



**CONTRACT FOR DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING
OF THE HIGH EFFICIENCY VRV/VRF AIR-CONDITIONER UNITS IN THE
AIRSIDE CORRIDORS BEYOND BOARDING GATES**

TENDERER'S DETAILS

1.	NAME OF TENDERER (BIDDING ENTITY)	(FULL NAME, i.e. (CC, (Pty) Ltd, JV, SOLE PROPRIETOR
.2.	TEL NUMBER	
.3.	FAX NUMBER	
.4.	EMAIL	
5.	NAME OF CONTACT	
6.	NATIONAL TREASURY CSD REGISTRATION NUMBER	



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C1.1 Form of Offer and Acceptance

Offer

The employer, identified in the acceptance signature block, wishes to enter into a contract for the

DESIGN, SUPPLY, INSTALLATION AND COMMISSIONING OF THE HIGH EFFICIENCY VRV/VRF AIR-CONDITIONER UNITS IN THE AIRSIDE CORRIDORS BEYOND BOARDING GATES

The Contractor, identified in the offer signature block, has examined this document and addenda hereto as listed in the schedules, and by submitting this offer has accepted the conditions thereof.

By the representative of the Contractor, deemed to be duly authorised, signing this part of this form of offer and acceptance, the Contractor offers to perform all 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.

The offered total of the Prices exclusive of VAT is	R
Value Added Tax @ 15% is	R
The total offered amount due inclusive of VAT is	R
(in words)	

(The above amount should be calculated as per the guide provided in the Pricing Data [Subtotal F]. In the event of any conflict between the amount above and the Pricing Data [Subtotal F], the former shall prevail.)

for the Contractor

Signature Date

Name Capacity

(Name and address of organisation)

Name and signature of witness signature

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the Bidder before the end of the period of validity stated in the tender data, whereupon the Bidder becomes the party named as the Contractor in the conditions of contract identified in the contract data.



Acceptance

By signing this part of this form of offer and acceptance, the employer identified below accepts the Contractor'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. Acceptance of the Contractor's offer shall form an agreement between the employer and the Contractor 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 and Price List
 - Part C3: Works information.
 - Part C4: Site information
- and schedules, drawings and documents or parts thereof where so indicated.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the tender schedules 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.

The Contractor shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's 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 when the Bidder receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the Bidder (now Contractor) within five working 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.

for the Employer

Signature Date

Name Capacity

**Airports Company South Africa,
3rd Floor ACSA North Wing Offices
O R Tambo International Airport
Kempton Park
1627**

Name of witness signature

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	General	
	<p>The <i>conditions of contract</i> are the core clauses and the clauses for main Option</p> <p>dispute resolution Option and secondary Options</p> <p>of the NEC3 Engineering and Construction Contract, April 2013</p>	<p>A: Priced contract with Activity schedule</p> <p>W1: Dispute resolution procedure</p> <p>X2: Changes in the law</p> <p>X5: Sectional Completion</p> <p>X7: Delay damages</p> <p>X13: Performance Bond</p> <p>X16: Retention</p> <p>X17: Low performance damages</p> <p>X18: Limitation of liability</p> <p>Z: Additional conditions of contract</p>
10.1	The <i>Employer</i> is (Name):	Airports Company South Africa SOC Ltd. (Reg no: 1993/004149/30), a juristic person incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at OR Tambo International Airport
10.1	The <i>Project Manager</i> is: (Name)	



Address	Aiports Company South Africa O R Tambo International Airport ACSA Admin. Building 3rd Floor North Wing Offices Kempton Park 1627
Tel	
Fax	
e-mail	
10.1	The <i>Supervisor</i> is: (Name)
Address	Aiports Company South Africa O R Tambo International Airport ACSA Admin. Building 3rd Floor North Wing Offices Kempton Park 1627
Tel No.	
Fax No.	
e-mail	
11.2(13)	The <i>works</i> are
	Design, Supply, Installation and Commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates as set out in the Section C3, Works Information
11.2(14)	The following matters will be included in the Risk Register
	1. The service and the works will be conducted in the Airside corridor beyond the boarding gates. 2. Availability of As Built information 3. Access to Site 4. Statutory approvals and ACSA approvals 5. Site Constraints and Constructability 6. Financial and Procurement
11.2(15)	The <i>boundaries of the site</i> are
	OR Tambo International Airport
11.2(16)	The Site Information is in
	Part 4: Site Information
11.2(19)	The Works Information is in
	Part 3: Scope of Work and all documents and drawings to which it makes reference.



12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa				
13.1	The <i>language of this contract</i> is	English				
13.3	The <i>period for reply</i> is	1 week				
2	The Contractor's main responsibilities	Data required by this section of the core clauses is provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.				
3	Time					
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	12 Months after signing of the contract by ACSA				
30.1	The <i>access dates</i> are:	<table border="1"> <thead> <tr> <th>Part of the Site</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>1 O.R. Tambo International Airport</td> <td>24Hours 7days a week</td> </tr> </tbody> </table>	Part of the Site	Date	1 O.R. Tambo International Airport	24Hours 7days a week
Part of the Site	Date					
1 O.R. Tambo International Airport	24Hours 7days a week					
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	2 weeks of the Contract Date.				
31.2	The <i>starting date</i> is	Upon signing of the contract by ACSA				
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	2 weeks.				
4	Testing and Defects					
42.2	The <i>defects date</i> is	Twelve (12) months after Completion of the whole of the works.				
43.2	The <i>defect correction period</i> is	Two (2) weeks				
5	Payment					
50.1	The <i>assessment interval</i> is	Four (4) weeks, on the 14th working day of each successive month				
51.1	The <i>currency of this contract</i> is the	South African Rand.				
51.2	The period within which payments are made is	30 Working days from the date of invoice.				
51.4	The <i>interest rate</i> is	(i) 0.5 percent above the publicly quoted prime rate of interest (calculated on a 365-				



day year) charged from time to time by South Africa's four largest Banks and

(ii) the LIBOR rate applicable at the time for amounts due in other currencies.

