

#### **TENDER DESCRIPTION:**

Appointment of a specialist service provider with CIDB Grading of 3ME or higher, for the manufacture/procurement, delivery, installation, commissioning, and guarantee of the auditorium ventilation and air conditioning (HVAC) system at iThemba LABS, Faure Western Cape, South Africa

**BID NO: NRF ILABS ATL/08/2024-25** 

Closing date: Monday, 11 August 2025 @11:00

NAME OF BIDDER:	
CSD NUMBER:	

Fraud alert! It is common for scammers to call bidders pretending to be NRF's employees and offering to swing tenders your way for a fee. DO NOT FALL FOR IT, IT IS A SCAM! The NRF would never offer payment or any other consideration in return for the favourable consideration of a bid. Please report any suspected acts of fraud or corruption to the following toll-free number - 0800 701 701 or SMS 39772.

#### **GENERAL TENDER INFORMATION**

**TENDER DESCRIPTION** 

Appointment of a CIDB 3ME or higher specialist service provider for the manufacture/procurement, delivery, installation, commissioning, and guarantee of the auditorium ventilation and air conditioning (HVAC) system at iThemba LABS, Faure Western Cape, South Africa.

CIDB CONTRACTOR GRADING

: Contractors must have a minimum CIDB contractor grading designation of 3ME or higher.

**COMPULSORY CLARIFICATION MEETING** 

An in-person compulsory clarification meeting and site visit will take place on **Monday**, **21 July 2025**, at 10:30

Venue: iThemba LABS, Old Faure Road, Faure, Western Cape;

GPS co-ordinates: 34.025°S 18.716°E

**Time:** 10.30AM

TENDER CLOSING DATE : Monday, 11 August 2025

TENDER CLOSING TIME : 11:00 AM

SUBMISSION INSTRUCTIONS

<u>Electronic submissions</u> must be sent to <u>scm@tlabs.ac.za</u>. <u>Bidder may use the following to submit proposals/bids:</u> <u>https://filesend.nrf.ac.za/. Bidders to ensure that expiry date of the link is set to 1 month</u>

Bids must be submitted in two separate electronic folders, one with the compliance and technical response, and the second with the financial response. Technical submissions be in searchable PDF format.

Physical submission: Tender Box, Main Security Gate, iThemba LABS, Old Faure Road, Faure, Western Cape, 7131, South Africa.

GPS coordinates: 34.025°S 18.716°E

Bidders to submit a flash drive or disk for electronic version of submission

**Envelope Addressing** 

On the face of each envelope, the Bid Number and Bidder's Name, Postal Address, Contact Name, Telephone Number and email address mail.

## BIDDER'S REPRESENTATIVE CONTACT INFORMATION:

NAME OF BIDDER:
CONTACT PERSON:
TELEPHONE NUMBER: CODENUMBER
CELL PHONE NUMBER:
E MAIL ADDRESS:

## **iTHEMBA LABS**

## **BID NO: NRF ILABS ATL/08/2024-25**

Appointment of a specialist service provider with CIDB Grading of 3ME or higher, for the manufacture/procurement, delivery, installation, commissioning, and guarantee of the auditorium ventilation and air conditioning (HVAC) system at iThemba LABS, Faure Western Cape, South Africa.

Contents		
Number	Heading	Page
TENDER		
Part T1: Tend	ering Procedures	
T1.1	Tender Notice and Invitation to Tender	
T1.2	Tender Data	7
Part T2: Retur	nable Documents	
T2.1	List of Returnable Documents	16
T2.2	Returnable Schedules	19
CONTRACT		
Part C1: Agree	ement and Contract Data	
C1.1	Form of Offer and Acceptance	54
C1.2	Contract Data	57
Part C2: Pricin	ng data	,
C2.1	Pricing assumptions	77
C2.2	Pricing schedules Bills of Quantities	78
Part C3: Scop	e of Work	
C3	Scope of Work	35
ANNEXURES:		
Annexure A:	Bill of Quantities	82
Annexure B:	Detailed Drawings	84
Annexure C:	List of Applicable Documents for Engineers Approval	
Annexure D:	ILABS Health and Safety Specification	

# T1: Tendering Procedures

Number	Heading	Pages
T1.1	Tender Notice and Invitation to Tender	6
T1.1.1	Locality Plan: Site Visit	8
T1.2	Tender Data	9
T1.2.1	Standard Conditions of Tender	9
T1.2.2	Variations to The Standard Conditions of Tender	9
T1.2.3	Additional Conditions of Tender	16

#### T1.1 TENDER NOTICE AND INVITATION TO TENDER

#### **ITHEMBA LABS**

**BID NO: NRF ILABS ATL/08/2024-25** 

Appointment of a specialist service provider for the manufacture/procurement, delivery, installation, commissioning, and guarantee of the auditorium ventilation and air conditioning (HVAC) system at iThemba LABS, Faure Western Cape, South Africa.

## **BID NOTICE**

#### INVITATION AND SCOPE OF WORK

Suitably experienced and qualified Contractors are invited to respond to this bid invitation for the iThemba LABS, a business unit of the National Research Foundation (NRF) (Hereinafter referred to as the "Employer")

Bid Number	Bid Description	CIDB Grading	Bid Closing Date and Time
NRF ILABS ATL/08/2024-25	Appointment of a specialist service provider for the manufacture/procurement, delivery, installation, commissioning, and guarantee of the auditorium ventilation and air conditioning (HVAC) system at iThemba LABS, Faure Western Cape, South Africa.	It is estimated that contractors must have a CIDB contractor grading designation of 3ME or higher	Monday, 11 August 2025 at 11.00 AM

#### **COMPULSORY CLARIFICATION MEETING AND SITE VISIT**

An in-person, compulsory clarification meeting and site visit will take place on Monday, 21 July 2025 at 10:30 AM as follows –

**Venue:** iThemba LABS, Old Faure Road, Faure, Western Cape:

GPS Coordinates: 34.025°S 18.716°E

**Time:** 10.30AM (arrive at least 30 mins prior to the start time to allow for access protocols)

Persons attending the compulsory clarification meeting and site visit must be duly authorised to represent the bidder. Persons arriving more than 15 minutes after the commencement of the clarification meeting will be denied access and deemed to have not attended the meeting and as such, will be precluded from submitting a bid. Any bid submitted by a bidder not represented at the clarification meeting will be rejected.

#### PREFERENTIAL PROCUREMENT SYSTEM:

The 80/20 price and preference points system, as prescribed by the Preferential Procurement Regulations, 2022 issued under the Preferential Procurement Policy Framework Act, (Act No 5 of 2000) (PPPFA) will be applied to evaluate this bid.

#### **EVALUATION CRITERIA:**

Only responsive bids in terms of meeting the decision criteria Go or No Go will be evaluated further on price and BEE points

#### **BID PUBLICATION:**

The bid document will be available from e-Tenders (<u>www.etenders.gov.za</u>) and NRF website: https://www.nrf.ac.za/procurement/ithemba-labs-procurement/

#### **BID SUBMISSION:**

Electronic bid submissions must be sent to scm@tlabs.ac.za.

#### **BID PACKAGING:**

Bids must be submitted in two separate electronic folders, one with the compliance and technical response, and the second with the financial response. Technical submissions must be in searchable PDF format.

#### PHYSICAL SUBMISSION:

Tender Box, Main Security Gate, iThemba LABS, Old Faure Road, Faure, Western Cape, 7131, South Africa. GPS coordinates: 34.025°S 18.716°E.

Bidders to submit a flash drive or disk for electronic version of submission.

#### **BID CONDITIONS:**

iThemba LABS does not bind itself to accept the lowest or any tender and reserves the right to accept any tender or portion of a tender.

#### **BID ENQUIRIES:**

No telephonic enquiries relating to this tender will be permitted. All enquiries regarding this tender must be in writing and directed to:

#### **Technical Queries:**

Project Manager

Email: scm@tlabs.ac.za

## **Procedural Queries:**

Mr. Lusindiso Buje, SCM Specialist

Email: scm@tlabs.ac.za

## T1.1.1 LOCALITY PLAN: SITE VISIT

Figure 1 below displays an aerial photograph of the iThemba LABS site, located approximately 5 kilometres from the N2 highway.

Venue: iThemba LABS

GPS Coordinates: 34.025°S 18.716°E

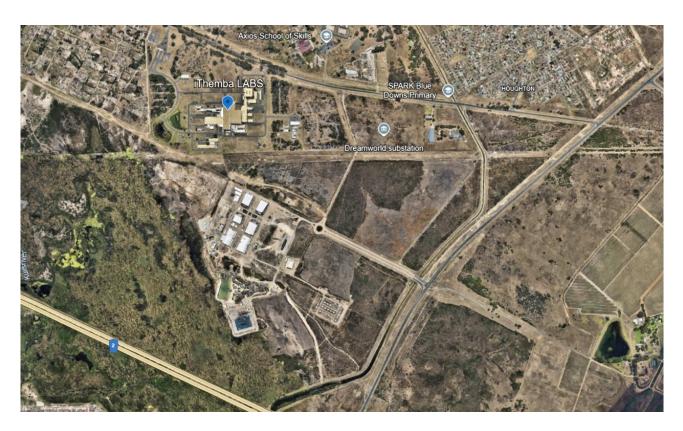


Figure 1: Locality Plan

## T1.2 TENDER DATA

#### T1.2.1 Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (see <a href="https://www.cidb.org.za">www.cidb.org.za</a>).

## T1.2.2 Variations to the Standard Conditions of Tender

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall take precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The following variations, amendments and additions to the Standard Conditions of Tender shall apply to this tender.

# Clause Variation, Amendment or Addition No.

#### C.1 General

#### C.1.2 Tender Documents

Add the following to the end of Clause C.1.2:

"The Tender Document for this Contract comprises the following:

Not issued to Bidders, but available from the National Treasury, Government printers, the Construction Industry Development Board, and the Employer, as applicable:

- 1. CIDB, "The Standard for Uniformity in Construction Procurement Annex C, Standard Conditions of Tender", Board Notice 423 of 2019 of Government Gazette No. 42622 of 9 August 2019.
- 2. The General Conditions of Contract for this project is the General Conditions of Contract for Goods and Services as published by National Treasury.
- 3. The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations, 2022.published in Government Gazette 47452 on 4 November 2022.
- 4. The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).

## C.2 Bidder's Obligations

## C.2.1 Eligibility

### **C.2.1.1** Add the following to the end of **Clause C.2.1.1**:

### A. Construction Industry Development Board (CIDB) Registration

b) Only those Bidders who are registered with the CIDB, or are capable of being so prior to the evaluation of submission, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industrial Development Regulations, for a 3 ME or higher class of construction work, are eligible to have their tenders evaluated.

- i) Joint ventures are eligible to submit tenders provided that:
  - 1. Every member of the joint venture is registered with the CIDB;
  - The lead partner has a contractor grading designation in the 3ME or higher class of construction work; or not lower than one level below the required grading designation in the class of works construction works under considerations and possess the required recognition status.
  - 3. The combined contractor grading designation calculated in accordance with the Construction Development Regulations is equal to or higher than a contract grading designation determined in accordance with sum tendered for a 3ME or higher class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

#### B. National Treasury Central Supplier Database Registration

Bidders must register on the National Treasury Central Supplier (CSD) Database and provide their CSD registration number where required in this bid document. Bidders who are not registered are not precluded from submitting bids, but must be registered prior to Contract Award.

In the case of Joint Venture partnerships this requirement will apply individually to each party to the Joint Venture.

Bidders who wish to register as service providers on the CSD can register online at <a href="https://secure.csd.gov.za/Account/Register">https://secure.csd.gov.za/Account/Register</a>.

## C. Attendance of Compulsory Tender Briefing

Only Bidders who have attended the compulsory clarification tender briefing will be eligible to submit a tender offer.

#### D. Bidder's Tax Clearance matters

Bidders must be registered with the South African Revenue Services (SARS) and must submit/append documentary evidence/proof in the form of a CSD registration number and/or valid Tax Clearance PIN Number issued by SARS.

At the point of award of the tender, the recommended bidder must be in good standing with SARS, failing which the bidder must be in good standing within such extended period as may be granted at the discretion of iThemba LABS, failing which the bidder will be disqualified from further consideration.

Each party to a Consortium/Joint Venture shall submit a separate CSD registration number and/or Tax Clearance PIN Number.

#### E. Minimum Functionality Score to be Achieved

Not applicable

## C.2.7 Clarification Meeting

Add the following to the end of Clause C.2.7:

"The arrangements for a compulsory clarification meeting and site visit are as stated in the Tender Notice and Invitation to Tender.

Bidders should be represented by a person or persons who are suitably qualified and experienced to comprehend the aspects of the work involved."

Bidders shall bear all costs for attendance of the clarification meeting and site visit.

## C.2.13 Submitting a Tender Offer

## C.2.13.2 Add the following to the end of *Clause C.2.13.2*:

"Bid submissions must be in electronic or physical format only"

Bid submissions shall comprise two separate submissions or subfolders as follows:

- "Technical" (T1) submission (Technical submissions should preferably be in searchable PDF format in case of electronic submission), and
- "Financial" (F2) submission Failure to comply with these requirements may result in the tender being deemed non-responsive."

## **C.2.13.4** Add the following after the first sentence of **Clause C.2.13.4**:

"The tender shall be signed by a person duly authorised to do so."

## **C.2.13.6** Delete the contents of **Clause C.2.13.6** and replace with the following:

"A two-envelope procedure as described in Clause C.3.5 will be followed.

In the case of Electronic Submissions, Bids must be submitted in two separate electronic folders, one with the Technical response (T1), and the second with the Financial response (F2). Each main folder may have sub-folders, and if this is the case, each sub-folder must be clearly indicated as such." When making a physical submission of Bids this must be done with the Technical and financial proposal documents clearly separated from each other and marked "Technical Proposal" and "Financial Proposal" respectively.

## **C.2.13.9** Delete the contents of **Clause C.2.13.9** and replace with the following:

"Tender offers may be submitted either in electronic format or physical submission will be accepted. Tenders submitted electronically may be uploaded in electronic format to <a href="https://filesend.nrf.ac.za/">https://filesend.nrf.ac.za/</a>. Bidders to ensure that expiry date of the link is set to 1 month, to be accepted by the Employer."

## C.2.15 Closing Time

## **C.2.15.1** Add the following to the end of Clause **C.2.15.1**:

"The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender". All electronic submissions must be uploaded before the closing date and time. Accept that technical difficulties experienced by the bidders will not result in extension of deadline.

## C.2.16 Tender Offer Validity

## **C.2.16.1** Add the following to the end of **Clause C.2.16.1**:

"The tender offer validity period is 90 days.

## C.2.17 Clarification of Tender Offer after Submission

Add the following to the end of Clause C.2.17:

"A tender may be rejected as non-responsive if the Bidder fails to provide any clarification requested by the Employer within such time as is granted by the Employer to provide such clarification. A tender may be rejected if the unit rates or lump sums for some of the items in the BOQ are, in the opinion of the Employer,

unreasonable, and the Bidder fails, within such time as is granted by the Employer, to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the total of the prices unchanged."

