Authorized Signature: .....

Name and Designation of Signatory: .....

Name of Purchaser: .....

Performance Security
Bank Guarantee

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Beneficiary: *[insert name and Address of Purchaser]* **Date:** _ *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _ *[insert name of Supplier]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the supply of _ *[insert name of contract and brief description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of*[insert amount in figures]* ()*[insert amount in words]*,[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the …. Day of ……, 2… [2], and any demand for payment under it must be received by us at this office indicated above on or before that date.

_____
signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

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[1] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance.*

[2] *Insert the date twenty-eight days after the expected completion dates described in GC Clause 18.4. The Purchaser should note that in the event of an extension of this date for completion of the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

Form of Security Declaration

[Please refer to ITB Para 19 of the Bid Document]

[The Bidder shall fill in this form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no Bid *substitutions shall be accepted.]*

Date: *[date (as day, month and year)]*

Bid Ref. No.: *[number of bidding process]*

Ref:

To

The Director
M/s Strategic Alliance Management Services
Pvt. Ltd. B-18, Sector-6,
Noida, G.B. Nagar
Uttar Pradesh – 201301

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Purchaser for the period of 2 (two) years starting on *the date of suspension,* if we are in breach of our obligation(s) under the bid conditions, because we:

(a) have withdrawn our Bid during the period of bid validity specified in the Letter of Technical Bid; or

(b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract; or (ii) fail or refuse to furnish the Performance Security, if required, in accordance with the ITB.

We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Name of the Bidder_____

Name of the person duly authorized to sign the Bid on behalf of the Bidder_____

Title of the person signing the Bid_____

Signature of the person named above_____

Date signed _____

Annexure Y1 - Acknowledgement of Receipt of Goods (for 40% Payment)

(This certificate is to be issued to SAMS and copy to Supplier and FIND India*. All the three copies 'should be signed in ORIGINAL'.)*

CONSIGNEE RECEIPT CERTIFICATE (CRC)

CRC No. **Date**

To
Strategic Alliance Management Services Pvt. Ltd,
B-18, Sector-06, NOIDA
Gautam Budh Nagar (U.P.)- 201301

This is to certify that the Goods as detailed below have been received

Project Name	Procurement Services to Foundation for Innovative New Diagnostics India (FIND India)
Purchaser	Strategic Alliance Management Services Pvt. Ltd., on behalf of FIND India
Contract i.e. NOA No. & Date	
Description of Goods Supplied Name of Equipment/ Laboratory Materials: Schedule No. as per Contract: Model: Serial No.:	
Packing and labeling details	
Date of manufacturing	
Date of Expiry	
Quantity supplied in Numbers	
Name of Supplier	
Invoice No. and Date	
Date of Delivery at Consignee Destination site	
Consignee full Address Name Address Contact No. Fax No.	

Seal Signature of Designated Consignee
Name :
Designation:
Seal:
Contact No:
Fax No. :

Copy To: (with Original Stamp and signature)

1. To Supplier
2. Foundation for Innovative New Diagnostics (FIND India), Flat No. 6 & 8 – 14, 9th Floor, Vijaya Bank Building, 17, Barakhamba Road, New Delhi -110001, India

Annexure Y2 - Final Acceptance Certificate (for 50% Payment)

(This certificate is to be issued to SAMS and copy to Supplier. All the three copies 'should be signed in ORIGINAL'.)

FINAL ACCEPTANCE CERTIFICATE (FAC)

FAC No. **Date:**

To
Strategic Alliance Management Services Pvt. Ltd,
B-18, Sector-06, NOIDA
Gautam Budh Nagar (U.P.)- 201301

Project Name	Procurement Services to Foundation for Innovative New Diagnostics India (FIND India)
Purchaser	Strategic Alliance Management Services Pvt. Ltd., on behalf of FIND India
Contract i.e. Notification of Award No. & Date	
Description of Goods Supplied Name of Equipment: Schedule No. as per Contract: Model: Serial No.:	
Name of Supplier	
Quantity Supplied in Numbers	
List with name of all or any accessories as per contract supplied with the equipment	
Date of Installation, testing and commissioning	
Is successful Installation, testing and commissioning of equipment supplied, upto the satisfaction of User done or not **(Yes/No)** Annexure Y2 – A needs to be submitted	
Date of Final Acceptance	
Invoice No. and Date	
Date of entry in Asset register	
Consignee full Address Name Address Contact No.	