6	Compensation events	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
7	Title	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. None
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	Contract Work Insurance, Public Indemnity, Professional Indemnity and SASRIA. The terms and other matters applicable to these insurances provided by the Employer (and to insurances generally) are detailed in the insurance schedule attached as section C1.4 to the contract ("the insurance Schedule)
84.1	The <i>Employer</i> provides these additional insurances	The terms and other matters applicable to these insurances provided by the Employer (and to insurances generally) are detailed in the insurance schedule attached as section C1.4 to the contract ("the insurance Schedule)
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the <i>works</i> , Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) caused by activity in	As stated in C1.4



connection with this contract for any one event is

84.2	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract for any one event is	As stated in C1.4
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
A	Priced contract with Activity schedule	
60.6	The <i>method of measurement</i> is	The 6th edition of the Standard System of measuring Building Works published by Association of South African Quantity Surveyors and amended as stated in Part C2.1, Pricing Assumptions.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is (Name)	the person selected from the ICE-SA Panel of Adjudicators listed in www.ice-sa.org.za by the Party intending to refer a dispute to him.
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	arbitration.
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.

	The place where arbitration is to be held is	Kempton Park, South Africa
	The person or organisation who will choose an arbitrator	
	<ul style="list-style-type: none"> - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is 	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.
12	Data for secondary Option clauses	
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
X5	Sectional Completion	Completion of installation, commissioning and handover of each boarding bridge.
X7	Delay damages (but not if Option X5 is also used)	
X7.1	Delay damages for Completion of each section of the <i>works</i> are	Amount per day is 0.05% of the contract value, up to the maximum of 10% of the contract value
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	Amount per day is 0.05% of the contract value, up to the maximum of 10% of the contract value
X13	Performance bond	
X13.1	The amount of the performance bond is	5% of Contract value excluding VAT.
X16	Retention (not used with Option F)	
X16.1	The <i>retention percentage</i> is	5%
X18	Limitation of liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	Nil - Neither Party is liable to the other for any consequential or indirect loss, including but not limited to loss of profit, loss of income or loss of revenue
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	The total of the Prices



X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The total of the Prices
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p>The Contractor's total direct liability to the Employer for all matters arising under or in connection with this contract, other than the excluded matters, is limited to the total of the Prices and applies in contract, tort or delict and otherwise to the extent allowed under the law of the contract.</p> <p>The excluded matters are amounts payable by the Contractor as stated in this contract for Loss of or damage to the Employer's property, Delay damages, Defects liability, Insurance liability to the extent of the Contractor's risks loss of or damage to property (other than the works, Plant and Materials), death of or injury to a person; damage to third party property; and infringement of an intellectual property right</p>
X18.5	The <i>end of liability date</i> is	<p>(i) 5 years after the <i>defects date</i> for latent Defects and</p> <p>(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.</p> <p>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</p>

Z	The Additional conditions of contract are
Z1	The Additional conditions of Z1 – Z17 contract are
Z1	Interpretation of the law
Z1.1	Add to core clause 12.3: Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the <i>Project Manager</i> , the <i>Supervisor</i> , or the <i>Adjudicator</i> does not constitute a waiver of rights and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.
Z2	Providing the Works:
Z2.1	Delete core clause 20.1 and replace with the following: The <i>Contractor</i> provides the works in accordance with the Works Information and warrants that the results of the Works, when complete, shall be fit for their intended purpose
Z3	Other responsibilities:
	Add the following at the end of core clause 27:
Z3.1	The <i>Contractor</i> shall have satisfied himself, prior to the Contract Date, as to the completeness, sufficiency and accuracy of all information and drawings provided to him as at the Contract Date
Z3.2	The <i>Contractor</i> shall be responsible for the correct setting out of the <i>Works</i> in accordance with the original points, lines and levels stated in the <i>Works</i> Information or notified by the <i>Project Manager</i> , <i>Supervisor</i> or the <i>Employer</i> . Any errors in the positioning of the <i>Works</i> shall be rectified by the <i>Contractor</i> at the <i>Contractor's</i> own costs.
Z4	Extending the defects date:
	Add the following as a new clause 46:
Z4.1	If the <i>Employer</i> cannot use the <i>works</i> due to a Defect, which arises after Completion and before the <i>defects date</i> , the <i>defects date</i> is delayed by a period equal to that during which the <i>Employer</i> , due to a Defect, is unable to use the <i>works</i> .
Z4.2	If part of the <i>works</i> is replaced due to a Defect arising after Completion and before the <i>defects date</i> , the <i>defects date</i> for the part of the <i>works</i> which is replaced is delayed by a period equal to that between Completion and the date by when the part has been replaced.



Z4.3 The *Project Manager* notifies the *Contractor* of the change to a *defect date* when the delay occurs. The period between Completion and an extended *defects date* does not exceed twice the period between Completion and the *defects date* stated in the Contract Data.

Z5 Termination

Z5.1 Add the following to core clause 91.1, at the second main bullet, fifth sub-bullet point, after the words “assets or”: “business rescue proceedings are initiated, or steps are taken to initiate business rescue proceedings”.

Additional Z Clauses

Z6 Cession, delegation and assignment

Z6.1 The *Contractor* shall not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*, which consent shall not be unreasonably withheld. This clause shall be binding on the liquidator/business rescue practitioner /trustee (whether provisional or not) of the *Contractor*.