## C.3 The Employer's Undertakings

## C.3.1 Respond to Requests from the Bidder

## **C.3.1.1** Substitute the contents of **Clause C.3.1.1** with the following:

"The Employer will respond to a request for clarification received up to ten calendar days before the tender closing time stated in the Tender Data and circulate responses to all bidders who attended the compulsory tender briefing meeting."

## C3.2 Add the following to the end of Clause 3.2

"....AND attended the compulsory Site Clarification Meeting"

## C.3.5 Two-envelope System

## **C.3.5.1** Substitute the contents of **Clause C.3.5.1** with the following:

"Where it is stated in the Tender Data that a two-envelope (two separate electronic folders) process is to be followed, open only the technical proposal of valid bids for evaluation by the Employer's evaluation committee. Technical proposals will not be opened in the presence of bidders' representatives, however a list of bids received on the closing date will be published on the Employer's website within 10 days of the tender closing date."

## **C.3.5.2** Substitute the contents of **Clause C.3.5.2** with the following:

"Evaluate functionality of the technical proposals offered by bidders, and only open the financial proposals of bidders who score the minimum number of functionality points or higher.

Financial proposals will not be opened in the presence of bidders' representatives."

## C.3.7 Grounds for rejection and disqualification

Add the following to the end of Clause C.3.7:

"Bidders will be disqualified if -

- (a) There is no evidence that they were represented at the compulsory bid clarification meeting and site visit.
- (b) Any of the Bidder's directors or shareholders are listed on the National Treasury Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004, as a person prohibited from doing business in the public sector.
- (c) They have been restricted from doing business with the Employer.

#### C.3.8 Test for Responsiveness

## C.3.8.2 Add the following to the end of Clause C.3.8.2:

"Tenders will also be considered non-responsive if:

- (a) Subject to clause C.3.11.1.1 below, the Tender offer does not meet any one of the eligibility criteria indicated as mandatory in Part T2.
- (b) The Bidder has not fully and correctly completed the Offer portion of "Form of Offer and Acceptance", the Bidder's details are not completed fully and correctly, and the Bidder has failed to sign the Offer.
- (c) The Bidder fails to respond, within such time frame granted by the Employer, to any written request for clarification, and such failure renders it impossible for the Employer to clarify any ambiguities in the bid submission, and therefore renders it impossible to evaluate the bid submission any further.
- (d) There are any other material deficiencies in the bid submission which cannot be cured by clarification.

#### C.3.11 Evaluation of Tender Offers

#### C.3.11.1 General

Add the following clauses after Clause C.3.11.1:

#### C.3.11.2 The Evaluation Method

Subsequent to the submission requirements (refer to the Tender Notice & Invitation to Tender), bids will be evaluated in a two-stage process, as follows –

<u>STAGE 1</u>: Compliance with administrative requirements in Part T2 (namely, completion of Returnable Documents, the Standard Bidding Documents, and submission of the returnable schedules in Schedules).

In this stage, discretion may be applied to allow bidders to complete and/or sign returnable schedules not completed and/or signed in the first instance or to submit returnable documents not submitted in the first instance, provided that such returnable schedules or documents are of a purely administrative nature and do not pertain to the substance of the bid such as to affect the competitive position of bidders, by giving one or more bidders a second and unfair opportunity to augment the quality (substantive) aspects of their bid. Only compliant bids will proceed to Stage 2.

STAGE 2: Bids will be scored on the 80/20 price and preference points system. (reference SBD 6.1)

The lowest priced bid will not necessarily be accepted and the Employer reserves the right to accept the whole or part of any tender, or not to consider any tender at all.

The Employer reserves the right to conduct due diligence on shortlisted bidders' ability to undertake the project."

iThemba LABS reserves the right to reject overpriced or under-priced bids.

## C.3.11.2.1 Score Functionality

Bidders will be evaluated on the qualifications and evidence to derive a Go/No Go decision.

## C.3.17 Provide Copies of the Contracts

Add the following to the end of Clause C.3.17:

"The number of paper copies of the signed contract to be provided by the Employer is ONE."

#### T1.2.3 Additional Conditions of Tender

The additional conditions of tender are:

# C.4.1 Compliance with Occupational Health and Safety Act 1993 and Construction Regulations (as amended 2014)

Bidders are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the latest amended Construction Regulations (2014) issued in terms of Section 43 of the Act. The Bidder shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard the Bidder shall submit with the tender, appended to Schedule B15: Health, Safety, Environmental and Quality (SHEQ) Management Plan in T2.2 Returnable Documents, a detailed SHEQ Plan prepared in accordance with the Health and Safety Specification (given in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations).

## C.4.2 Claims Arising after Submission of Tender

No claim arising out of any doubt or obscurity as to the true intent and meaning of anything contained in the Conditions of Contract, Scope of Work and Pricing Data, will be accepted by the Employer after the submission of any tender and the Bidder shall be deemed to have:

- (1) Read and fully understood the Conditions of Contract.
- (2) Read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.
- (3) Visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials and plant to and from the site and made the necessary provisions for any additional costs involved thereby.
- (4) Requested the Employer to make clear the actual requirements of anything contained in this bid document, the exact meaning or interpretation of which is not clearly intelligible to the Bidder.

## C.4.3 Imbalance in Tendered Rates

In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are either excessively low or high (in comparison to the Employer market price range determination), or not in proper balance with other rates or lump sums, the Bidder may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the Bidder to amend these rates and lump sums along the lines indicated by it.

The Bidder will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the Contract Amount.

Should the Bidder fail to amend the Tender in a manner acceptable to the Employer, the Employer may reject the Tender.

## T2: Returnable Documents

Number	Heading	Pages
T2.1	List of Returnable Documents	17
T2.2	Returnable Schedules	22

## **T2.1** LIST OF RETURNABLE DOCUMENTS

#### T2.1.1. General

The Tender Document must be submitted as a whole. All schedules and forms must be properly completed as instructed, and the document must not be taken apart or altered in any way whatsoever.

Bidders are required to complete each and every schedule and form contained herein to the best of their ability, as the evaluation of tenders and the eventual contract will be based on the information provided by the Bidder.

Completion of the returnable schedules and submission of the returnable documents is mandatory. Failure to do so will result in a bid being held to be non-responsive, except in limited circumstances, namely, the Employer may allow bidders to complete returnable schedules not completed in the first instance or to submit returnable documents not submitted in the first instance where these are purely of an administrative nature (e.g. the Standard Bidding Documents), and do not pertain to the substance of the bid such as to affect the competitive position of bidders, by giving one or more bidders a second and unfair opportunity to augment the quality (substantive) aspects of their bid.

RETURNABLE DOCUMENT CHECKLIST TO QUALIFY FOR EVALUATION					
Returnable Documents	<u>Specification</u>				
(M – Mandatory); (O – Optional)	SUBMITTED and MEETS REQUIREMENTS		Bid Section Reference	Reference to Bidder's document	
Administrative I	Requiren	<u>nents</u>			
Procurement Invitation (SBD 1), signed and completed.	M	☐ Yes ☐ No			
Bidder's Disclosure (SBD 4), signed and completed	М	☐ Yes ☐ No			
Preference Points Claimed (SBD 6.1), signed and completed with B-BBEE certificate or sworn affidavit.	0	☐ Yes ☐ No			
A resolution granting authority to sign documents on behalf of the company to the signatory on every document in the tender bid where required (If documents completed and signed by the Owner/Partner/Managing Director, Resolution not needed from the bidder)	0	□ Yes □ No			
Bidder Support Due I	Diligence	Eligibility			
A portfolio of roof package unit and split unit HVAC system projects covering a similar scope and works in a commercial or industrial environment completed in the past 3 years (restricted to a minimum of 3 projects).	M	□ Yes □ No			
Company Profile demonstrating at least 5 years' experience in the supply and installation of HVAC systems	М	☐ Yes ☐ No			

RETURNABLE DOCUMENT CHECKLIST TO QUALIFY FOR EVALUATION					
Returnable Documents		<u>Sr</u>	<u>pecification</u>		
(M – Mandatory); (O – Optional)	SUBMITTED and MEETS REQUIREMENTS		Bid Section Reference	Reference to Bidder's document	
At least 3 contactable reference letters for works in					
installation of commercial /Industrial HVAC in the past 3	М	☐ Yes ☐ No			
years					
Proof of a valid CIDB Grade 3ME or higher	M	☐ Yes ☐ No			
Letter of endorsement from the Original Equipment					
suppliers/manufacturers, brand must be supported locally	M	☐ Yes ☐ No			
and spare parts be available locally.					
A Letter of Good Standing from the Compensation for		☐ Yes ☐ No			
Occupational Injuries and Diseases (COID)	M	LI TES LI INO			
Demonstration on how to respond and provide same day					
technical support within office hours in Cape Town by		☐ Yes ☐ No			
submitting of a method statement and details of Cape	M	LI TES LINO			
Town response team.					
Public liability insurance to the value of R5 000 000	М	☐ Yes ☐ No			
Demonstration of capable team to execute the project on					
time by a providing project organogram.	M	☐ Yes ☐ No			
Provide detailed CV of project manager with mechanical					
engineering and certificate of project management					
qualifications having and at least 5 years post qualification	М	☐ Yes ☐ No			
experience in projects of commercial / industrial HVAC					
Installation.					
Submission of a detailed project plan with specific tasks					
and durations on how the project will be executed	M	☐ Yes ☐ No			
Submission of Curriculum Vitae (CV) confirming the					
qualifications and experience of the suitably qualified					
Refrigeration Mechanics and staff who will be executing the	M	☐ Yes ☐ No			
works. (valid trade certificate must be submitted).					
Submission of Curriculum Vitae (CV) confirming the					
qualifications and experience of the electrician with trade					
test certificates and wireman's license who will be	M	☐ Yes ☐ No			
executing the electrical works. (valid trade certificates must					
be submitted).					

RETURNABLE DOCUMENT CHECKLIST TO QUALIFY FOR EVALUATION					
Returnable Documents		<u>Sp</u>	ecification		
(M – Mandatory); (O – Optional)	SUBMITTED and Bid Section Reference REQUIREMENTS		Reference to Bidder's document		
Provide Equipment schedule indicating the electrical power consumption, capacity/size, noise level, make/manufacturer and weight of the equipment. Technical datasheet to be supplied for all equipment that will be installed and workshop drawings to be provided as evidence.	M	□ Yes □ No			

# T2.1.2. List of Returnable Schedules, Forms and Certificates

SCHEDULE	DESCRIPTION	PAGE
Company Spe	cific Schedules	L
A1	Authority to Sign Documents	23
A2	Certificate of Authority for Joint Ventures / Consortia (where applicable)	24
A3	Compulsory Enterprise Questionnaire	25
A4	Form concerning the fulfilment of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014)	27
A5	Certificates of Insurance Cover (Public liability insurance to the value of R5 000 000)	
Standard Bidd	ling Documents (SBD) for Compliance Assessment	I
SBD 4	Bidder's Disclosure	29
SBD 6.1	Preference Points Claim Form in terms of the Preferential Procurement Regulations 2022	Error! Bookn ark no define

B1	Schedule of Proposed Subcontractors (If applicable)	36
C2.1	Form of Offer and Acceptance	53
	Certificate of CIDB Registration of Contractor of 3ME or higher	
	A Letter of Good Standing from the Compensation for Occupational Injuries and Diseases (COID)	
	National Treasury Central Supplier Database (CSD) Registration	
	BBBEE Certificate or Sworn Affidavit	
Returnable D	ocuments for Go/No Go Evaluation	I
	A portfolio of installation projects of roof package unit and split unit HVAC system covering a similar scope and works in a commercial or industrial environment completed in the past 3 years (restricted to a minimum of 3 projects).	
	Company Profile demonstrating at least 5 years' experience in the supply and installation of HVAC systems	
	At least 3 contactable reference letters for works in installation of commercial /Industrial HVAC in the past 3 years	
	Demonstration on how to respond and provide same day technical support within office hours in Cape Town by submitting a method statement and details of Cape Town response team.	
	Letter of endorsement from the Original equipment suppliers/manufacturers, brand must be supported locally and spare parts be available locally.	
	Demonstration of capable team to execute the project on time by a providing project organogram.	
	Provide detailed full CVs and qualifications of project manager with mechanical engineering and certificate of project management qualifications and at least 5 years' post qualification experience in projects of commercial / industrial HVAC Installation.	
	Submission of a detailed project plan with specific tasks and durations on how the project will be executed	

	Submission of Curriculum Vitae (CV) confirming the qualifications and experience of the suitably qualified Refrigeration Mechanics and staff who will be executing the works. (valid trade certificate must be submitted).	
	Submission of Curriculum Vitae (CV) confirming the qualifications and experience of the electrician with trade test certificates and wireman's license who will be executing the electrical works. (valid trade certificates must be submitted).	
	Provide Equipment schedule indicating the electrical power consumption, capacity/size, noise level, make/manufacturer and weight of the equipment.  Technical datasheet to be supplied for all equipment that will be installed and workshop drawings to be provided as evidence.	
Returnable Doo	cuments pertaining to the Contract	
B4	Record of Addenda to Tender Documents	41
	Joint Venture Agreement (If bidder is a JV)	

# **T2.2** RETURNABLE SCHEDULES

NB: BIDDERS MUST COMPLETE THESE DOCUMENTS / FORMS IN BLACK TYPE OR BLACK INK

## A1. AUTHORITY TO SIGN DOCUMENTS

I/We*.	the undersigned,	am/are* duly	authorised to	sign the form	of tender of	n behalf of
,, , , , , , , , , , , , , , , , , , ,	tilo dilaciolgiloa,	allifulo dal	y aatiioilood to	oign the form	or torraor or	i bollali ol

by vir	rtue of the Articles of Association/Res	solution of the Board of Directors*, of wh	ich a copy is attached, or
*Dele	ete whichever is inapplicable		
1.			
	NAME	SIGNATURE	DATE
2.			
	NAME	SIGNATURE	DATE
WITN	NESSES:		
1.			
	NAME	SIGNATURE	DATE
2.			
	NAME	SIGNATURE	DATE

## A2. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES / CONSORTIA

This Returnable Schedule is to be completed only if the bidder is a joint venture or consortium.

We, the undersigned, are submitting this tender offer as a joint venture / consortium, and hereby authorise			
Mr/Ms	, authorised signatory of	company,	
close corporation or partnership, acting in the capacity of lead partner, to sign all documents in connection with the tende			
offer and any contract resulting from it on our behalf.			

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature :
		Name :
		Designation :
		Signature :
		Name :
		Designation :
		Signature :
		Name :
		Designation :
		Signature :
		Name :
		Designation :

## Note:

A copy of the Joint Venture / Consortium Agreement showing clearly the percentage contribution of each partner to the Joint Venture / Consortium must be included in the bid submission.