CERTIFICATE

This is to certify that we have received medical Equipment/ lab materials as detailed above in good condition in accordance with the Technical specifications and conditions of the NOA/ Contract and the same has been successfully Installed and Commissioned (if, applicable) on _____ to the satisfaction of all users and entered in the Asset/Consumable/Non-Consumable Register at page no. _____ on _____

Seal & Signature of Designated Consignee
Name:
Designation:

Copy To: (with Original Stamp and signature)

(1) To Supplier
(2) Foundation for Innovative New Diagnostics (FIND India), Flat No. 6 & 8 – 14, 9th Floor, Vijaya Bank Building, 17, Barakhamba Road, New Delhi -110001, India

Annexure Y2 - A

Upper UVGI Installation report and checklist

Name of Site: Address: Contact Person: Contact Number:	Supplier details:
Equipment Details Make: Model: Sr. No: Installation Location: Fixture Type: Wattage of UV Lamp: Wattage of GUV Fixture:	Date of installation: Name of Engineer: Contact no:

Master Instruments used for Installation

Multimeter Make:		Model:			Radiometer Make:	Sr. No:	
Sr. No:		Calibration certificate no:			Model:	Calibration certificate no:	
Voltage			Installation Height		UV Light meter Make:	Sr. No:	
P-N :	N-E:	P-E:	Room Height		Model:	Calibration certificate no:	

Checkpoint	Yes	No	Checkpoint	Yes	No
Physical damage to UV lamp			Whether Safety and operational training to user		
Physical Damage to Fixture			Submission of Manufacturer catalogues, Test certificates etc.		
Provision of dedicated on/Off switch (the same area below the Upper UVGI fixtures)					
Any obstructions in the Kill zone					

Test performed (Checkpoint)	Yes	No	Observed parameters/ Values	Pass / Fail	Acceptable Tolerance Range

Upper UVGI Installation report and checklist						
UV Wavelength check					254 nm +/-1 nm	
Safety test including radiation dose at 6 feet height					≤ 0.2 µW/cm^2 (micro watt per square cm)	
Efficacy Test – UVC-irradiance check					emit UV light radiation intensity of at least 15 mW/ m3 (milli watt per cubic meter) area in the upper irradiated zone to ensure minimal inactivation	
Observation/ Recommendation by Engineer Sign & stamp of Agency						
Observation/ Recommendation by Authorized signatory Sign & stamp of Institute						

Annexure Y3 -Warranty Service Performance Certificate (for 10% Payment on annual basis)

(This certificate is to be issued to SAMS and copy to Supplier. All the three copies 'should be signed in ORIGINAL'.)

WARRANTY SERVICE PERFORMANCE CERTIFICATE (WSPC)

FAC No. **Date:**

To
Strategic Alliance Management Services Pvt. Ltd,
B-18, Sector-06, NOIDA
Gautam Budh Nagar (U.P.)- 201301

Project Name	Procurement Services to Foundation for Innovative New Diagnostics India (FIND India)	
Purchaser	Strategic Alliance Management Services Pvt. Ltd., on behalf of FIND India	
Contract i.e. Notification of Award No. & Date		
Description of Goods Supplied Name of Equipment: Schedule No. as per Contract: Model: Serial No.:		
Name of Supplier		
Quantity Supplied in Numbers		
Is warranty service performed up to the satisfaction of User done or not **(Yes/ No)**		
Whether training provided to all users up to the satisfaction or not **(Yes/ No)**		
Guarantee Card handing over (date and details)		
Date of 1st visit: Quarterly Preventive maintenance visit Annexure Y3 – A needs to be submitted		
Date of 2nd visit: Half yearly Preventive maintenance visit Annexure Y3 – B needs to be submitted		
Date of 3rd visit: Quarterly Preventive maintenance visit Annexure Y3 – A needs to be submitted		
Date of 4th visit: Yearly Preventive maintenance visit Annexure Y3 – C needs to be submitted		
Date of Warranty Service Performance		
Consignee full Address Name Address Contact No.		