Z6.2 The *Employer* may cede and delegate its rights and obligations under this contract to any person or entity.

Z7 Joint and several liability

Insert the following new clause as Option X18.6:

Z7.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00

Z7.2 Notwithstanding any other clause in this contract, any proceeds received from any insurances or any proceeds which would have been received from any insurances but for the conduct of the *Contractor* shall be excluded from the calculation of the limitations of liability listed in the contract

Additional Z Clauses

Z8 Cession, delegation and assignment

Z8.1 The *Contractor* shall not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*, which consent shall not be unreasonably withheld. This clause shall be binding on the liquidator/business rescue practitioner /trustee (whether provisional or not) of the *Contractor*

Z8.2 The *Employer* may cede and delegate its rights and obligations under this contract to any person or entity



Z9	Joint and several liability
Z9.1	If the <i>Contractor</i> constitutes a joint venture, consortium or other unincorporated grouping of two or more persons, these persons are deemed to be jointly and severally liable to the <i>Employer</i> for the performance of the Contract.
Z9.2	The <i>Contractor</i> shall, within 1 week of the Contract Date, notify the <i>Project Manager</i> and the <i>Employer</i> of the key person who has the authority to bind the <i>Contractor</i> on their behalf.
Z9.3	The <i>Contractor</i> does not materially alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without prior written consent of the <i>Employer</i> .
Z10	Ethics
Z10.1	The <i>Contractor</i> undertakes:
Z10.1.1	not to give any offer, payment, consideration, or benefit of any kind, which constitutes or could be construed as an illegal or corrupt practice, either directly or indirectly, as an inducement or reward for the award or in execution of this contract;
Z10.1.2	to comply with all laws, regulations or policies relating to the prevention and combating of bribery, corruption and money laundering to which it or the <i>Employer</i> is subject, including but not limited to the Prevention and Combating of Corrupt Activities Act, 12 of 2004.
Z10.2	The <i>Contractor's</i> breach of this clause constitutes grounds for terminating the <i>Contractor's</i> obligation to Provide the Works or taking any other action as appropriate against the <i>Contractor</i> (including civil or criminal action). However, lawful inducements and rewards shall not constitute grounds for termination.
Z10.3	If the <i>Contractor</i> is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices, including but not limited to the making of offers (directly or indirectly), payments, gifts, gratuity, commission or benefits of any kind, which are in any way whatsoever in connection with the contract with the <i>Employer</i> , the <i>Employer</i> shall be entitled to terminate the contract in accordance with the procedures stated in core clause 92.2. the amount due on termination is A1.
Z11	Confidentiality
Z11.1	All information obtained in terms of this contract or arising from the implementation of this contract shall be treated as confidential by the <i>Contractor</i> and shall not be used or divulged or published to any person not being a party to this contract, without the prior written consent of the <i>Project Manager</i> or the <i>Employer</i> , which consent shall not be unreasonably withheld.
Z11.2	If the <i>Contractor</i> is uncertain about whether any such information is confidential, it is to be regarded as such until otherwise notified by the <i>Project Manager</i> .



- Z11.3** This undertaking shall not apply to –
- Z11.3.1** Information disclosed to the employees of the *Contractor* for the purposes of the implementation of this agreement. The *Contractor* undertakes to procure that its employees are aware of the confidential nature of the information so disclosed and that they comply with the provisions of this clause;
- Z11.3.2** Information which the *Contractor* is required by law to disclose, provided that the *Contractor* notifies the *Employer* prior to disclosure so as to enable the *Employer* to take the appropriate action to protect such information. The *Contractor* may disclose such information only to the extent required by law and shall use reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed;
- Z11.3.3** Information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time);
- Z11.4** The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*
- Z11.5** The *Contractor* ensures that all his Subcontractors abide by the undertakings in this clause.

Z12 ***Employer's Step-in rights***

- Z12.1** If the *Contractor* defaults by failing to comply with his obligations and fails to remedy such default within 2 weeks of the notification of the default by the *Project Manager*, the *Employer*, without prejudice to his other rights, powers and remedies under the contract, may remedy the default either himself or procure a third party (including any subcontractor or supplier of the *Contractor*) to do so on his behalf. The reasonable costs of such remedial works shall be borne by the *Contractor*
- Z12.2** The *Contractor* co-operates with the *Employer* and facilitates and permits the use of all required information, materials and other matter (including but not limited to documents and all other drawings, CAD materials, data, software, models, plans, designs, programs, diagrams, evaluations, materials, specifications, schedules, reports, calculations, manuals or other documents or recorded information (electronic or otherwise) which have been or are at any time prepared by or on behalf of the *Contractor* under the contract or otherwise for and/or in connection with the *works*) and generally does all things required by the *Project Manager* to achieve this end.

Z13 **Liens and Encumbrances**



Z13.1 The *Contractor* keeps the Equipment used to Provide the Services free of all liens and other encumbrances at all times. The *Contractor*, vis-a-vis the *Employer*, waives all and any liens which he may from time to time have, or become entitled to over such Equipment and any part thereof and procures that his Subcontractors similarly, vis-a-vis the *Employer*, waive all liens they may have or become entitled to over such Equipment from time to time

Z14 Intellectual Property

Z14.1 Intellectual Property (“IP”) rights means all rights in and to any patent, design, copyright, trademark, trade name, trade secret or other intellectual or industrial property right relating to the Works.

Z14.2 IP rights remain vested in the originator and shall not be used for any reason whatsoever other than carrying out the *works*.