#### A3. COMPULSORY ENTERPRISE QUESTIONNAIRE

questionnaires in respect of each partner mu	st be completed and submitted.	
Section 1: Name of enterprise		
Section 2: VAT registration number, if an	у	
Section 3: CIDB registration number, if a	ny	
Section 4: Particulars of sole proprietors	and partners in partnerships	

Name*	Identity number*	Personal income tax number*

<sup>\*</sup> Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

#### Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: The attached SBD 4 must be completed for each tender and be attached as a tender requirement

#### Section 7: The attached SBD 6.1 must be completed for each tender and be attached as a tender requirement

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- i) authorises the Employer to obtain a tax Clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- confirms that neither the name of the enterprise nor the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004:
- confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

# SIGNED:

ENTERPRISE NAME	DATE	

NAME	POSITION	SIGNATURE

# A4 FORM CONCERNING THE FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014 OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

In terms of regulation 4(3) of the Construction Regulations, 2014, as amended (hereinafter referred to as the Regulations), promulgated on 18 July 2003 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations (2014) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1.	I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the
	necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of
	the Regulations.

YES	
NO	

2. Proposed approach to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – specify:	
Specialist subcontract resources (competent) – specify:	

- 3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the team as specified in the Regulations (CVs to be attached):
- 4. Provide details of proposed training (if any) that will be undergone:
- 5. Potential key risks identified and measures for addressing risks:

I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.

YES	
NO	

## **SIGNED BY/ON BEHALF OF BIDDER:**

NAME	SIGNATURE	

## STANDARD BIDDING DOCUMENT (SBD) 4

#### **BIDDER'S DISCLOSURE**

#### 1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

#### 2. Bidder's declaration

2.1	Is the bidder, or any of its directors /	trustees	/ shareholders /	/ members /	partners	or any	person	having	а
	controlling interest1 in the enterprise,								
	employed by the state?			YES	/NO				

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

2.2	Do you, or any person connected with	n the bidder, have a relationship with any person who is employed by the
2.2.1	procuring institution? If so, furnish particulars:	YES/NO

29

<sup>1</sup> the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3		of its directors / trustees / shareholders / members / partners or any person having enterprise have any interest in any other related enterprise whether or not they YES/NO	
2.3.1	If so, furnish particulars:		
3 DE	ECLARATION		
	I, the undersigned, (accompanying bid, do he	name) in submitting reby make the following statements that I certify to be true and complete in every resp	the ect:
3.1 3.2		and the contents of this disclosure; ompanying bid will be disqualified if this disclosure is found not to be true and comp	olete
3.3	agreement or arrangeme	t the accompanying bid independently from, and without consultation, communication with any competitor. However, communication between partners in a joint venturenstrued as collusive bidding.	
3.4	regarding the quality, qu prices, market allocation,	en no consultations, communications, agreements or arrangements with any compe antity, specifications, prices, including methods, factors or formulas used to calcu the intention or decision to submit or not to submit the bid, bidding with the intention ons or delivery particulars of the products or services to which this bid invitation rela	ulate n not
3.4	The terms of the accomp	anying bid have not been, and will not be, disclosed by the bidder, directly or indire the date and time of the official bid opening or of the awarding of the contract.	
3.5	official of the procuring in except to provide clarification	sultations, communications, agreements or arrangements made by the bidder with stitution in relation to this procurement process prior to and during the bidding process on the bid submitted where so required by the institution; and the bidder was the specifications or terms of reference for this bid.	cess
3.6	related to bids and con- investigation and possible 89 of 1998 and or may b may be restricted from c terms of the Prevention a	n and without prejudice to any other remedy provided to combat any restrictive pract racts, bids that are suspicious will be reported to the Competition Commission imposition of administrative penalties in terms of section 59 of the Competition Act reported to the National Prosecuting Authority (NPA) for criminal investigation and conducting business with the public sector for a period not exceeding ten (10) year and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislater (PORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.	n for at No nd or rs in
		TATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAP CTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUP	
	CHAIN MANAGEMENT	SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.	
	Signature	Date	
	Position	Name of bidder	

By signing this request for Standard Bidding document the supplier offers to supply the goods or service in respect of **RFQ** and **Description** of goods or services as described in this document.

<sup>2</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

Signature		Date
Print name:		
On Behalf of the Supplie	er (duly authorized)	

**COMPANY STAMP** 

Note: It is advised that documents be returned in PDF

## STANDARD BIDDING DOCUMENT (SBD) 6.1

#### PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022.

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

#### 1. GENERAL CONDITIONS

- 1.1 The following preference point systems are applicable to invitations to tender:
  - the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included);
     and
  - the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

## 1.2 To be completed by the organ of state

(delete whichever is not applicable for this tender).

- a) The applicable preference point system for this tender is the 80/20 preference point system.
- 1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:
  - (a) Price; and
  - (b) Specific Goals.

### 1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

- 1.5 Failure on the part of a bidder to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.
- 1.6 The organ of state reserves the right to require of a bidder, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

#### 2. DEFINITIONS

- (a) "tender" means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) "price" means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts:
- (c) "rand value" means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes:
- (d) "tender for income-generating contracts" means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) "the Act" means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

#### 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

#### 3.1. POINTS AWARDED FOR PRICE

#### 3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$Ps = 80\left(1 - \frac{Pt - Pmin}{Pmin}\right)$$
 or  $Ps = 90\left(1 - \frac{Pt - Pmin}{Pmin}\right)$ 

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

#### 3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

### 3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$Ps = 80\left(1 + \frac{Pt - P max}{P max}\right)$$
 or  $Ps = 90\left(1 + \frac{Pt - P max}{P max}\right)$ 

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

#### 4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the bidder will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
  - (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
  - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to bidders: The bidder must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender (B-BBEE Status Level of Contributor)	Number of points allocated (90/10 system)  (To be completed by the organ of state)	Number of alloc (80/20 s (To be comp organ o	ated ystem) leted by the	Number of points claimed (90/10 system) (To be completed by the bidder)	Number of points claimed (80/20 system) (To be completed by the bidder)
1	10	20			
2	9	18			
3	6	14			
4	5	12			
5	4	8			
6	3	6			
7	2	4			
8	1	2			
Non-compliant contributor	0	0			

#### **DECLARATION WITH REGARD TO COMPANY/FIRM**

4.3. Name of company/firm	
---------------------------	--

4.4.	Cor	mpany r	egistration number:			
4.5.	TYI	PE OF C	COMPANY/ FIRM			
	  -  -  Tic	One- Clos Publ Pers (Pty) Non- State	nership/Joint Venture / Consortium -person business/sole propriety e corporation ic Company onal Liability Company Limited -Profit Company e Owned Company CABLE BOX]			
4.6.	bas	sed on th	signed, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, ne specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown by by ledge that:			
	i)	The inf	formation furnished is true and correct;			
	<ul> <li>The preference points claimed are in accordance with the General Conditions as indicate of this form;</li> </ul>					
	<ul> <li>In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 a the contractor may be required to furnish documentary proof to the satisfaction of the organ of sta the claims are correct;</li> </ul>					
	iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of control have not been fulfilled, the organ of state may, in addition to any other remedy it may have —					
		(a)	disqualify the person from the tendering process;			
		(b)	recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;			
		(c)	cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;			
		(d)	recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the <i>audi alteram partem</i> (hear the other side) rule has been applied; and			
		(e)	forward the matter for criminal prosecution, if deemed necessary.			
s	URNAN	1E AND	SIGNATURE(S) OF TENDERER(S) NAME:			
D	ATE:					
A	DDRES	SS:				

## **B1.** SCHEDULE OF PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

SUBCONTRACTORS						
Category/ type	PERSON/PHONE/E-MAN/DETAILS OF THO DE HINDEMAKEN DV THE					

NB: If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documentation file, to be submitted in accordance with Clause C2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

Number of additional sheets submitted by the Bidder to this Schedule (If nil, enter NIL)

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Engineer.

## **SIGNED BY/ON BEHALF OF BIDDER:**

NAME	SIGNATURE	DATE

# B2. BIDDER'S HISTORY OF COMPLETED CONTRACTS VALUE OF SIMILAR NATURE TO THE WORKS AS PER FUNCTIONALITY CRITERIA

The tenderer shall insert in the spaces provided below a list of similar completed contracts awarded to it and those currently being undertaken.

EMPLOYER (NAME, TEL No. AND FAX No.)	CONSULTING ENGINEER (NAME, TEL No. AND FAX No.)	NATURE OF WORK	VALUE OF WORK R(m)	COMPLETION DATE
	CO	MPLETED CONTRACTS		
	CI	URRENT CONTRACTS		

# B3. SPECIFICATIONS OF EQUIPMENT TO BE SUPPLIED (To be completed by bidders)

# 1. Air Handling Unit:

Unit Ref:	Unit of Measure	AHU-01
To Serve		
Location		
Make		
Model Number		
Quantity		
Supply Air Fan		
Fan Speed/size	rpm/mm	
Air Quantity	l/s	
Total Pressure	kPa	
Fan Motor		
Motor Rating	kW	
Size	mm	
Voltage	V	
Motor Speed	rpm	
F.L.A/Overload Size Range	A	
Fan Run Amps	A	
Cooling Coil		
Coil Type		
CHW/DX On Coil Temperature db/wb	°C	
Off Coil Temperature db/wb	°C	
Coil Duty	kW	
Coil Face Velocity	I/s	
Heating Coil		
Coil Type	CHW/DX	
On Coil Temperature db/wb	°C	
Off Coil Temperature db/wb	°C	
Coil Duty	kW	
Coil Face Velocity	I/s	
Fresh Air		
At minimum air/maximum air	I/s	
Return Air		
At minimum air/maximum air	I/s	
Controls		
Thermostat Operation (Cool/Heat)	Yes/No	
Actual Setpoint	°C	
Dual Static set point	°C	
Refrigerant:		
Type		
Operating Charge	kg	
Operating Weight of Unit	kg	
Type of Mounting		
Physical Dimensions		
WxLxH	mm	

# NOTE:

The supply air fan will be on essential power supply and the cooling/heating to be on non-essential.

Full Bluchem or equivalent for maximum protection against corrosion.

# 2. Split Air Conditioning Unit:

Unit Numbers	Unit of Measure	AC01 & AC02
To Serve		
Location		
Make		
Model Number		
Quantity		
Total Capacity	kW	
Total Sensible Capacity	kW	
Ambient Temperature	°C	
Supply Air	l/s	
Input Power	A (V/ph/Hz)	
•		

# NOTE:

Full Bluchem or equivalent for maximum protection against corrosion.

# 3. Ventilation Fan:

Unit Ref	Unit of Measure	FAF-01
Fan		
To Serve		
Location		
Make		
Model Number		
Quantity		
Size	mm	
Total Air Quantity (Fan)	l/s	
Total Air Quantity (Grilles)	l/s	
Pressure differential (Fan Curve)	kPa	
Type of Mounting		
Sound Attenuators		
Motor		
Motor Rating/ Power Drawn kW		
Motor F.L.A Current A		
Motor Speed		
rpm		
Motor Voltage	V	
Overload Size, Range and setting.	А	

# NOTE:

Pressures indicated are for tendering purpose only, the Contractors shall determine final fan pressures once equipment has been selected.

4.	Δ		ŧ	^	m	12	ti	^	C	^	n	tr	Λ	le	
4.	m	u	L	u	"	ıa	u	L	u	u	и	u	u	13	٠.

	Make and Model Number
Thermostats	
Room Type	
Reheater	
Safety Overheat	
Fire	
Air Pressure Differential Switch	
Damper Motors	
Step Controller	
Voltage Monitors	
Time Switches	
Pressure Reducing Dampers	
Variable Speed Drivers	

# 5. Switchpanels and Control Boards:

	Make and Model Number
Name of Manufacturer	
Make of	
Isoloators	
Circuit Breakers	
Contactors	
Motor Starters	
Relays	
Time Delay Relays	
Time Switches	
Rotary Switches	
Instruments	

	Time Switches		
	Rotary Switches		
	Instruments		
Number of s	heets appended by the bidder to this Sch	chedule(If nil, enter	NIL).
SIGNED ON	BEHALF OF BIDDER:		

# B4. RECORD OF ADDENDA TO TENDER DOCUMENTS

6. 7. 8.	No.	Date	Title or Details					
3. 4. 5. 6. 7. 8. 9. 10.  If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule	1.							
4.  5.  6.  7.  8.  9.  10.  If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)	2.							
5.  6.  7.  8.  9.  If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule	3.							
3.  9.  If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)	4.							
7.  8.  9.  10.  If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule	5.							
be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)	6.							
9.  If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)	7.							
If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)	8.							
If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documenta be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)	9.							
be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.  Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)	10.							
SIGNED BY/ON BEHALF OF BIDDER:	be su	bmitted in acc	ordance with Clau	use C.	3.2.13.3 of T1.2.2 Variations to the	Star	ndard Conditions of Tender.	tion f
	SIGN	ED BY/ON BI	EHALF OF BIDDE	ER:				

# C3: Scope of Works

Any reference to 'Scope of Works' in any of the documents forming part of this agreement shall mean the "Employer's Requirements"

Number	Heading	Pages
C3.1	Background to the National Research Foundation and iThemba LABS	36
C3.2	Summary of Scope of Works	37

# C3.1 BACKGROUND TO THE NATIONAL RESEARCH FOUNDATION AND ITHEMBA LABS

The National Research Foundation ("NRF") is a juristic person established in terms of section 2 of the National Research Foundation Act, (Act 23 of 1998). The NRF supports and promotes research and human capital development through funding, the provision of National Research Facilities and science outreach platforms and programmes to the broader community in all fields of science and technology, including natural science, engineering, social science and humanities.

iThemba LABS (Laboratory for Accelerator-Based Sciences) is a multi-disciplinary research laboratory based at two sites in the Western Cape and Gauteng respectively, these provide facilities for:

- Basic and Applied Nuclear Physics Research using Particle Beams
- Research Radiation Biophysics
- The supply of Accelerator-produced Radioactive Isotopes for Nuclear Medicine and Research

Please visit the iThemba LABS website (<a href="http://tlabs.ac.za">http://tlabs.ac.za</a>) for more information.

# C3.2 SUMMARY SCOPE OF WORKS (EMPLOYER'S REQUIREMENTS)

#### 1. OVERVIEW

The auditorium at iThemba LABS at Faure is able to host 180 persons and is currently air-conditioned using an existing AHU (air handling unit) located in the plantroom, which supplies conditioned air to various spaces through externally insulated galvanized ductwork and diffusers. Additionally, cassette-type split air conditioning units provides supplementary cooling for the auditorium. The Laboratories J2 and J6 which are adjacent to the auditorium currently have no air-conditioning. It was realised that the airconditioning in the auditorium was not fit for purpose based on the discomfort levels experience especially when the auditorium is used at or close to its capacity. iThemba LABS commissioned the services of BVI consulting engineers to redesign the auditorium air conditioning and have also been appointed as Principal Agent.