CERTIFICATE

This is to certify that we have received warranty service performed for Upper room UVGI Disinfection System in accordance with the Technical specifications and conditions of the NOA/ Contract on _____ to the satisfaction of all users and entered in the Asset Register at page no. _____ on _____

Seal & Signature of Designated Consignee
Name:
Designation:

Copy To: (with Original Stamp and signature)

(1) To Supplier
(2) Foundation for Innovative New Diagnostics (FIND India), Flat No. 6 & 8 – 14, 9th Floor, Vijaya Bank Building, 17, Barakhamba Road, New Delhi -110001, India

Annexure Y3 - A

GUV Device Quarterly Maintenance Report /Checklist

Name of Site: Address: Contact Person: Contact Number:	Supplier details:
Equipment Details Make: Model: Sr. No: Installation Location: Fixture Type: Wattage of UV Lamp: Wattage of GUV Fixture:	Date of installation: Name of Engineer: Contact no:

Master Instruments used during the PM

Multimeter Make:		Model:			
Sr. No:		Calibration certificate no:			
Voltage					
P-N :	N-E:	P-E:			

Checkpoint	Yes	No	Checkpoint	Yes	No
Any physical damage to UV lamp			Cleaning of GUV Fixture system		
Any Physical Damage to Fixture			Cleaning of UVGI Lamp		
Any obstructions in the Kill zone			Check for damage to wiring		

Observation/ Recommendation by Engineer

Sign & stamp of Agency

Observation/ Recommendation by Authorized signatory

Sign & stamp of Institute

Annexure Y3 - B

GUV Device Half Yearly PM Report /Checklist

Name of Site: Address: Contact Person: Contact Number:	Supplier details:
Equipment Details Make: Model: Sr. No: Installation Location: Fixture Type: Wattage of UV Lamp: Wattage of GUV Fixture:	Date of installation: Name of Engineer: Contact no:

Master Instruments used during the PM

Multimeter Make:	Model:	Radiometer Make:	Sr. No:
Sr. No:	Calibration certificate no:	Model:	Calibration certificate no:
Voltage	P-N: N-E: P-E:		

Checkpoint	Yes	No	Checkpoint	Yes	No
Physical damage to UV lamp			Whether Safety and operational training to user		
Physical Damage to Fixture			Submission of Manufacturer catalogues, Test certificates etc.		
Provision of dedicated on/Off switch (the same area below the Upper UVGI fixtures)			Any obstructions in the Kill zone		

Test performed (Checkpoint)	Yes	No	Observed parameters/ Values	Pass / Fail	Acceptable Tolerance Range
UV Wavelength check					254 nm +/-1 nm
Safety test including radiation dose at 6 feet height					≤ 0.2 µW/cm^2 (micro watt per square cm)
Efficacy Test – UVC-irradiance check					emit UV light radiation intensity of at least 15 mW/ m3 (milli watt per cubic meter) area in the upper irradiated zone to ensure minimal inactivation

Observation/ Recommendation by Engineer

Sign & stamp of Agency

Observation/ Recommendation by Authorized signatory

Sign & stamp of Institute

Annexure Y3 - C

Upper UVGI Yearly PM Report and checklist	
Name of Site: Address: Contact Person: Contact Number:	Supplier details:
Equipment Details Make: Model: Sr. No: Installation Location: Fixture Type: Wattage of UV Lamp: Wattage of GUV Fixture:	Date of installation: Name of Engineer: Contact no:

Master Instruments used for Installation

Multimeter Make:		Model:			Radiometer Make:	Sr. No:	
Sr. No:		Calibration certificate no:			Model:	Calibration certificate no:	
Voltage			Installation Height		UV Light meter Make:	Sr. No:	
P-N :	N-E:	P-E:	Room Height		Model:	Calibration certificate no:	

Checkpoint	**Yes**	**No**	**Checkpoint**	**Yes**	**No**
Replacement of UV Lamp of same wattage			Cleaning of GUV Fixture system		
The ineffective lamps to be taken out of the facility and to be disposed as per guidelines			Check for damage to wiring		
Any physical Damage to Fixture			Submission of the test certification report		
Any obstructions in the Kill zone					

Test performed (Checkpoint)	**Yes**	**No**	**Observed parameters/ Values**	**Pass / Fail**	**Acceptable Tolerance Range**
UV Wavelength check					254 nm +/-1 nm

Upper UVGI Yearly PM Report and checklist						
Safety test including radiation dose at 6 feet height					≤ 0.2 µW/cm^2 (micro watt per square cm)	
Efficacy Test – UVC-irradiance check					emit UV light radiation intensity of at least 15 mW/ m3 (milli watt per cubic meter) area in the upper irradiated zone to ensure minimal inactivation	
Observation/ Recommendation by Engineer Sign & stamp of Agency						
Observation/ Recommendation by Authorized signatory Sign & stamp of Institute						