Z14.3 The *Contractor* gives the *Employer* an irrevocable, transferrable, non-exclusive, royalty free licence to use and copy all IP related to the *works* for the purposes of constructing, repairing, demolishing, operating and maintaining the works

Z14.4 The written approval of the *Contractor* is to be obtained before the *Contractor's* IP made available to any third party which approval will not be unreasonably withheld or delayed. Prior to making any *Contractor's* IP available to any third party the *Employer* shall obtain a written confidentiality undertaking from any such third party on terms no less onerous than the terms the *Employer* would use to protect its IP

Z14.5 The *Contractor* shall indemnify and hold the *Employer* harmless against and from any claim alleging an infringement of IP rights (“**the claim**”), which arises out of or in relation to:

Z14.5.1 the *Contractor's* design, manufacture, construction or execution of the Works

Z14.5.2 the use of the *Contractor's* Equipment, or

Z14.5.3 the proper use of the Works.

Z14.6 The *Employer* shall, at the request and cost of the *Contractor*, assist in contesting the claim and the *Contractor* may (at its cost) conduct negotiations for the settlement of the claim, and any litigation or arbitration which may arise from it.

Z16 Dispute resolution:

Z16.1 Appointment of the Adjudicator

An *Adjudicator* is appointed when a dispute arises, from the Panel of Adjudicators below. The referring party nominates an Adjudicator, which nomination is either accepted or rejected by the other party. In the instance of a rejection of the nominated *Adjudicator*, the referring Party refers the appointment deadlock to the Chairman of the Johannesburg Bar Council, who appoints an *Adjudicator* listed in the Panel of Adjudicators below

The Parties appoint the *Adjudicator* under the NEC3 Adjudicator's Contract, April 2013

Panel of Adjudicators

Name	Location	Contact details (phone & e mail)
Adv. Ghandi Badela	Gauteng	+27 11 282 3700 ghandi@badela.co.za
Mr. Errol Tate Pr. Eng.	Durban	+27 11 262 4001 Errol.tate@mweb.co.za
Adv. Saleem Ebrahim	Gauteng	+27 11 535-1800 salimebrahim@mweb.co.za
Mr. Sebe Msutwana Pr. Eng.	Gauteng	+27 11 442 8555 sebe@civilprojects.co.za
Mr. Sam Amod	Gauteng	sam@samamod.com
Adv. Sias Ryneke SC	Gauteng	083 653 2281 ryneke@duma.nokwe.co.za
Mr. Emeka Ogbugo (Quantity Surveyor)	Pretoria	+27 12 349 2027 emeka@gosiame.co.za

Z16.2 Appointment of the Arbitrator

An *Arbitrator* is appointed when a dispute arises from the Panel of Arbitrators below. The referring party nominates an Arbitrator, which nomination is either accepted or rejected by the other party. In the instance of a rejection of the nominated *Arbitrator*, the referring Party refers the appointment deadlock to the Chairman of the Johannesburg Bar Council, who appoints an *Arbitrator* listed in the Panel of *Arbitrators* below

Panel of Arbitrators

Name	Location	Contact details (phone & e mail)
Adv. Ghandi Badela	Gauteng	+27 11 282 3700 ghandi@badela.co.za
Mr. Errol Tate Pr. Eng.	Durban	+27 11 262 4001 Errol.tate@mweb.co.za
Adv. Saleem Ebrahim	Gauteng	+27 11 535-1800 salimebrahim@mweb.co.za
Mr. Sebe Msutwana Pr. Eng.	Gauteng	+27 11 442 8555 sebe@civilprojects.co.za
Mr. Sam Amod	Gauteng	sam@samamod.com
Adv. Sias Ryneke SC	Gauteng	083 653 2281 ryneke@duma.nokwe.co.za
Mr. Emeka Ogbugo (Quantity Surveyor)	Pretoria	+27 12 349 2027 emeka@gosiame.co.za

Z17 Notification of a compensation event



Z17.1	Delete “eight weeks” in clause 61.3 and replace with “four weeks”. Delete the words “unless the event arises from the Project Manager or the Supervisor giving an instruction, issuing a certificate, changing an earlier decision or correcting an assumption.
Z18	BBBEE Certificate
Z18.1	The <i>Contractor</i> shall be expected to annually present a compliant BEE Certificate. Failure to do adhere to these requirements shall be considered a material breach of the conditions of this Contract, the sanction for which may be a cancellation of this Contract.
Z19	Communication
Z19.1	Add a new Core Clause 14.5 and 14.6 to read as follows: The <i>Project Manager</i> requires the written consent of the Employer if an action will result in a change to the design, scope, and Works information that is 5% or more
Z19.2	The <i>Project Manager</i> requires the written consent of the Employer if an action will result in the Completion Date being extended by more than 30 days.
Z20	Delegation
	As stipulated by Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993 as amended the <i>Contractor</i> agrees to the following:
Z20.1	As part of this contract the Contractor acknowledge that it (mandatory) is an employer in its own right with duties as prescribed in the Occupational Health and Safety Act No 85 of 1993 as amended and agree to ensure that all work being performed, or Equipment, Plant and Materials being used, are in accordance with the provisions of the said Act, and in particular with regard to the Construction Regulations
Z21	Transformation Imperatives
Z21.1	The Service Provider shall enter into a contract (either through partnership, joint venture or sub-contracting) with (a) Targeted Enterprise(s) to perform a minimum of 30% of work.
Z21.2	A Targeted Enterprise is a registered built environment firm contracted (either by Joint Venture, partnership or sub-contracting) by the tenderer to perform a specified percentage of work stated in the Contract Data under the guidance of the tenderer; or
Z21.3	A built environment CIDB registered firm contracted (either by Joint Venture, partnership or sub-contracting) by the tenderer to perform a specified percentage of work stated in the Contract Data under the guidance of the tenderer and which complies with the following:
Z21.3.1.	Does not share equity holding with the tenderer; and
Z21.3.2.	Is registered in terms of the Company’s Act, 2008 (Act No. 71 of 2008) or Close Corporation Act, 1984 (Act No. 69 of 1984); and
Z21.3.3.	Is registered with the South African Revenue Service; and
Z21.3.4.	Is at least an Exempted Micro Enterprise (EME) with a B-BBEE Status of “Level Two Contributor”, as defined in the Amended Codes of Good Practice for measuring Broad- Based Black Economic Empowerment (published in Government Gazette No. 36928 on 11 October 2013); or