The requirement is thus for the appointment of a main contractor to implement the designed solution. The scope focuses on delivering a new standalone HVAC system dedicated to the auditorium, encompassing adjacent spaces J2 and J6 as reflected in the drawings, to achieve the environmental conditions specified in accordance with SANS 10400 Part O.

## 2. THE SCOPE

The scope entails manufacture/supply, installation, commissioning and guarantee of the HVAC (Heating, Ventilation, and Air Conditioning) system including the related electrical and control systems for the auditorium, and for laboratories J2 and J6 at iThemba LABS. The specific tasks are:

#### 2.1. Removal of redundant HVAC services

Existing Cassette Units, diffusers, dampers, return air grilles, ducting, piping and all other redundant HVAC services shall be removed from the auditorium to make the space feasible for the new design.

#### 2.2. Install standalone HVAC system dedicated to the auditorium comprising new AHU and VRV condenser

One new Air handling unit coupled with a mini VRV condenser shall be installed on the roof. The new Air handling unit will supply conditioned air to the auditorium through both existing and newly installed sheet metal insulated ducts and twelve new diffusers. The Air handling unit will be controlled within the auditorium via a remote panel and space sensors. The installation will adhere to the specifications outlined in the drawing (no. 35071.00-740-01), thus ensuring compliance with BMS standards and integration.

#### 2.3. Install new split air conditioning units for laboratories J2 and J6.

Installation of two new under ceiling split air conditioning units complete with condensers located in the roof and wall mounted controllers located in laboratory J2 & J6 will provide air conditioning for both the laboratories. A new ventilation fan coupled with two sound attenuators & filter medium will provide ventilation through sheet metal ducting and four new supply air grilles complete with opposed blade dampers.

### 2.4. Install a new ventilation fan system for laboratories J2 and J6.

A new ventilation fan coupled with two sound attenuators & filter medium will provide ventilation through sheet metal ducting and four new supply air grilles complete with opposed blade dampers.

#### 2.5. Coordination and builder's work

The AHU, split units and ventilation system installation is detailed in the attached drawings (no. 35071.00-740-01), and the onus is on the Contractor to coordinate these drawings with the existing building layouts.

Minor builders work related to the installation of the new HVAC systems will be carried out by the HVAC contractor. This includes ensuring that all required openings, brackets, supports, waterproofing etc. are carried out timeously to ensure the successful installation of all HVAC systems.

# 3. ENGINEERING DRAWINGS AND DOCUMENTATION (Annexures)

# 3.1. Submissions for Engineers Approval

Please note that the following documents must be submitted to the Engineer for approval prior to the supply of equipment and commencement of installations (refer to section 3.36 CIDB):

- Equipment schedule indicating the electrical power consumption, capacity/size, noise level, make/manufacturer and weight of the equipment
- Workshop drawings indicating locations and sizes of the equipment
- Any other equipment required for installation.

The following drawings are applicable to the works and are issued with this tender document and will form part of the Contract Documents.

# <u>Drawings not bound in Document:</u>

DRAWING NO.	SHORT DESCRIPTION
35071.00-740-00 Rev A	SITE PLAN
35071.00-740-01 Rev B	GROUND FLOOR AND ROOF HVAC LAYOUT

# 3.2. Notes Regarding Drawings:

- 3.2.1. The Contractor will be supplied with 3 unreduced paper prints of each of the drawings required for construction. These copies are issued free of charge and the Contractor shall make any additional copies he may require at his own cost.
- 3.2.2. Only figured dimensions shall be used and drawings shall not be scaled unless otherwise instructed.
- 3.2.3. The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends and all other underground infrastructure shall be given by either co-ordinates, or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.
- 3.2.4. Any information in the possession of the Contractor, which the Engineer requires to complete his record drawings shall be supplied to the Engineer's Representative before a certificate of completion will be issued.
- 3.2.5. No CAD drawings will be e-mailed or supplied for tendering purposes. As built native file including extension will be shared with the successful contractor after appointment.

#### 4. DETAILED DESIGN SPECIFICATIONS

The criteria used for the design are as detailed hereunder. The completed work shall, where applicable, conform in all respects to these criteria and its operation shall be measured against these criteria during the practical and final completion inspections.

# 4.1. Air-conditioned indoor, outdoor temperatures

Ambient Conditions	Altitude:	42 m
Ambient Conditions	Summer:	32 °C dry bulb, 24 °C wet bulb
	Winter:	2 °C dry bulb
Air-conditioned indoor	Summer:	23 °C DB ± 2 °C ± 50% RH
temperatures	Winter:	21 °C DB ± 2 °C
Air-conditioned outdoor	Summer:	35 °C DB; 22 °C WB
temperatures.	Winter:	7 °C DB; 5 °C WB
	Air density	1.2kg/m³

#### 4.2. Noise Generation and Vibration Reduction

Auditorium	NC 30
Laboratory J2	NC 40
Laboratory J6	NC 40

Sound levels inside the building shall be measured 1m from the noise source, whether that may be an item of equipment or any fluid (e.g. water, air, etc.) transfer piping, ducts, grilles, louvers, etc.

# 4.3. Temperature and Humidity Control

The air-conditioning is designed for all seasons, i.e. for both cooling and heating. The temperature will be controlled with individual temperature set point adjustments for each internal space. Humidity is not specifically controlled, however during cooling the relative humidity from outdoor air would reduce to acceptable levels of less than 60% RH, which is appropriate for this type of building application.

### 4.4. Specific Major Equipment

- 4.4.1. The Auditorium will be served by an Air Handling Unit coupled with a Variable Refrigerant Volume (VRV) condenser installed on the roof.
- 4.4.2. Laboratory J2 and J6 will be served by two split air conditioning units installed in the laboratory along with a ventilation system installed on the roof.
- 4.4.3. The design and specification of the air handling unit, split air conditioning units, ventilation fan and control systems were carefully engineered. Bidders must adhere to the technical specifications provided to ensure accurate pricing of the required equipment (refer to sections 3.23 3.25). All equipment to be approved by the engineer prior to supply and installation.

- 4.4.5. One new air handling unit will be installed on the roof floor level, along with two split units in the laboratories. The air handling unit will operate independently from the current chilled water system, providing heating, ventilation and air conditioning for the auditorium alone.
- 4.4.6. Laboratory J2 & J6 will be equipped with a new fresh air fan for ventilation.

#### 4.5. Controls and Instrumentation

- 4.5.1. The air handling unit control panel system shall monitor and control the temperature in the auditorium through a remote panel and space sensors located in the auditorium and wired back to the electrical control panel of the air handling unit located in the roof.
- 4.5.2. For temperature control, average sensors in the space will do the temperature control, CO2 sensors in the space will control dampers to allow more fresh air when CO2 levels are too high. For economy control, when ambient temperature is cooler than return air temperature in cooling mode, fresh air dampers will open and return air damper will be closed. For Air pressure, supply air flow is controlled via supply air pressure and as the filters get dirty the supply fan will speed up to maintain pressure set point.
- 4.5.3. The control system is completely automated and will change over from cooling to heating and vice versa through a set point. A TH (temperature and humidity) Tune remote controller will be installed in the auditorium where the user can switch the system on/off and change temperature set point.
- 4.5.4. The temperature in the laboratory J2 & J6 will be controlled and monitored through wall mounted thermostat controllers located within the laboratories wall. The thermostat will sense the temperature in the room, then sends a signal to the under-ceiling units control board indicating the desired temperature.

# 4.6. Fixing of Equipment

- 4.6.1. The Contractor shall identify and submit the location of hangers and/or other support points of all equipment with a mass in excess of 25 kg to the Engineer. Approval of the proposed hanging and fixing shall be obtained from the Engineer, prior to carrying out the work.
- 4.6.2. All lightweight fixing to brick or concrete shall be made with steel screws and "Fischer" or other approved plugs. Holes of the required size for the plugs, which shall suit the screws used, are to be neatly drilled in the concrete or brickwork (not in the joints between bricks) to a depth excluding plaster or soft wall finish equal to at least the length of the plugs. The plug lengths shall be such that all the threaded length of the screws are in the plugs.
- 4.6.3. All heavy weight fixings to brick or concrete shall be by means of appropriately sized grouted galvanized bolts or by one of the various types of suitable expanding bolt fixings.
- 4.6.4. After erection of equipment all exposed metalwork of fixings shall be treated with two coats of paint to match the finish of the equipment. Bolts shall in all instances be secured by means of a washer on the bolt head side and a lock washer on the nut side of the items being bolted.
- 4.6.5. Where the Contractor is in any way uncertain of the method of fixing of any plant or material, the proposed fixing and loading involved shall be cleared with the Engineer prior to carrying out the work on site.

#### 4.7. Vibration Isolation

4.7.1. Unless otherwise noted on the equipment schedules hereafter, all mechanical equipment, i.e. chillers, pumps, machinery, piping, ducting, etc., shall be mounted on vibration isolators to prevent the transmission of vibration and mechanically transmitted sound to the building structure.

#### 4.8. Corrosion Precautions and Finishes

- 4.8.1. All materials such as brackets, hangers, etc., shall be shot blasted, pre-painted, galvanised or treated against corrosion prior to their delivery to site. Any work that will require site cutting, etc., i.e. exposure of the bare steel to the atmosphere, shall immediately be treated by cold galvanising, painting, etc. Full Bluchem or equivalent treatment for maximum protection against corrosion.
- 4.8.2. The method of treatment for the above shall depend on the particular environment and type of surface to be coated. The surface preparation, primer coats, finishing coats, etc. shall therefore be in accordance with those specified by reputable paint manufacturers such as Plascon, Dulux, etc.
- 4.8.3. All black steel piping, support brackets, hangers, etc., installed inside the building shall be treated with two coats of corrosion inhibitor paint prior to installation. The first coat shall be allowed to dry completely before the next coat is applied.
- 4.8.4. A further coat of corrosion inhibitor shall be applied after installation and allowed to dry completely. Two coats of enamel paint, to the Architect or Engineers specification, shall finally be applied. The first coat shall be allowed to dry completely before the next coat is applied.
- 4.8.5. All black steel piping, support brackets, hangers, etc., exposed to the weather shall be hot dipped galvanized.
- 4.8.6. All duct, supports, equipment and materials exposed to view (i.e. not in shafts, false ceiling, bulkheads, etc.) shall be cleaned, primed and then finished with two coats of enamel paint to the Architect or Engineer's specification. Each application shall be allowed to dry completely before the next coat is applied. The only exception to these stipulations shall be in the case of subcontracts, where the sub-contractor shall only apply the primer coats and the Principal Contractor the finishing coats.
- 4.8.7. Colour coding shall follow the coding currently used on site. If no colour coding is in use, or in the case of new installations, the latest SANS 10173 (clause 6) and SANS 10140 Standards shall be used.
- 4.8.8. Plant and equipment, pre-painted or pre-primed at the factory shall be examined to ensure that the paint finishes are in a good condition. If not satisfactory, priming paint or finishing coats shall be removed where necessary, the surface cleaned to remove rust, and all such surfaces re primed and finished in two coats of high quality paintwork to match the original.

#### 4.9. Marking and Labelling

- 4.9.1. The contractor shall fix black on white ivorine labels to all items of equipment (machinery, fans, pumps, electric heater batteries, humidifiers, air handling units, outdoor condensers, etc.), as well as to all active valves (motorized and solenoid) and major isolating valves.
- 4.9.2. The labels shall be screwed or pop-riveted to the equipment and attached to the valves with steel cables. The lettering shall not be less than 10 mm in height and the wording shall be approved by the Engineer. The wording and tag numbers shall be the same as those used in this specification and indicated on the drawings.

#### 4.10. Associated Electrical Work

- 4.10.1. All electrical switchgear and wiring required for the proper operation of the works shall be provided by the Contractors representative who is suitably qualified and certified. The existing switchboard and switchgear will be re-used where possible.
- 4.10.2. The Contractor shall indicate whether the above power supplies are sufficient or not and whether additional plug points, conduits and draw boxes are required. All costs arising from the failure to comply with this instruction will be for the Contractor's account.
- 4.10.3. The contractor shall ensure that the power supply to the equipment is installed correctly and that, once switched on, it will not damage the equipment.
- 4.10.4. All electrical works performed will require a Certificate of Compliance to be issued by the contractor.
- 4.10.5. The contractor will provide power supply adjacent to the mechanical equipment as indicated on drawings. The contractor shall supply and connect the supply isolator, and do all work on the load side of this point of connection as necessary for the complete installation and operation of equipment.
- 4.10.6. The contractor shall supply and install all equipment and materials necessary for the complete and correct electrical operation of the mechanical services under normal operation, fire mode and emergency power mode. All items of equipment shall be of good quality with regard to design and manufacture and shall be completely satisfactory for operation, control, safety and maintenance under all conditions of service.
- 4.10.7. Uniformity of type and manufacture of switchgear, control gear, fittings and accessories shall be preserved throughout the whole of the installation.

### 4.11. Commissioning

- 4.11.1. Commissioning of the works shall be witnessed by the engineer. All equipment shall be commissioned by the contractor and execution shall be based on detailed commissioning schedules well in advance of the programmed practical completion inspection date.
- 4.11.2. The schedules shall make allowance for all measurements that will be required, checking of operational and safety set-points, test results, etc., and shall be submitted to the Engineer for approval prior to the start of commissioning.
- 4.11.3. Each task in these schedules shall be countersigned by the Contractors Commissioning Engineer to ensure that any discrepancies between site and commissioning conditions/data can be clarified.

# 4.12. Instruction/ Training

- 4.12.1. The Bidders shall allow at least two (2) days for instructing/training of the Employers representatives and the Engineer on the operation, maintenance and adjustment of the systems at a date approved by the engineer.
- 4.12.2. Instruction shall take place during the warranty period on dates and times to be identified by the Engineer.

# 4.13. Equipment and Capacities Required

# 4.13.1. Air Handling Unit

Unit Ref:	Unit of	AHU-01
	Measure	
To Serve		Auditorium
Location		Roof
Make		Air Options & Daikin, similar or
		equally approved
Model Number		MAH 2
Quantity		1
Cumply Air Fan		
Supply Air Fan Fan Speed/size	rpm/mm	1885/355
Air Quantity	I/s	1909
Total Pressure	kPa	570
Total i Tessure	ni d	310
Fan Motor		
Motor Rating	kW	2.2
Size	mm	355
Voltage	V	220/380
Motor Speed	rpm	1885
F.L.A/Overload Size Range	A	
Fan Run Amps	A	
Cooling Coil		
Coil Type		DX
CHW/DX		
On Coil Temperature db/wb	°C	28.6/19.2
Off Coil Temperature db/wb	°C	14.1/13
Coil Duty	kW I/s	41.18
Coil Face Velocity	1/5	2.46
Heating Coil		
Coil Type		
CHW/DX		
On Coil Temperature db/wb	°C	
Off Coil Temperature db/wb	°C	
Coil Duty	kW	
Coil Face Velocity	m/s	
Fresh Air		
At minimum air/maximum air	I/s	1512
Detum Air		
Return Air At minimum air/maximum air	I/s	397
AL HILLIHUM AII/MAXIMUM AII	1/5	351
Controls		1
Thermostat Operation (Cool/Heat)	Yes / No	Yes
Actual Setpoint	°C	.33
Dual Static set point	°C	
Electrical Control Panel	Yes / No	Yes
Refrigerant:		
Туре		R410
Operating Charge	kg	

Operating Weight of Unit	kg	
Type of Mounting		
Physical Dimensions		
WxLxH	mmm	1330x2940x1106

# NOTE:

The supply air fan will be on essential power supply and the cooling/heating to be on non-essential.