Z21.3.5.	Is at least a Qualifying Small Enterprise (QSE) with a B-BBEE Status of “Level Two Contributor”, as defined in the Amended Codes of Good Practice for measuring Broad- Based Black Economic Empowerment (published in Government Gazette No. 36928 on 11 October 2013); and
Z21.3.6.	Is 50% or more black owned or 30% or more black women owned; and
Z21.3.7.	<p>Has entered into a written relationship agreement of co-operation and assistance with the tenderer for the duration of the contract.</p> <p>The service provider shall achieve in the performance of the contract the contract skills development goal established in the CIDB Standard for developing skills through infrastructure contracts (August 2013)</p> <p>The Employer shall have no contractual relationships with Subcontractors. However, if a Subcontractor is found by the Employer to be incompetent, the Employer may request the Service Provider either to provide a Subcontractor with qualifications and experience acceptable to the Employer as a replacement, or to resume the performance of the relevant part of the Services itself.</p> <p>The Service Provider shall not sub-contract more than 25% of the tendered contract value excluding value of work allocated to Targeted Enterprise(s) and any services specified in the Scope of Work to be procured through the Employer’s Supply Chain Procurement process) to any other enterprise that does not have an equal or higher B-BBEE status level, unless the intended sub-contractor(s) is an Exempted Micro Enterprise that has the capability and ability to execute the sub-contract.</p> <p>The Targeted Enterprise(s) shall not be allowed to sub-contract any work that forms part of the specified participation percentage without the Employer’s approval.</p>
Z21.4	If due to his negligence or for reasons within its control, the Service Provider does not meet the specified target of work stated in the (measured through the value of the Fee Tendered) to the Targeted Enterprise the Employer shall be entitled to levy a penalty equal to 50% of the value by which the cumulative value of the payments to the Targeted Enterprise fails to meet the specified percentage.
Z21.4.1	If the service provider fails to substantiate that any failure to achieve the contract skills development goal was due to reasons beyond the service provider’s control, which is the only reason that may be acceptable to the employer, sanctions shall apply as follows:
Z21.4.2	In the event that the service provider does not meet the specified CSDG target, ACSA shall levy a penalty which is equal to 50% of the Total Notional Cost over contract duration of the skills development programme.

C1.2 Contract Data

Part two - Data provided by the *Contractor*

Notes to a tendering contractor:

Please read both the NEC3 Engineering and Construction Contract (June 2005) and the relevant parts of its Guidance Notes (ECC3-GN)¹ in order to understand the implications of this Data which the Bidder is required to complete. An example of the completed Data is provided on pages 152 to 154 of the ECC3 Guidance Notes.

The number of the clause which requires the data is shown in the left-hand column for each statement however other clauses may also use the same data

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The Contractor is (Name):	
	Company Registration Number	_____
	Company VAT Number	_____
	Address	_____ _____ _____
	Telephone no.	_____
	Fax No.	_____
11.2	The <i>working areas</i> are	See C3 'Works information'
24.1	The <i>Contractor's Key people</i> are:	CV's to be appended to Resource Proposal (Annex F)
1	Project Manager	
	Name:	_____
	Qualifications relevant to this contract	_____ _____

¹ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za



Experience

2 Air-conditioning and Refrigeration Mechanic

Name:

Qualifications relevant to this contract

Experience

3 Electrician / Millwright

Name:

Qualifications relevant to this contract

Experience

4 Controls and Instrumentation Engineer

Name:

Qualifications relevant to this contract

Experience

5 High rope access Supervisor



Name:

Qualifications relevant to this contract

Experience

6 Scaffolding Inspector

Name:

Qualifications relevant to this contract

Experience

7 Occupational Health and Safety Practitioner

Name:

Qualifications relevant to this contract

Experience

8 Rigger

Name:

Qualifications relevant to this contract



Experience





C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract (June 2005)

The *conditions of contract* stated in the Contract Data Part 1 include the following Secondary Options:

Option X13: Performance Bond

Each of these secondary Options requires a bond or guarantee “in the form set out in the Works Information”. Pro forma documents for these bonds and guarantees are provided here for convenience but are to be treated as part of the Works Information.

Option X16: Retention (not used with Option F)

The *Contractor* may provide a Retention Money Guarantee in the form stated here. When the *Employer* receives and accepts a Retention Money Guarantee exactly in the form stated he will instruct the *Project Manager* not to assess any amount be retained in terms of secondary Option X16.

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.



Pro forma Performance Bond – Demand Guarantee (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Bond / Guarantee)

[Insert Contractor's name and registered address]

Bank reference No.