Full Bluchem or equivalent treatment for maximum protection against corrosion.

# 4.13.2. Split Air Condition Units

Unit Ref:	Unit of Measure	AC01 & AC02
To Serve		Laboratory J2 & J6
Location		Laboratory J2 & J6
Make		Daikin, Similar or equally
		approved
Model Number		FHA140A
Quantity		2
Total Capacity	kW	14
Total Sensible Capacity	kW	10
Ambient Temperature	°C	35/7
Supply Air	I/s	567
Input Power	A (V/ph/Hz)	1.8/230/1/50

# NOTE:

Full Bluchem or equivalent treatment for maximum protection against corrosion.

# 4.13.3. Ventilation Fan

Unit Ref:	Unit of Measure	FAF-01
Fan		
To Serve		Laboratory J2 & J6
Location		Roof
Make		AMS, Similar or equally approved
Model Number		TD 4000/355
Quantity		1
Size		355
mm		
Total Air Quantity (Fan)		650
l/s		
Total Air Quantity (Grilles)		600
l/s		
Pressure differential (Fan Curve)	kPa	225
Type of Mounting		AVM springs
Sound Attenuators		Yes
Motor		
Motor Rating/ Power Drawn	kW	0.345
Motor F.L.A Current	A	1.53
Motor Speed	rpm	1400
Motor Voltage	V	230
Overload Size, Range and setting.	A	

# NOTE:

Pressures indicated are for tendering purpose only, the Contractors shall determine final fan pressures once equipment has been selected.

Bidders must provide for the mandatory servicing and cost thereof in order for warranty obligations to be honoured.

# C1: Agreements and Contract Data

Number	Heading	Pages
C1.1	Form of Offer and Acceptance	54
C1.2	Contract Data	57

# C2.1 Form of Offer and Acceptance

# Offer

**SIGNED BY WITNESS:** 

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

BID NO: NRF ILABS ATL/08/2024-25 – Appointment of a specialist service provider with CIDB Grading of 3ME or higher, for the manufacture/procurement, delivery, installation, commissioning, and guarantee of the auditorium ventilation and air conditioning (HVAC) system at iThemba LABS, Faure Western Cape, South Africa.

The bidder, identified in the offer signature block below, has examined all the documents listed and included by reference in the tender data and addenda thereto as listed in the Schedule of Returnable, Contract Documents and all documents defining the Employer' Requirements, and by submitting this offer has accepted the conditions of tender and the Contract.

By the representative of the bidder, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the Bidder offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data, within the Contract Period stated below.

# A) THE OFFERED TOTAL OF THE PRICES <u>INCLUSIVE</u> OF VALUE ADDED TAX IS:

		RAND (	in words);
R	(in figures)		
returning one co	py of this document to the bidder before	e Acceptance part of this Form of Offer and the end of the period of validity stated in attractor in the Conditions of Contract identifie	the Tender Data,
SIGNED ON BE	HALF OF/BY THE BIDDER:		
	NAME	SIGNATURE	
	CAPACITY	DATE	
Name and Add	dress of Organisation:		

# **Acceptance**

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the Bidder's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data and for the contract period offered. Acceptance of the bidder's offer shall form an Agreement between the Employer and the Bidder upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

Part C1: Agreements and Contract Data (which includes this Agreement)

Part C2: Pricing Data

Part C3: Scope of Work (Employer Requirements)

and drawings and documents or parts thereof, which may be incorporated by reference into Parts D1 to D3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Returnable Documents as well as any changes to the terms of the Offer agreed by the Bidder and the Employer during this process of offer and Acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this schedule which must be duly signed by the authorised representative(s) of both parties.

The bidder shall within two weeks of signing this Agreement, including the Schedule of Deviations (if any), or when or just after this Agreement comes into effect, contact the employer's implementing agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date of signature of this document, including the Schedule of Deviations (if any). Unless the bidder (now Contractor) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

# SIGNED ON BEHALF OF/BY THE EMPLOYER:

NAME	SIGNATURE
CAPACITY	DATE

Name and Address of Organisation		
SIGNED BY WITNESS:		
NAME	SIGNATURE	DATE

### C2.1 Contract Data

# Part 1: Contract Data Provided by the Employer

### **CONDITIONS OF CONTRACT**

The following GCC Conditions of Contract are applicable for this Contract:

Conditions which form part of the Conditions of Contract for Construction, designed by the Employer.

#### **BIDDER NEEDS TO KNOW**

#### ACKNOWLEDGEMENT OF READING EACH PAGE

The bidder warrants by signature in this document that the bidder has read and accepts each page in this document including any annexures attached to this document.

#### **CENTRAL SUPPLIER DATABASE REGISTRATION**

The NRF requests bidders to register on the Central Supplier Database and to include in their bid their Master Registration Number (Supplier Number) in order to enable the NRF to verify the supplier's tax status on the Central Supplier Database.

# **CLARIFICATION**

If the respondent wishes to clarify aspects of this request or the acquisition process, they write to the contact officials listed under the enquiries section above. The National Research Foundation distributes the response to a clarification request to all respondents that have communicated their intention to bid (i.e. briefing session attendance register) within 2 working days of receipt of the query. The National Research Foundation does not provide the origin of the request to any party.

#### **RESPONSE PREPARATION COSTS**

The NRF is not liable for any costs incurred by a bidder in the process of responding to this Bid Invitation, including on-site presentations.

#### **COUNTER PROPOSALS**

No counter proposals are accepted as this is a request for quotation of supplies.

### TWO ENVELOPE SYSTEM

The NRF, in the interests of transparent procurement, utilises the two-envelope system to minimise any form of price bias in the technical selection phase.

- a) All responses must be submitted in two sealed envelopes/boxes; the first envelop/box shall have the technical, and the second envelop/box shall only have the financial response. Bidders must ensure that they do not indicate any financial information in the first envelop/box.
- b) Bidders are required to package their response/Bid as follows:

Envelope 1-part A: Bid Forms and Compliance Response

• Envelope 1-part B: Technical Response (response to scope of work)

• Envelope 2 : Financial Proposal and Bid Submission Form

#### **COLLUSION, FRAUD AND CORRUPTION**

Any effort by Bidder to influence evaluation, comparisons, or award decisions in any manner will result in the rejection and disqualification of the bidder concerned.

#### **FRONTING**

The NRF supports the spirit of broad based black economic empowerment and recognizes that achieving real empowerment is through individuals and businesses conducting themselves in accordance with the Constitution and in an honest, fair, equitable, transparent, and legally compliant manner. Against this background, the NRF condemns any form of fronting. The NRF, in ensuring that bidders conduct themselves in an honest manner will, as part of the bid evaluation processes where applicable, conduct or initiate the necessary enquiries/investigations to determine the accuracy of the representation made in the bid documents. The onus is on the bidder to prove that fronting does not exist, should the National Research Foundation establish and notify the bidder of potential breaches. Failure to do so within a period of 7 days from date of notification will invalidate the bid/contract and may also result in the restriction of the bidder to conduct business with the public sector for a period not exceeding 10 years, in addition to any other remedies the NRF may have against the bidder concerned.

#### **DISCLAIMERS**

The NRF has produced this document in good faith. The NRF, its agents, and its employees and associates do not warrant its accuracy or completeness. The NRF makes no representation, warranty, assurance, guarantee or endorsements to any provider/bidder concerning the document, whether with regard to its accuracy, completeness or otherwise and the NRF shall have no liability towards the responding service providers or any other party in connection therewith.

#### **GENERAL DEFINITIONS**

"B-BBEE" means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;

"B-BBEE status level of contributor" means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

"Bid" means a written offer in a prescribed or stipulated form in response to an invitation by the National Research Foundation for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;

"Broad-Based Black Economic Empowerment Act" means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

"Contract" means the entire bid document inclusive of scope of work, specification, price conditions, price quote table, service delivery conditions, performance conditions with their key performance indicators, and general conditions when attached to the Standard Bidding Document 7.1 (SBD 7.1) which has been signed by the awarded bidder and the National Research Foundations:

"EME" means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;

"Market Price" means tests to verify the offered prices are market related to the NRF in allowing the bidder to complete the work without risk of performance failure to the NRF and that the price provides the sustainability to the bidder.

"Functionality" means the ability of a bidder to provide goods or services in accordance with specifications including quality that deliver the set levels of performance functionality as set out in the bid documents.

"Proof of B-BBEE status level of contributor" means:

- a. B-BBEE Status level certificate issued by an authorized body or person;
- b. A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
- c. Any other requirement prescribed in terms of the B-BBEE Act.

"QSE" means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act.

### **Checking Tax Compliance**

iThemba LABS verifies tax status as set out in the SBD 1 through the CSD and, for non-resident respondents, obtains the Confirmation of Tax Obligations letter from the South Africa Revenue Services after submitting their SBD 1 tax questionnaire to South Africa Revenue Services.

### **Award and Contract Signing**

The NRF nominates the bidder with the highest combined score for the contract award subject to the bidder having supplied the relevant administrative documentation.

# Cancellation of the Bid prior to Award

The NRF cancels the Bid Invitation prior to making an award where

- a. Due to changed circumstances there is no need for the specified procurement in the document, or
- b. No bids meet the minimum required specification, or
- c. A material irregularity occurred in the bid process, or
- d. Where the price is too low/high in comparison to the pre-bid defined market price range with no bidder

prepared to negotiate the price into the determined market price range.

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

### **GENERAL CONDITIONS OF CONTRACT**

In this document words in the singular also mean in the plural and vice versa, words in the masculine mean in the feminine and neuter, words "department" means organs of state inclusive of public entities and vice versa, and the words "will/should" mean "must".

The National Research Foundation cannot amend the National Treasury's General Conditions of Contract (GCC). The National Research Foundation therefore appends Special Conditions of Contract (SCC) providing specific information relevant to a GCC clause that requires the addition of Special Conditions in the Special Condition of Contract Section in above in Part A.

GCC1	Definitions - The following terms shall be interpreted as indicated:
1.1	"Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
1.2	"Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
1.3	"Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
1.4	"Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
1.5	"Countervailing duties" imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
1.6	"Country of origin" means the place where the goods were mined, grown, or produced, or from which the services are supplied. Goods produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components
1.7	"Day" means calendar day.
1.8	"Delivery" means delivery in compliance of the conditions of the contract or order.
1.9	"Delivery ex stock" means immediate delivery directly from stock actually on hand
1.10	"Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
1.11	"Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
1.12	"Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars, or revolutions, fires, floods, epidemics, quarantine restrictions

	GENERAL CONDITIONS OF CONTRACT
	and freight embargoes.
1.13	"Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
1.14	"GCC" mean the General Conditions of Contract.
1.15	"Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
1.16	"Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
1.17	"Local content" means that portion of the bidding price, which is not included in the imported content if local manufacture does take place.
1.18	"Manufacture" means the production of products in a factory using labour, materials, components, and machinery and includes other related value-adding activities.
1.19	"Order" means an official written order issued for the supply of goods or works or the rendering of a service.
1.20	"Project site", where applicable, means the place indicated in bidding documents.
1.21	"Purchaser" means the organization purchasing the goods.
1.22	"Republic" means the Republic of South Africa.
1.23	"SCC" means the Special Conditions of Contract.
1.24	"Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
1.25	"Written" or "in writing" means handwritten in ink or any form of electronic or mechanical writing.
GCC2	Application
2.1	These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
2.2	Where applicable, special conditions of contract laid down to, cover specific supplies, services or works.
2.3	Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

GENERAL CONDITIONS OF CONTRACT  General	
GCC3	General
3.1	Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
3.2	With certain exceptions (National Treasury's eTender website), invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za
GCC4	Standards
4.1	The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.
GCC5	Use of contract documents and information
5.1	The supplier shall not disclose, without the purchaser's prior written consent, the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure made to any such employed person is in confidence and shall extend only as far as may be necessary for purposes of such performance.
5.2	The supplier shall not make, without the purchaser's prior written consent, use of any document or information mentioned in GCC clause 5.1 except for purposes of performing the contract.
5.3	Any document, other than the contract itself mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract if so required by the purchaser.
5.4	The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.
SCC5A	Copyright and Intellectual Property
	Intellectual property are creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names, images used in commerce; and includes copyright (a legal term describing the rights that creators have over their literary and artistic works including books, music, paintings, sculpture and films, to computer programs, databases, advertisements, maps and technical drawings); trademark (a legal term describing a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises); and patents (a legal terms describing an exclusive right granted for an invention providing the patent owner with the right to decide how - or whether - the invention can be used by others).
	<b>Background intellectual property</b> is the intellectual property pertaining to this contract, created, and owned by any of the appointed parties to this contract prior to the effective date of this contract.
	<b>Contract intellectual property</b> is the intellectual property created by the parties to this contract for and in the execution of the contract.
	All background intellectual property (existing prior to this contract) invests in and remains the sole

#### **GENERAL CONDITIONS OF CONTRACT**

property of the appointed parties to this contract. Both parties disclose openly such intellectual property ownership to the parties in writing at the commencement of this contract.

The supplier/ grants the purchaser a fully paid up, irrevocable, and non-exclusive licence to use its background intellectual property for the exploitation of this contract to enable the purchaser to obtain the full benefit of the appointed deliverables for this contract.

The parties agree that all right, title, and interest in contract intellectual property created during the execution of this contract invests with the purchaser unless where agreed in writing to a different allocation of the ownership of the contract intellectual property as set out in the below special condition (SCC 5B).

Both parties to this contract shall keep the intellectual property created during this contract confidential and shall fulfil its confidentiality obligations as set out in this document.

The supplier agrees to assist the purchaser in obtaining statutory protection for the contract intellectual property at the expense of the purchaser wherever the purchaser may choose to obtain such statutory protection.

The purchaser shall procure where necessary the signatures of its personnel for the assignment of its respective contract intellectual property to the National Research Foundation or as the National Research Foundation may direct, and to support the National Research Foundation or its nominee, in the prosecution and enforcement thereof in any country in the world.

The purchaser irrevocably appoints the National Research Foundation to be its true and lawful agent in its own name, to do such acts, deeds, and things and to execute deeds, documents, and forms that the National Research Foundation in its discretion requires in order to give effect to the terms of this clause.

# SCC5B Confidentiality

Each party shall be careful and diligent as not to cause any unauthorised disclosure or use of the confidential information, in particular, during the consistency of the Contract and after termination of the Contract. Without the prior consent of the other party, each party will keep confidential and will not:

- a. Disclose the confidential information, directly or indirectly, to any person or entity,
- Use, exploit or in any other manner whatsoever apply the confidential information for any other purpose whatsoever, other than for the execution of the contract and the delivery of the deliverables or
- c. Copy, reproduce, or otherwise publish confidentiality information except as strictly required for the execution of the contract.