Date:

Dear Sirs,

Performance Bond – Demand Guarantee for [insert name of Contractor] required in terms of contract [insert Contractor's contract reference number or title]

In this Guarantee the following words and expressions shall have the following meanings: -

1.1	"Bank" means	[Insert name of Bank], [●] Branch, Registration No. [●]
1.2	"Bank's Address" means	[Insert physical address of Bank]
1.3	"Contract" means	the written agreement relating to providing the <i>works</i> , entered into between the <i>Employer</i> and the <i>Contractor</i> , on or about the [●] day of [●] 20[●] (Contract Reference No. [●]) as amended, varied, restated, novated or substituted from time to time;
1.4	"Contractor" means	[●] a company registered in accordance with the laws of [●] under Registration No [●].
1.5	"Employer" means	Airports Company South Africa SOC Limited a company registered in accordance with the laws of the Republic of South Africa under Registration Number 1993/004149/30
1.6	"Expiry Date" means	the earlier of the date that the Bank receives a notice from the <i>Employer</i> stating that all amounts due from the <i>Contractor</i> as certified in terms of the contract have been received by the <i>Employer</i> and that the <i>Contractor</i> has fulfilled all his obligations under the Contract, or the date that the Bank issues a replacement Bond for such lesser or higher amount as may be required by the <i>Employer</i> .
1.7	"Guaranteed Sum" means	10% of contract value excluding VAT which must be submitted within 10 working days from notification of award
1.8	"works" means	Design, Supply, Installation and Commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates as set out in the Section C3, Works Information

At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer* as security for the proper performance by the *Contractor* of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to



the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

A demand for payment under this guarantee shall be made in writing at the Bank’s address and shall: be signed on behalf of the *Employer* by a director of the *Employer*; state the amount claimed (“the Demand Amount”); state that the Demand Amount is payable to the *Employer* in the circumstances contemplated in the Contract.

Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank’s obligation/s to make payment:

is and shall be absolute provided demand is made in terms of this bond in all circumstances; and is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.

The Bank’s obligations in terms of this Guarantee:

- shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.

The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.

Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.

This Guarantee:

shall expire on the Expiry Date until which time it is irrevocable; is, save as provided for in **Error! Reference source not found.** above, personal to the *Employer* and is neither negotiable nor transferable; shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof; shall be regarded as a liquid document for the purpose of obtaining a court order; and shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa. will be invalid and unenforceable if any claim which arises or demand for payment is received after the Expiry Date.

The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank’s Address.

Signed at _____ on this _____ day of _____ 20__

For and on behalf of the Bank

Bank Signatories(s) _____



Name(s) (printed)

Witness(s)

Bank's seal or stamp

C1.4 Insurance Schedule

Summary of Terms and other Matters Applicable to Employer Provided Insurance

INSURANCE CLAUSES FOR CAPEX PROJECTS

This is an ACSA internal document and should not be shared with external stakeholders in this format. Only the insurance clauses relevant to the particular project should be copied and pasted to that tender document or contract.

SECTION A: DEFINITIONS

Landside refers to:

Areas of the airport before the security points; and

The restricted area beyond the security points but, within the perimeter of gatehouses, passenger terminals and cargo buildings.

Airside refers to:

The Apron / maneuvering areas; and

Area within the airside boundary/perimeter fence, excluding the internal areas of the passenger terminals, perimeter gatehouses and cargo buildings.



SECTION B: INSURANCE CLAUSES

1. INSURANCE REQUIREMENTS FOR PROJECTS WITH A VALUE BELOW R50 million AND DURATION NOT EXCEEDING 36 MONTHS ON THE LANDSIDE

- Projects with a value below R50 million and with a duration not exceeding 36 months are automatically covered under an ACSA umbrella insurance. No need to notify ACSA Treasury about these projects.
- But please note that **Project Notification forms** should be completed by project managers and sent to ACSA Treasury (Email: nokulunga.masiza@airports.co.za) for all projects with a value below R50 million, and with a duration that **exceeds** 36 months as soon as the contract is awarded, as these projects are not automatically covered under an ACSA umbrella insurance.

1.1 Contract Works Insurance

The contractor must secure a contract works insurance cover for a limit not less than R250 000, each and every claim

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

1.2 Public Liability Insurance

The contractor must secure Public Liability insurance cover for 3rd party property damage, for a limit not less than R275 000 for each and every claim;

The contractor must secure Public Liability insurance cover for removal of lateral support, for a limit not less than R500 000 for each and every claim;

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

1.3 Professional Indemnity Insurance

All consultants must secure Professional Indemnity cover for a limit not less than R5 million; Contractors who have a material design element, excluding typical P & G related work, as part of their scope, must secure Professional Indemnity cover for a limit not less than R5 million;

The consultant must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and consultant.



2. INSURANCE REQUIREMENTS FOR PROJECTS WITH A VALUE BELOW R50 million AND DURATION NOT EXCEEDING 36 MONTHS ON THE AIRSIDE

Projects with a value below R50 million and with a duration not exceeding 36 months are automatically covered under an ACSA umbrella insurance. No need to notify ACSA Treasury about these projects.

But please note that **Project Notification forms** should be completed by project managers and sent to ACSA Treasury (Email: nokulunga.masiza@airports.co.za) for all projects with a value below R50 million, and with a duration that **exceeds** 36 months as soon as the contract is awarded, as these projects are not automatically covered under an ACSA umbrella insurance.

2.1 Contract Works Insurance

The contractor must secure a contract works insurance cover for a limit not less than R250 000, for each and every claim

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

2.2 Public Liability Insurance

The contractor must secure Public Liability insurance cover for 3rd party property damage, for a limit not less than R525 000, for each and every claim;

The contractor must secure Public Liability insurance cover for removal of lateral support, for a limit not less than R750 000, for each and every claim;

The contractor must secure Public Liability insurance cover for damage to aircraft, for a limit not less than R750 000, for each and every claim

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

2.3 Professional Indemnity Insurance

All consultants must secure Professional Indemnity cover for a limit of not less than R5 million; Contractors who have a material design element, excluding typical P & G related work, as part of their scope, must secure Professional Indemnity cover for a limit not less than R5 million;

The consultant must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and consultant.