The parties shall ensure that any employees, agents, directors, contractors, service providers, and associates which may gain access to the confidential information abide by the undertakings in this clause both during the term of their associations with the recipient and after termination of their respective associations with the parties, not to

- a. Disclose the confidential information to any third party, or
- b. Use the confidential information otherwise than as may be strictly necessary for the execution of the contract,
- c. The parties shall take all such steps as may be reasonably necessary to prevent the confidential information from falling into the hands of any unauthorised third party.

The undertakings set out in this clause shall not apply to confidential information, which the parties are

# GENERAL CONDITIONS OF CONTRACT able to prove: a. Was independently developed or in the possession of the recipient of the confidentiality information prior to its involvement with the other part; b. Is now or hereafter comes into the public domain other than by breach of this contract by any of the parties; c. Was lawfully received by the recipient from a third party acting in good faith having a right of further disclosure and who do not derive the same directly or indirectly from the other party, or d. Required by law to be disclosed by the recipient, but only to the extent of such order and the recipient shall inform the other party of such requirement prior to any disclosure. Each party shall within one (1) month of receipt of a written request from the NRF to do so, return to the other party all material embodiments, whether in documentary or electronic form, of the confidential information including but not limited to: a. All written disclosures; b. All written transcripts of confidential information disclosed verbally; and c. All material embodiments of the contract intellectual property. The parties acknowledge that the confidential information was made available solely for the execution of the contract and for no other purpose whatsoever and that the confidential information would not have been made available, but for the obligations of confidentiality agreed to herein. Except as expressly herein provided, this contract shall not be construed as granting or confirming, either expressly or impliedly any rights, licences or relationships by furnishing of confidential information by either party pursuant to this contract. The recipient acknowledges that the unauthorised disclosure of confidential information may cause harm to the NRF. The recipient agrees that, in the event of a breach or threatened breach of confidentiality, the NRF is entitled to seek injunctive relief or specific performance, in order to obtain immediate remedies. Any such remedy shall be in addition to and not in lieu of any other remedies available at law, including monetary damages. SCC5C **Protection of Private Information** The supplier hereby gives the purchaser permission, in terms of the Protection of Personal Information Act 4 of 2013, to process, collect, receive, record, organise, collate, store, update, modify, retrieve, alter, consult, use, disseminate, distribute, merge, link, erase or destroy personal information received. By submitting a bid, the supplier gives its voluntary explicit consent to the terms of this special condition. GCC6 Patent rights 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser. GCC7 Performance security

to the purchaser the performance security of the amount specified in SCC.

Within thirty days (30) of receipt of the notification of contract award, the successful bidder shall furnish

7.1

	GENERAL CONDITIONS OF CONTRACT	
7.2	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 his obligations under the contract.	
7.3	The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:	
	7.3.1 bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or	
	7.3.2 a cashier's or certified cheque.	
7.4	The performance security will be discharged by the purchaser and returned to the supplier within thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.	
SCC7	The additional terms for performance securities as detailed in Special Conditions Of Contract Management on page 72-74 are applicable.	
GCC8	Inspections, tests and analyses	
8.1	All pre-bidding testing will be for the account of the bidder.	
8.2	If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the purchaser or an organization acting on behalf of the purchaser.	
8.3	If there are no inspection requirements indicated in the bidding documents and contract makes no mention, but during the contract period, it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.	
8.4	If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.	
8.5	Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the supplier shall defray the cost in connection with these inspections, tests, or analyses.	
8.6	Supplies and services referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.	
8.7	Any contract supplies may on or after delivery be inspected, tested or analysed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies are held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies, which do comply with the requirements of the contract. Failing such removal the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.	

	GENERAL CONDITIONS OF CONTRACT
8.8	The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract because of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.
SCC8	Additional inspection procedures as detailed in Special Conditions Of Contract Management on page 72 are applicable.
GCC9	Packing
9.1	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. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt, and precipitation during transit, 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.
9.2	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 SCC, and in any subsequent instructions ordered by the purchaser.
SCC9	Additional packing requirements as detailed in Special Conditions Of Contract Management on page 72 are applicable.
GCC10	Delivery and Documentation
10.1	The supplier in accordance with the terms specified in the contract shall make delivery of the goods/services. The SCC specifies the details of shipping and/or other documents furnished by the supplier.
10.2	Documents submitted by the supplier specified in SCC.
SCC10	Additional delivery documentation requirements as detailed in Special Conditions Of Contract Management on page 72 are applicable.
GCC11	Insurance
11.1	The goods supplied under the contract are fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.
SCC11	Professional indemnity insurance cover in accordance with Special Conditions Of Contract Management on page 72-74 is required.
GCC12	Transportation
12.1	Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.
GCC13	Incidental services
13.1	The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
	13.1.1 Performance or supervision of on-site assembly and/or commissioning of the supplied goods;
	13.1.2 Furnishing of tools required for assembly and/or maintenance of the supplied goods;
	13.1.3 Furnishing of a detailed operations and maintenance manual for each appropriate unit of the

GENERAL CONDITIONS OF CONTRACT	
	supplied goods;
	13.1.4 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
	13.1.5 Training of the purchaser's personnel, at the supplier's plant and/or on-site, conducted in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.
13.2	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.
GCC14	Spare parts
14.1	As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:
	14.1.1 Such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
	14.1.2 In the event of termination of production of the spare parts:
	14.1.2.1 Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
	14.1.2.1 Following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.
GCC15	Warranty
15.1	The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models and those they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
15.2	This warranty shall remain valid for twelve (12) months after the goods, installed, commissioned and accepted at the final destination indicated in the contract, unless specified otherwise in SCC.
15.3	The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
15.4	Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
15.5	If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take 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.
SCC15	The additional warranty requirements as detailed in Special Conditions Of Contract Management on page 72-74 are applicable.

GENERAL CONDITIONS OF CONTRACT	
GCC16	Payment
16.1	The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.
16.2	The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.
16.3	Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
16.4	Payment will be made in Rand unless otherwise stipulated in SCC.
SCC16	Additional payment terms as detailed <b>in</b> Special Conditions Of Contract Management <b>on</b> page 72-74 <b>are applicable.</b>
GCC17	Prices
17.1	Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.
GCC18	Contract amendment
18.1	No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.
GCC19	Assignment
19.1	The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.
GCC20	Subcontract
20.1	The supplier shall notify the purchaser in writing of all subcontracts awarded under this contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract
SCC20	The requirements of sub-contractor management as detailed in Special Conditions Of Contract Management on page 72-74 are applicable.
GCC21	Delays in supplier's performance
21.1	Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
21.2	If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration, and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
21.3	No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.

GENERAL CONDITIONS OF CONTRACT	
21.4	The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.
21.5	Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 without the application of penalties.
21.6	Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.
GCC22	Penalties
22.1	Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.
GCC23	Termination for default
23.1	The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
	23.1.1 If the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2;
	23.1.2 If the Supplier fails to perform any other obligation(s) under the contract; or
	23.1.3 If the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract. h
23.2	In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in suc manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.
23.3	Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
23.4	If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may

	GENERAL CONDITIONS OF CONTRACT
	impose it on the supplier.
23.5	Any restriction imposed on any person by the Accounting Officer / Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.
23.6	If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information:
	23.6.1 The name and address of the supplier and / or person restricted by the purchaser;
	23.6.2 The date of commencement of the restriction
	23.6.3 The period of restriction; and
	23.6.4 The reasons for the restriction.
	These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.
23.7	If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.
SCC23	The additional terms of termination as detailed in Special Conditions Of Contract Management on page 72 are applicable.
GCC24	Anti-dumping and countervailing duties and rights
24.1	When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him
GCC25	Force Majeure
25.1	Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

	GENERAL CONDITIONS OF CONTRACT
25.2	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
GCC26	Termination for insolvency
26.1	The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.
GCC27	Settlement of disputes
27.1	If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.
27.2	If, after thirty (30) 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 his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
27.3	Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
27.4	Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.
27.5	Notwithstanding any reference to mediation and/or court proceedings herein,
	27.5.1 The parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
	27.5.2 The purchaser shall pay the supplier any monies due the supplier.
GCC28	Limitation of liability
28.1	Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to Clause 6;
	28.1.1 The supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and
	28.1.2 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.
GCC29	Governing language
29.1	The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.
GCC30	Applicable law

GENERAL CONDITIONS OF CONTRACT		
30.1	The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.	
GCC31	Notices	
31.1	Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice.	
31.2	The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice	
SCC31	Electronic communication, to the extent it meets the requirements of legal notices, is also permitted.	
GCC32	Taxes and duties	
32.1	A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.	
32.2	A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.	
32.3	No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid, the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services	
SCC32A	The "tax certificate" in clause 32.3's second sentence refers to the documents specified in National Treasury Instruction Note 9 of 2017/18 applicable to public entities and departments.	
GCC33	National Industrial Participation Programme	
33.1	The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.	
GCC34	Prohibition of restrictive practices	
34.1	In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).	
34.2	If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has/have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998.	
34.3	If a bidder(s) or contractor(s), has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years and / or claim damages from the bidder(s) or contractor(s) concerned.	

#### SPECIAL CONDITIONS OF CONTRACT MANAGEMENT

Special conditions amending specific clauses of the general conditions of contract reference the specific clause in the title The General Conditions forming part of these special conditions and conditions of contract are those stated from page 59 to page Error! Bookmark not defined.

# **Project Management**

# iThemba LABS

The General Technical Support department of iThemba Labs Cape Town is responsible for this Tender and subsequent contract. Contact details provided to the appointed service provider's Key Account Manager.

# **Service Provider**

Appointed Principal Agent – BVi Consulting Engineers

# Implementation, hand over, and product management

The appointed bidder provides the delivery management as specified in the detailed specification. iThemba LABS will issue purchase orders as a project control tool and will monitor the execution of the schedule until the purchase order requirements are received on site.

After signing the contract, the appointed bidder must ensure that the equipment comply with the necessary norms for the installation and commissioning of the equipment supplied according to the original requirements, specifications and safety regulations.

A meeting between the appointed bidder and the iThemba LABS contract project manager shall take place to confirm that all specifications comply with finally agreed specification as well as to make sure that all standards conform to international and South African regulations.

# Incidental Services to the subject matter of this contract (General Condition of Contract Clause No: 13)

In the event of requiring such incidental services, it is only valid if confirmed through the issue of a written purchase order that specifies, where applicable, quality, quantity, description, unit price, and delivery date.

# Performance Verification (General Condition of Contract Clause No: 8)

The iThemba LABS appointed project manager verifies the performance of this contract with reference to the required requirements and any other element specified in this contract:

The appointed bidder will render services as per specifications under this contract.

### **Contract Due Diligence during the contract period**

iThemba LABS has the right to conduct supply chain due diligence. The iThemba LABS Project Team have the right to conduct site visits and inspections at any given time during the contract period.

# **Communication (General Condition of Contract Clause No: 31)**

The appointed bidder communicates in writing through regular mail, physical delivery, or email. The appointed bidder states the contract number and purchase order number on communication documentation. The contract bidder does not act upon any communication without the contract number or must verify such communication with the iThemba LABS project manager prior to acting upon it.

### **Performance Security (General Condition of Contract Clause No: 7)**

An acceptable financial performance bond is required where iThemba LABS pays an upfront deposit in excess of R 1 million to the same value as any such upfront deposit. No other performance security is required.

### Packing (General Condition of Contract Clause No: 9)

Components (where applicable) must be packaged such that they prevent damage during transportation and storage.

### **Delivery and Documentation (General Condition of Contract Clause No: 10)**

The functional HVAC systems, commissioning data and as built drawings must be delivered to iThemba LABS within 6 months after the award of the bid to the successful bidder.

### **Payment (General Condition of Contract Clause No: 16)**

Payment terms are within 30 days of receipt of an invoice issued following successful rendering of services and earlier where the invoices are accompanied by signed iThemba LABS delivery validation documents including proof of performance stating acceptance of quantity, acceptance to specification, and unit pricing in agreement with the contract and any purchase orders issued in terms of the contract.

It is in the interests of the appointed bidder to adhere to these to receive prompt payment. Any losses incurred through exchange rate variations or interest charged on late payment will be charged to the appointed bidder where these costs arose from non-adherence to the above.

#### **Prices (General Condition of Contract Clause No: 17)**

The price schedule for the bid under the contract shall not vary from the prices quoted by the service provider in their bid with iThemba LABS with the exception of any price adjustments authorized in this section.

1. **Exceptions:** Exceptions to the clause are incidental services, changes in Value Added Tax as gazetted, and exchange rates and spare parts.

#### 2. Price Adjustment Rules:

The appointed bidder provides revised pricing detailing reasons for price variations substantiated by evidence such as manufactured country's inflation rates, technology refresh rate impacts, verifiable consumer price variations, and verified movement in exchange rates. iThemba LABS enters in negotiation on the submitted price quotation and variation reasons. iThemba LABS reserves the right to obtain three price quotes from the market to verify the submitted pricing are within such identified market price ranges.

Exchange rate prices — Where the supplied requirements are from overseas, the appointed bidder will state the portion and currency payable overseas separating local costs. iThemba LABS will only consider exchange rate variations on the identified foreign price component. The rate variation is the difference between the current exchange rate and the exchange rate ruling at the date of signing the SBD 7.1. Exchange rates are obtained from ABSA or for the www.xe.com website. iThemba LABS will verify the submitted exchange rate variation and enter into negotiation with the appointed bidder on the agreed variation.

- 3. <u>Ceiling Price Calculation for price competition:</u> iThemba LABS provides bidding estimates of quantities to allow for the calculation of a bidding price for the contract that allows an equal comparison basis equitable to all bidders for award selection.
- 4. **Commitment to Appointed Services Provider:** iThemba LABS, through the signed contract, guarantees its procurement of service from the appointed party only where the appointed party meets or exceeds the contractual performance levels.
- 5. Contract Price Management in terms of the Contract: iThemba LABS issues written purchase orders authorising the work as required in this contract as addendums to the contract. The purchase orders stipulate quantity, work description, delivery date, and the unit price in accordance with this contract. iThemba LABS, when issuing the written purchase order, guarantees that the funding is available for the value of that purchase order.
- 6. **Contract Price:** The cumulative value of all purchase orders issued and paid for is the total value of this signed contract at its expiry/completion date.

#### **Termination for Default (General Condition of Contract Clause No: 23)**

In the event of the non-performance as per the agreed contract, iThemba LABS will appoint an alternative provider at the cost of the appointed bidder. The defaulting appointed bidder is obliged to settle the damages/additional costs that iThemba LABS has incurred as result of the non-performance of the appointed bidder.