3. INSURANCE REQUIREMENTS FOR PROJECTS WITH A VALUE ABOVE R50 million BUT BELOW R1 billion ON THE LANDSIDE

Projects with a value of more R50 million are not automatically covered under the construction policies. A separate quote is provided by insurers per project. **Project Notification forms** must be completed by project managers and sent to ACSA Treasury (Email: nokulunga.masiza@airports.co.za) for all projects with a value above R50 million, as soon as the contractor is awarded

3.1 Contract Works Insurance

The contractor must secure a contract works insurance cover as follows:

- i) a limit not less than R300 000 each and every claim - For all civil works and earthworks
- ii) a limit not less than R300 000 each and every claim - all other claims
- iii) a limit not less than R700 000 each and every claim – other property insured

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

3.2 Public Liability Insurance

The contractor must secure Public Liability insurance cover for 3rd party property damage, for a limit not less than R275 000 for each and every claim;

The contractor must secure Public Liability insurance cover for removal of lateral support, for a limit not less than R500 000 for each and every claim;

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

3.3 Professional Indemnity Insurance

All consultants must secure Professional Indemnity insurance cover for a limit of not less than R10 million;

Contractors who have a material design element, excluding typical P & G related work, as part of their scope, must secure Professional Indemnity insurance cover for a limit not less than R10 million;

The consultant must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and consultant.



4. INSURANCE REQUIREMENTS FOR PROJECTS WITH A VALUE ABOVE R50 million BUT BELOW R1 billion ON THE AIRSIDE

Projects with a value of more R50 million are not automatically covered under the construction policies. A separate quote is provided by insurers per project. **Project Notification forms** must be completed by project managers and sent to ACSA Treasury (Email: nokulunga.masiza@airports.co.za) for all projects with a value above R50 million, as soon as the contractor is awarded.

4.1 Contract Works

The contractor must secure a contract works insurance cover as follows:

- iv) For all civil works and earthworks excluding runways - a limit not less than R300 000 each and every claim
- v) For runway rehabilitation - a limit not less than R300 000 each and every claim
- vi) For new runway construction - a limit not less than R700 000 each and every claim
- vii) For all other claims - a limit not less than R300 000 each and every claim
- viii) For other property insured - a limit not less than limit of R700 000 each and every claim

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

4.2 Public Liability Insurance

The contractor must secure Public Liability insurance cover for 3rd party property damage, for a limit not less than R1 025 000 for each and every claim;

The contractor must secure Public Liability insurance cover for removal of lateral support, for a limit not less than R1 250 000 for each and every claim;

The contractor must secure Public Liability insurance cover for damage to aircraft, for a limit not less than R1 250 000 for each and every claim

The contractor must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and the contractor

4.3 Professional Indemnity Insurance

- All consultants must secure Professional Indemnity insurance cover for a limit not less than R10 million;
- Contractors who have a material design element, excluding typical P & G related work, as part of their scope, must secure Professional Indemnity insurance cover for a limit not less than R10 million;
- The consultant must submit to ACSA proof of cover in the form of a certificate of insurance before a contract is signed between ACSA and consultant.



5. INSURANCE REQUIREMENTS FOR PROJECTS WITH A VALUE ABOVE R1 billion ON EITHER LANDSIDE OR AIRSIDE

The limits to be insured stipulated above on paragraphs 1; 2; 3; and 4 do not apply to projects with a value above R1 billion

Applicable limits to be insured will be determined on a project-by-project basis when insurers are approached for cover

Insurers may also stipulate additional insurance covers, depending on the scope of the project

Project managers must complete **Project Notification forms** and send them to ACSA Treasury(Nokulunga.masiza@airports.co.za) for projects above R1 billion, **before the publication of the tender document.**



C1.5 Occupational Health and Safety Agreement

OCCUPATIONAL HEALTH AND SAFETY AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH & SAFETY ACT (ACT 85 OF 1993) & CONSTRUCTION REGULATION 5.1(k)

OBJECTIVES

To assist Airport Company South Africa (ACSA) to comply with the requirements of:

1. The Occupational Health & Safety (Act 85 of 1993) and its regulations and
2. The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993) also known as the (COID Act).

To this end an Agreement must be concluded before any contractor/ subcontracted work may commence

The parties to this Agreement are:

Name of Organization:	AIRPORTS COMPANY SOUTH AFRICA O R TAMBO INTERNATIONAL AIRPORT
Physical Address:	Airport Company South Africa OR Tambo International Airport ACSA Building, 4th Floor

Hereinafter referred to as "Client"

Name of organisation:
Physical Address

Hereinafter referred to as "the Mandatary/ Principal Contractor"



GENERAL INFORMATION FORMING PART OF THIS AGREEMENT

The Occupational Health & Safety Act comprises of SECTION 1-50 and all un-repealed REGULATIONS promulgated in terms of the former Machinery and Occupational Safety Act No.6 of 1983 as amended as well as other REGULATIONS which may be promulgated in terms of the Act and other relevant Acts pertaining to the job in hand.

“Mandatory” is defined as including as agent, a principal contractor or a contractor for work, but WITHOUT DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant

Section 37 of the Occupational Health & Safety Act potentially punishes Employers (PRINCIPAL CONTRACTOR) for unlawful acts or omissions of Mandatories (CONTRACTORS) save where a Written Agreement between the parties has been concluded containing arrangements and procedures to ensure compliance with the said Act BY THE MANDATARY. All documents attached or refer to in the above Agreement form an integral part of the Agreement.

To perform in terms of this agreement Mandatories must be familiar and conversant with the relevant provisions of the Occupational Health & Safety Act 85 of 1993 (OHS Act) and applicable Regulations.

Mandatories who utilize the services of their own Mandatories (contractors) must conclude a similar Written Agreement with them.

Be advised that this Agreement places the onus on the Mandatory to contact the CLIENT in the event of inability to perform as per this Agreement.

This Agreement shall be binding for all work the Mandatory undertakes for the client.