#### PERFORMANCE LEVEL (General Condition of Contract Clause No: 22)

If the appointed bidder fails to meet any performance level:

- a) Both iThemba LABS and the appointed bidder shall jointly investigate and report on the root causes of the performance level failure;
- b) Promptly correct the failure and begin meeting the set performance levels;
- c) Advise iThemba LABS as to the extent requested by iThemba LABS of the status of remedial efforts being undertaken with respect to such performance level failure; and
- d) Take preventive measures to prevent the recurrence of the performance level failure.

e) In the event of the non-performance as per the agreed contract, iThemba LABS will appoint an alternative provider at the cost of the appointed bidder. The defaulting appointed bidder is obliged to settle the damages/additional costs that iThemba LABS has incurred as result of the non-performance of the appointed bidder.

STATEMENT OF PERFORMANCE LEVELS						
Performance being Measured	Measurement Methodology	Penalty and Trigger Level				
Completion of manufacturing	Both parties jointly check and confirm	Penalty – 2% of the specific invoice				
design review according to	specifications are met within 10 days after	value for each month of delay in				
specification	the completion before payment.	completion				
As built drawing in DWG format  Manufacturing/workshop  drawings	Made available within 10 days post installation.	Penalty – 2% of the specific invoice value or milestone payment for each month of delay in completion				
The completion and delivery of HVAC systems in accordance with the contracted delivery dates	Both parties jointly check and confirm that delivery dates are met within 10 days after the delivery before payment	Penalty – 2% of the specific invoice value for each month of delay in contracted delivery dates				

# C1.2.2 PARTICULAR CONDITIONS

# C2: Pricing Data

Number	Heading	Pages
C2.1	Pricing Instructions	7877
C2.2	Bill of Quantities	79

# C2.1 Pricing Instructions

Subm SBD 3	uit pricing in separate envelope (stand-alone) 3.1
1.	Price Quotation Basis: Unit prices are fully inclusive of all applicable taxes, less all unconditional discounts, and all costs to deliver the services and/or goods to the specified iThemba LABS price delivery point
	Price Pickup Point: iThemba LABS, Old Faure Road, Faure, Western Cape, South Africa, 7131
2.	Calculating the Bid Price: iThemba LABS provides bidding quantities below to bidders for calculating their bid price that allows for a fair and equal comparison equitable to all bidders for price competition and contract award selection.
4.	Application of Preference Points: Pricing is subject to the addition of Preference Points as stipulated in - Standard Bidding Document 6.1 Preference claim form.

# C2.2 BOQ Summary

# C2.3 Annexure A: Bill of Quantities

		PRICING SCHEDULE			
No.	QTY	DESCRIPTION	UOM	UNIT PRICE	TOTAL (incl. VAT)
3.0		PRELIMINARY & GENERAL CONDITIONS			
		PREAMBLES			
		All items in this Bill of Quantities (pages 1-8) must be read in conjunction with the Contract Documents, Technical Specifications, Standard Specifications, and Drawings, etc.			
		Special Preliminary and General Conditions pertaining to this Subcontract			
	1	Clearance of Rubbish	Item	R	R
	1	Site Establishment & Clearance	Item	R	R
	1	Scaffolding	Item	R	R
	1	Progress for Measurement – QS	Item	R	R
	1	First Aider & Safety File	Item	R	R
	1	Test and Inspections	Item	R	R
	1	12 Months Guarantee and Maintenance	Item	R	R
	1	Contract and Shop Drawings	Item	R	R
	1	Contract Management	Item	R	R
	1	Site Management	Item	R	R

	1	Office Administration	Item	R	R
	1	Rigging and Crane Hire	Item	R	R
	1	Equipment Labels	Item	R	R
	1	Extra over P&G for phasing of work.	Item	R	R
	1	Any additional items of preliminary nature that the Bidder may wish to add to comply with requirements of the specification and/or bill of quantities (To be listed hereunder by the Bidder)	Item	R	R
SUBTOTAL	: SECTION	1 - PRELIMINARY & GENERAL CONDITIONS		R	R

No.	QTY	DESCRIPTION	UOM	UNIT PRICE	TOTAL (incl. VAT)
2.		DEMOLITION			
		Removal of Redundant Equipment – (Disconnect blank off, make safe)			
	1	Remove redundant ducting, diffusers, grilles etc	Item	Allowance	R 40 000-00
	1	Remove redundant controls, cabling etc.	Item	Allowance	R 10 000-00
	1	Remove redundant piping	Item	Allowance	R 5 000-00
	1	Remove 2-off existing cassette units	Item	Allowance	R 10 000-00
SUBTOTA	L: SECTION	N 2 - DEMOLITION		R	R

No.	QTY	DESCRIPTION	UOM	UNIT	TOTAL
				PRICE	(incl. VAT)
3		AIR HANDLING UNIT (AHU-01)			P
		Supply, install, test and commission air handling unit, complete with, fans, sound attenuators, electrical control panel, steel frame, anti-vibration mounting, corrosion treatment for condensing unit, refrigerant piping complete with fittings, insulation and all other necessary accessories for successful installation.			
	1	Air Handling Unit 41.2kW - MAH 2	No	R	R
	1	VRV Condensing Unit 44kW - RXYQ16U	No	R	R
	4	Anti-Corrosion Treatment - RXYQ16U	14.0.00		
	1	Anti-Corrosion Treatment - RXYQ100	Item	R	R
	180	Galvanized Mild Steel Ducting	m²	R	R
	100	FRK Duct Insulation	m²	R	R
	100	PIC Fibreglass Duct Insulation	m²	R	R
	6	Refrigerant Piping & Insulation -12.7(Liquid)	m	R	R
		Tronigorant i iping & insulation - 12.7 (Eiquid)	""	11	
	6	Refrigerant Piping & Insulation - 28.6 (Gas)	m	R	R
	10	PVC Condensate Drain Piping - ND 35	m	R	R
		Council Attenuates (075) (1,050) (1,040)	Na		
	2	Sound Attenuator (975Wx550Hx1400L)	No	R	R
	2	Bend Type Attenuator (425Wx550Hx1400L)	No	R	R
	1	Crosstalk Attenuator - 975Wx450Hx1400L	No	R	R
	12	Constant volume supply air square diffusers in 595x595 epoxy powder coated plate complete with supports and other accessories - CCD (Dia 250)	No	R	R

	6	Datum Air milles DAC (600,600)	Na	D	П
	6	Return Air grilles - RAG (600x600)	No	R	R
				6	
	3	Balancing dampers complete with fittings and accessories - OBD (600x350)	No	R	R
		(000,000)			
	1	Weather Louvre (1000x500)	No	R	R
	1	Electrical Control Panel, space sensors and All other Accessories	No	R	R
	1	Other	Item	R	R
SUBTOTA	AL: SECTIO	N 3 - AUDITORIUM INSTALLATION (HVAC)		R	R
No.	QTY	DESCRIPTION	UOM	UNIT PRICE	TOTAL (incl. VAT)
4		SPLIT AIR CONDITIONING (AC-01)			
		Supply, install, test and commission an underceiling unit, complete with, corrosion treatment, refrigerant piping & insulation, drain piping, fittings, electrics & control and all other necessary accessories for successful installation.			
	1	Under Ceiling Unit 14kW (Indoor + Outdoor)	No	R	R
	1	Anti-Corrosion Treatment for Condensing Unit	Item	R	R
	40	Refrigerant Piping & Insulation - 9.52 (Liquid)	m	R	R
	40	Refrigerant Piping & Insulation - 15.9 (Gas)	m	R	R
				_	
	6	Condensate Drain Piping ND 20	m	R	R
	1	Electrics & control - connect wiring between control time and fresh air fan, final electrical connection from isolator to the fan and all other necessary accessories	No	R	R
	1	Other	Item	R	R

SUBTOTA	AL: SECTION	ON 4 - LAB J2 INSTALLATION (HVAC)		R	R
No.	QTY	DESCRIPTION	UOM	UNIT PRICE	TOTAL (incl. VAT)
5		SPLIT AIR CONDITIONING UNIT (AC-02)			
		Supply, install, test and commission an underceiling unit, complete with, corrosion treatment, refrigerant piping & insulation, drain piping, fittings, electrics & control and all other necessary accessories for successful installation.			
	1	Under Ceiling Unit 14kW (Indoor + Outdoor)	No	R	R
	1	Anti-Corrosion Treatment for Condensing Unit	Item	R	R
	40	Refrigerant Piping & Insulation - 9.52 (Liquid)	m	R	R
	40	Reingerant Fibring & Insulation - 9.52 (Liquid)	111	N N	I N
	40	Refrigerant Piping & Insulation - 15.9 (Gas)	m	R	R
	6	Condensate Drain Piping ND 20	m	R	R
	1	Electrics & Control - Final electrical connection from isolator, thermostat to the split unit and all other necessary accessories	No	R	R
	1	Other (qualify)	Item	R	R
	<u>'</u>	Othor (quality)	itom		
SUBTOTA	I AL SECTIO	N 5 - LAB J6 INSTALLATION (HVAC)	ı	R	R
No.	QTY	DESCRIPTION	UOM	UNIT PRICE	TOTAL (incl. VAT)
5		VENTILATION FAN (FAF-01) (HVAC)			
		Supply, install, test and commission ventilation fan, complete with sound attenuators, filter, flexible collars, anti-vibration mountings, all necessary fittings, fixings and other accessories for successful installation.			
	1	Ventilation Fan duty 650l/s @ 200Pa - FAF-01	No	R	R
				_	
	53	Galvanized Mild Steel Ducting	m²	R	R

	20	PIC Fibreglass Duct Insulation	m²	R	R
	1	Weather Louvre (400x400) - WL	No	R	R
		,			
	2	Sound Attenuator (900L)	No	R	R
	4	Supply Air Grilles (300X300) - SAG c/w OBD	No	R	R
	1	Electrics & control - connect wiring between control time and fresh air fan, final electrical connection from isolator to the fan and all other necessary accessories	No	R	R
	1	Other (qualify)	Item	R	R
	1	Outor (quality)	Item	11	11
SUBTOTA	L SECTIO	N 5 - FRESH AIR FAN INSTALLATION (HVAC)		R	R
No.	QTY	DESCRIPTION	UOM	UNIT PRICE	TOTAL (incl. VAT)
6		ELECTRICAL SERVICES			
		Distribution Boards – AC DB 01			
		Supply, install connect and commission the new distribution board in position as indicated on drawings. Complete with internal equipment, 30% spare capacity, switchgear, wiring, trays, panels, labels, architraves, busbars and conductor connections. Equipment types equal and approved to ABB, Schneider, Hager, CBI, Eaton or equal and approved. DIN rail mounted. All control equipment, components, contactors and circuit breakers to be SANS approved or bare SANS mark of approval. Installation to comply to latest wiring code SANS 10142-1.			
	1	Supply	No	R	R
	1	Install	No	R	R
		Oaklas for Dance Distall 12			
		Cables for Power Distributions  Supply and install the following armoured PVC			
		Supply and install the following armoured PVC sheathed copper LT cables including insulated earth wire clamping, supports and accessories. NOTE: For ordering of cables, measurement shall NOT be taken from this bill. Actual cable			

	lengths shall be measured on site for ordering and installation purposes.			
122	Supply (35 mm² x 4 core CU cable)	m	R	R
122	Install (35 mm² x 4 core CU cable)	m	R	R
•	T : " (05 2 4 0H 14)			-
2	Termination (35 mm² x 4 core CU cable)	No	R	R
1	Supply (25 mm² x 4 core CU cable)	m	R	R
'	Supply (23 min X 4 core co cable)	111	IX	IX
1	Install (25 mm² x 4 core CU cable)	m	R	R
1	Termination (25 mm² x 4 core CU cable)	No	R	R
10	Supply (16 mm² x 4 core CU cable)	m	R	R
10	Install (16 mm² x 4 core CU cable)	m	R	R
0	Transitation (40 and 2 of ann Oll sales)	NI-	Б	D
2	Termination (16 mm² x 4 core CU cable)  EARTHWIRES	No	R	R
	Supply and instal conductors in wire ways			
	(including off-cuts, terminations and wastes).  Bare copper earth wires.			
122	Supply (25 mm²)	m	R	R
122	Install (25 mm²)	m	R	R
2	Termination (25 mm²)	No	R	R
1	Sunnly (16 mm²)	m	R	R
I	Supply (16 mm²)	m	T.	1\
1	Install (16 mm²)	m	R	R
	( - /			
1	Termination (16 mm²)	No	R	R
10	Supply (10 mm²)	m	R	R
10	Install (10 mm²)	m	R	R

2	Termination (10 mm²)	No	R	R
	WIRING			
	PVC insulated conductors installed in conduits or wire trunking. Earth conductors shall be green PVC insulated (including off-cuts and waste)			
30	Supply (4mm²)	m	R	R
30	Install (4mm²)	m	R	R
40	Supply (2.5mm²)	m	R	R
40	Install (2.5mm²)	m	R	R
10	Supply (2.5mm² x 4C)	m	R	R
10	Install (2.5mm² x 4C)	m	R	R
	ISOLATORS			
	Supply and install (surface) mounted weather proof isolators as amended in the SANS 10142 specification for maintenance purposes of mechanical and other equipment. Complete with draw box. (for condenser units)			
1	Supply (100A triple pole weather proof surface mounted isolator)	No	R	R
				_
1	Install (100A triple pole weather proof surface mounted isolator	No	R	R
6	Install (30A double pole weather proof surface mounted isolator	No	R	R
6	Install (30A double pole weather proof surface mounted isolator	No	R	R
	EXISTING MAIN DISTRIBUTION BOARD			
	Quote for supply and installation of the following distribution board equipment inside			

	EXISTING MAIN DISTRIBUTION BOARD as		li .	
1	specified below.  Supply (100A TP 15kA CB)	No	R	R
<b>'</b>	Cupply (1864-11-18k4-05)	140	1	
1	Install (100A TP 15kA CB)	No	R	R
	CABLE TRAYS & LADDERS			
	Supply and install cable ladder and tray, complete with all accessories, fasteners and fixtures.			
50	Supply (200mm wide heavy duty galvanized cable tray)	m	R	R
50	Install (200mm wide heavy duty galvanized cable tray)	m	R	R
15	Supply (100mm wire mesh tray, Hot dipped galvanised welded wire mesh cable tray complete with all accessories, T- pieces, bends and reduction pieces as per specifications	m	R	R
15	Supply (100mm wire mesh tray, Hot dipped galvanised welded wire mesh cable tray complete with all accessories, T- pieces, bends and reduction pieces as per specifications	m	R	R
	650554			
	GENERAL			
	Allowance for stripping of electrical services	Sum	R	R
	and making safe. Removal of 4x AC units in Auditorium, Lab J2 and Lab J6. Trace existing circuits BEFORE commencing work	Guill		
	Testing, commissioning and issuing COC's for all Distribution (New and Existing) boards complete.	Sum	R	R
	Marking/labelling of individual isolators complete as per drawings.	Sum	R	R
	Allowance for fire sealing of penetration for main cable	Sum	R	R

Α		Other - please specify:	Sum	R	R
В		Other - please specify:	Sum	R	R
С		Other - please specify:	Sum	R	R
SUBTOTA	AL SECTIO	N 7 - ELECTRICAL SERVICES INSTALLATION		R	R
No.	QTY	DESCRIPTION	UOM	UNIT PRICE	TOTAL (incl. VAT)
8		STRUCTURAL WORKS			
		PREAMBLES View Site Before submitting his tender the contractor visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sums in respect of the nature and extent of the work or of inferior or damaged materials will be entertained.  General The contractor shall carry out the whole of the work with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide and erect any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the project manager, and remove when directed The contractor will be required to take all dimensions affecting the existing building on the site and he will be held solely responsible for the accuracy of all such dimensions Any water supply pipes and other piping that may be met with and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings, to the satisfaction of the project manager Costs of tests The costs of making, storing and testing of concrete test cubes as required under clause 7 Tests of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting			

	reports on the tests to the principal agent. The			
	testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the principal agent. (Test cubes are measured separately)			
	Concrete Rates for concrete shall be deemed to include all preparation as required, including access, formwork and stabilisation of formwork as may be needed.  Openings through walls and slabs Rates for creating openings shall include all preparation and access as required. It shall also include all machinery and tools as is necessary to create the openings, as well as making good of cut edges after the openings have been made.  Drawings Refer to the latest revision of drawing 35071.00-200-01 & 35071.00-201-01			
	CREATE OPENINGS IN EXISTING WALLS AND REINFORCED CONCRETE SLABS			
	Break out and form openings through walls for the routing of HVAC ducting and new HVAC louvres. Make good plaster on both sides and into reveals with 20MPa concrete thresholds with steel trowelled finish.			
2	1.075 x 0.55m openings through 280mm brick wall	No	R	R
3	0.55 x 0.5m openings through 230mm brick wall	No	R	R
1	1.075 x 0.65m openings through 280mm brick wall	No	R	R
4	0.5 0.5 11 1 000 111 1		Б	D
4	0.5 x 0.5m openings through 230mm brick wall	No	R	R
1	0.95 x 0.5m openings through 280mm brick wall	No	R	R
	Cut through roof slabs, floor slabs and ceilings. Make good and repair reveals. Make good cutting edges. Builders work and waterproofing measured elsewhere.			

Cut through 250mm thick reinforced concrete slab for opening 700 x 700mm		R	R
1 Cut through 250mm thick reinforced concrete N slab for opening 500 x 500mm		R	R
REINFORCED CONCRETE PLINTHS			
Reinforced concrete plinths cast on roof slab for new HVAC equipment.			
1.5 "25MPa concrete cast in-situ for 3x plinths: - 3.16 x 1.5 x 0.15m high - 1.23 x 0.98 x 0.15m high - 2.5 x 1.0 x 0.15m high"		R	R
Mesh ref 193	m²	R	R
3-ply malthoid placed between existing RC slab and newly cast plinth	m²	R	R
CONSTRUCTION OF DOG BOXES			
Reinforced concrete upstand beams			
Scabble existing concrete surface, clean and apply approved wet-dry bonding agent		R	R
1 25MPa concrete cast in-situ for upstand beams, including all preparation and formwork as required		R	R
High tensile steel, diameter smaller than 20mm	kg	R	R
Y10 U-bars dowelled-in using Hilti HY-200 chemical anchor (or similar approved)	kg	R	R
Masonry upstand walls			
230mm brick wall (including brickforce and mortar as required)	m²	R	R
Apply primer and 1 coat approved water-tight paint	m²	R	R
Reinforced concrete cover slabs			
25MPa concrete cast in-situ for cover slabs, including all preparation and formwork as required	m3	R	R
	Cut through 250mm thick reinforced concrete slab for opening 500 x 500mm  REINFORCED CONCRETE PLINTHS  Reinforced concrete plinths cast on roof slab for new HVAC equipment.  "25MPa concrete cast in-situ for 3x plinths: - 3.16 x 1.5 x 0.15m high - 1.23 x 0.98 x 0.15m high - 2.5 x 1.0 x 0.15m high"  Mesh ref 193  3-ply malthoid placed between existing RC slab and newly cast plinth  CONSTRUCTION OF DOG BOXES  Reinforced concrete upstand beams Scabble existing concrete surface, clean and apply approved wet-dry bonding agent  25MPa concrete cast in-situ for upstand beams, including all preparation and formwork as required  High tensile steel, diameter smaller than 20mm  Y10 U-bars dowelled-in using Hilti HY-200 chemical anchor (or similar approved)  Masonry upstand walls  230mm brick wall (including brickforce and mortar as required)  Apply primer and 1 coat approved water-tight paint  Reinforced concrete cover slabs  25MPa concrete cast in-situ for cover slabs, including all preparation and formwork as	Cut through 250mm thick reinforced concrete slab for opening 500 x 500mm  REINFORCED CONCRETE PLINTHS  Reinforced concrete plinths cast on roof slab for new HVAC equipment.  "25MPa concrete cast in-situ for 3x plinths: - 3.16 x 1.5 x 0.15m high - 1.23 x 0.98 x 0.15m high - 2.5 x 1.0 x 0.15m high"  Mesh ref 193  Mesh ref 193  m²  3-ply malthoid placed between existing RC slab and newly cast plinth  CONSTRUCTION OF DOG BOXES Reinforced concrete upstand beams Scabble existing concrete surface, clean and apply approved wet-dry bonding agent  25MPa concrete cast in-situ for upstand beams, including all preparation and formwork as required  High tensile steel, diameter smaller than 20mm kg  Y10 U-bars dowelled-in using Hilti HY-200 chemical anchor (or similar approved)  Masonry upstand walls  230mm brick wall (including brickforce and mortar as required)  Apply primer and 1 coat approved water-tight paint  Reinforced concrete cast in-situ for cover slabs, including all preparation and formwork as including and preparation and fo	Slab for opening 700 x 700mm  Cut through 250mm thick reinforced concrete slab for opening 500 x 500mm  REINFORCED CONCRETE PLINTHS  Reinforced concrete plinths cast on roof slab for new HVAC equipment.  "25MPa concrete cast in-situ for 3x plinths: - 3.16 x 1.5 x 0.15m high - 1.23 x 0.98 x 0.15m high - 2.5 x 1.0 x 0.15m high"  Mesh ref 193  Mesh ref 193  Mesh ref 193  Masonry upstand walls  25MPa concrete cast in-situ for upstand beams, including all preparation and formwork as required  Masonry upstand walls  230mm brick wall (including brickforce and mortar as required)  Apply primer and 1 coat approved water-tight paint  Reinforced concrete cast in-situ for cover slabs, including all preparation and formwork as required  Apply primer and 1 coat approved water-tight paint  Reinforced concrete cast in-situ for cover slabs, including all preparation and formwork as required  Apply primer and 1 coat approved water-tight paint  Reinforced concrete cast in-situ for cover slabs, including all preparation and formwork as required  Apply primer and 1 coat approved water-tight paint  Reinforced concrete cast in-situ for cover slabs, including all preparation and formwork as required  The concrete cast in-situ for cover slabs, including all preparation and formwork as required  Reinforced concrete cast in-situ for cover slabs, including all preparation and formwork as required

	3	High tensile welded mesh ref 500	m²	R	R
		Waterproofing			
	8	GI flashing and counterflashing, installed and built into brickwork as needed		R	R
	2	Timber frame around openings as indicated, including all fixings	lump	R	R
	2	Non-hardening mastic caulking	litre	R	R
	9	Entire dog box structure to be waterproofed using abe Super Lakold and membrane	m²	R	R
SUBTOTA	L SECTIO		R	R	

SUBTOTAL: SECTION 1 - PRELIMINARY & GENERAL CONDITIONS	R
SUBTOTAL: SECTION 2 - DEMOLITIAN	R
SUBTOTAL: SECTION 3 - AUDITORIUM INSTALLATION (HVAC)	R
SUBTOTAL: SECTION 4 - LAB J2 INSTALLATION (HVAC)	R
SUBTOTAL SECTION 5 - LAB J6 INSTALLATION (HVAC)	R
SUBTOTAL SECTION 6 - FRESH AIR FAN INSTALLATION (HVAC)	R
SUBTOTAL SECTION 7 - ELECTRICAL SERVICES INSTALLATION	R
SUBTOTAL SECTION 8 – STRUCTURAL WORKS INSTALLATION	R
TOTAL OF ALL SECTIONS EXCLUDING (VAT)	R
TOTAL OF ALL SECTIONS INCLUDING (VAT)	R

### **Declaration**

# (In respect of completeness of Tender)

I/we, the undersigned, do hereby declare that these are the properly priced Bill of Quantities forming Part D2 of this Contract Document in consecutive order upon which my/our tender for the BID NO: NRF ILABS ATL/08/2024-25 – Appointment of a specialist service provider with CIDB Grading of 3ME or higher for the manufacture/procurement, delivery, installation, commissioning, and guarantee of the auditorium ventilation and air conditioning (HVAC) system at iThemba LABS, Faure Western Cape, South Africa, has been based.

# **SIGNED BY/ON BEHALF OF BIDDER**

NAME	SIGNATURE	DATE

# C2.4 Annexure B: Drawings

REFERENCE LETTER FOR	MAT FOR BIDDER							
Referee Legal Name :								
Bidder's name:								
Bid Number:								
1								
Describe the service/work start date and	Describe the service/work, start date and completion date the above bidder provided to you below							
	Toomproudin date and door	o blader provided to ye	<u> </u>					
Criteria/Risks	Below requirements	Meets requirements	Exceeds					
			requirements					
Quality of rendered services as measure	d							
against your service level								
Satisfied with work done								
Overall Impression	Other comments							
Approximate value of contract								
Would you use the provider again?			☐ YES ☐ NO					
T.								
Completed by:								
Signature:								
Company Name:								
Contact Telephone Number:								
Deter								
Date:								

NB: The above reference letter format is optional. service provider/bidder may use their own template as long as the information therein is in line with the one specified in the "Due diligence of capacity and capability" or "Returnable documents" tables from page Error! Bookmark not defined..

# Annexure C: Applicable Documents to be presented for Approval by the Engineer

# 1. The minimum list of applicable documentation to be provided by the Contractor for approval by the Engineer

# **Site Acceptance Checklist**

<u>Initial Visual Check</u>	<u>√/</u>
	<u>X</u>
Correct models, types, etc. provided.	
Equipment located in correct positions and parallel to building lines unless otherwise	
specified.	
Shipping fasteners, clamps, etc. removed or released.	
Joints tight and correctly fitted.	
All fasteners in position and tight.	
Coil piping correct configuration. (Counter flow, IN at the bottom, OUT at the top, etc.).	
Existence of sufficient and where applicable correctly fitted bleed off, vent valves,	
drains, etc., as specified. (Both at components and in pipework.)	
Thermal expansion and contraction allowances.	
Access panels provided and are hinged complete with handles, patches, locks, etc.	
Natural free movement of rotary/moving equipment.	
Proper isolation of rotary/moving equipment (check canvas collars anti vibration	
mounts, flexible couplings/rubber mounts, etc.).	
Soundness and alignment of general supports.	
Grommets provided against chaffing at all pipe cables, etc. penetrations through	
housings, etc.	
Installation workmanship and finish.	
Air Pre-switch on Checks	
Megger all electrical circuits for correct continuity, etc.	•
Check oil levels and lubricate where applicable.	•
Run fan impellers by hand to see that they are free of obstructions.	•
Post First Switch on Checks	
Listen for strange noises from equipment items.	•
Check for unbalanced rotary items.	•
Vibration transmitted to fixed elements, such as ducts, structure, pipework, etc. (Anti vibration mountings, flexible canvas collars, to be checked for isolation.)	•
Moving/rotary equipment smooth operation, i.e. free of excessive vibration, drumming, rumbling, etc.	•
Excessive air and other fluid leaks (prime suspects: Evaporator units' joints and	•
canvas collars).	
<u>Insulation</u>	
Securement.	•
Type and thickness.	•
Soundness/integrity of joints.	•
Vapor barrier, where applicable.	•
Wooden rings, or other approved thermal break, at supports.	•
<u>Electrics</u>	
Check motor sizes.	•
Check motor types.	•
Check amperage against motor nameplate ratings.	•
oneon amperage against motor namepiate fattings.	

Motor direction of rotation.	•
Electrical wiring, etc.	•
Starters overloads settings, etc.	•
Interlocks.	•
Check soundness of all wiring connections (particularly ammeters.)	•
<u>General</u>	
Lubrication.	•
General noises (record unusual levels).	•
Colour coding provision.	•
Space cleanliness.	•
Spare parts/operating manuals handed over.	•

It is hereby recorded that the checking, testing, adjusting, measuring, setting, confirming, reporting, etc., of the foregoing items are the minimum requirements. Additional tasks which are necessary for the proper commissioning of the works shall be conducted by the Contractor as required.

### 2. As-built Drawings

As-built drawings shall be prepared by the Contractor. These drawings shall be submitted to the Engineer for approval 1 week prior to the programmed date for the practical completion inspection of the last section of the works. These shall be provided in a standard CAD .dwg format.

# 3. Operating and Maintenance Manuals

Three sets of operating and maintenance manuals shall be prepared by the Contractor. These manuals shall be submitted to the Engineer for approval 2 weeks prior to the programmed date for the practical completion inspection.

Bidders are to note that the said practical completion inspection shall not be carried out prior to the approval of these operating and maintenance manuals.

The manuals shall be properly bound and titled. Each set shall consist of 4 sections. Each section shall have the following sub-sections:

### Section 1 - Operation

#### **Introduction**

Short description of the complete system to familiarize laymen with the system lay-out and operation

# **Detailed Description**

A detailed description of each system and its equipment, complete with schematic drawings. The purpose of this system is to explain the intended operation of each system and item of equipment to technical personnel. Detailed descriptions of the operation, set-points, adjustments, etc., are thus to be included.

### Section 2 - Commissioning data

#### **Schedules of Data**

Detailed schedules of commissioning data of all the systems shall be included in this section for future reference. These schedules shall include, amongst others, air flow rates, major equipment power draws, pressure drops, etc.

#### Section 3 - Maintenance

### **Schedules**

This section shall contain detailed maintenance and service schedules for the complete installation.

### **Equipment Details**

This section shall contain manufacturers' brochures, spare parts lists, etc., of all the items of equipment.

# **List of Suppliers**

The list of suppliers (complete with addresses and telephone numbers) for each item of equipment shall be included in this section.

# Section 4 - Drawing

# **As-built Drawings**

A complete set of as-built drawings shall be enclosed in this section.

In addition to the above, one operating and maintenance instruction booklet per air-conditioning unit installed shall be provided by the contractor prior to the practical completion inspection.

It is to be noted that under no conditions will the practical completion inspections be carried out unless these instruction booklets have been handed over to the Engineer.

It shall be the contractor's responsibility to advise the air-conditioning units' suppliers of this requirement at tender stage and to ensure that any associated costs are allowed for in the tendered subcontract sum.