All documentation as per the Safety checklist including a copy of the written Construction Manager appointment in terms of construction regulation 8, must be submitted 7 days before work commences.

THE UNDERTAKING

The Mandatory undertakes to comply with:

INSURANCE

The Mandatory warrants that all their employees and/or their contractor’s employees if any are covered in terms of the COID Act, which shall remain in force whilst any such employees are present on the Client’s premises. A letter is required prior commencing any work on site confirming that the Principal contractor or contractor is in good standing with the Compensation Fund or Licensed Insurer.

The Mandatory warrants that they are in possession of the following insurance cover, which cover shall remain in force whilst they and /or their employees are present on the Client’s premises, or which shall remain in force for that duration of their contractual relationship with the Client, whichever period is the longest.

- Public Liability Insurance Cover as required by the Subcontract Agreement.
- Any other Insurance cover that will adequately makes provision for any possible losses and/or claims arising from their and /or their Subcontractors and/or their respective employee’s acts and/or omissions on the Client’s premises.



COMPLIANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT 85 OF 1993

The Mandatary undertakes to ensure that they and/or their subcontractors if any and/or their respective employees will always comply with the following conditions:

1. All work performed by the Mandatary on the Client's premises must be performed under the close supervision of the Mandatary's employees who are to be trained to understand the hazards associated with any work that the Mandatary performs on the Client's premises.
2. The Mandatary shall be assigned the responsibility in terms of Section 16(1) of the OHS Act 85 of 1993, if the Mandatary assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.
3. The Mandatary shall ensure that he/she familiarise himself/herself with the requirements of the OHS Act 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.
4. The Mandatary shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.
5. The Mandatary shall appoint competent persons who shall be trained on any Occupational Health & Safety aspect pertaining to them or to the work that is to be performed.
6. The Mandatary shall ensure that discipline regarding Occupational Health & Safety shall be strictly enforced.
7. Any personal protective equipment required shall be issued by the Mandatary to his/her employees and shall be worn at all times.
8. Written safe working practices/procedures and precautionary measures shall be made available and enforced and all employees shall be made conversant with the contents of these practises.
9. No unsafe equipment/machinery and/or articles shall be used by the Mandatary or contractor on the Client's premises.
10. All incidents/accidents referred to in OHS Act shall be reported by the Mandatary to the Provincial Director: Department of Labour as well as to the Client.
11. No user shall be made by the Mandatary and/or their employees and or their subcontractors of any of the Client's machinery/article/substance/plant/personal protective equipment without prior written approval.
12. The Mandatary shall ensure that work for which the issuing of permit is required shall not be performed prior to the obtaining of a duty completed approved permit.
13. The Mandatary shall ensure that no alcohol or any other intoxicating substance shall be allowed on the Client's premises. Anyone suspected to be under the influence of alcohol or any other intoxicating substance shall not be allowed on the premises. Anyone found on the premises suspected to be under the influence of alcohol or any other intoxicating substance shall be escorted off the said premises immediately.
14. Full participation by the Mandatary shall be given to the employees of the Client if and when they inquire into Occupational Health & Safety.



FURTHER UNDERTAKING

1. Only a duly authorised representative appointed in terms of Section 16.2 of the OHS Act is eligible to sign this agreement on behalf of the Mandatary. The signing power of this representative must be designated in writing by the Chief Executive Officer of the Mandatary. A copy of this letter must be made available to the Client.
2. The Mandatary confirms that he has been informed that he must report to the Client's management, in writing anything he/she deems to be unhealthy and /or unsafe. He has versed his employees in this regard.
3. The Mandatary warrants that he/she shall not endanger the health & safety of the Client's employees and other persons in any way whilst performing work on the Client's premises.
4. The Mandatary understands that no work may commence on the Client's premises until this procedure is duly completed, signed and received by the Client.
5. Non-compliance with any of the above clauses may lead to an immediate cancellation of the contract.

ACCEPTANCE BY MANDATARY

In terms of section 37(2) of the Occupational Health & Safety Act 85 of 1993 and section 5.1(k) of the Construction Regulations 2014,

I, _____ (Name and Surname), a duly authorised
16.2

Appointee acting for and on behalf of _____ (Company Name) undertake to ensure that the requirements and the provision of the OHS Act 85 of 1993 and its regulations are complied with.

Mandatary – WCA/ Federated Employers Mutual No.....

Expiry date

SIGNATURE ON BEHALF OF MANDATARY
(Warrant his authority to sign)

DATE

SIGNATURE ON BEHALF OF THE CLIENT
AIRPORT COMPANY SOUTH AFRICA

DATE

**ACSA SERVICE & MAINTENANCE CONTRACTORS
ENVIRONMENTAL TERMS AND CONDITIONS TO COMMENCE WORK - EMS 048**

The following Environmental Terms and Conditions shall be strictly adhered to by all contractors when conducting works for ACSA. ACSA shall audit contractor activities, products and services on an ad hoc basis to ensure compliance to these environmental conditions. Any pollution clean-up costs shall be borne by the contractor.

ISSUE	REQUIREMENT
Environmental Policy	ACSA's Environmental Policy shall be communicated, comprehended and implemented by all ACSA appointed contractor staff.
Storm water, Soil and Groundwater Pollution	<p>No solid or liquid material may be permitted to contaminate or potentially contaminate storm water, soil or groundwater resources.</p> <p>Any pollution that risks contamination of these resources must be cleaned-up immediately. Spills must be reported to ACSA immediately. Contractors shall supply their own suitable clean-up materials where required.</p> <p>Washing, maintenance and refuelling of equipment shall only be allowed in designated service areas on ACSA property. It is the contractor's responsibility to determine the location of these areas.</p> <p>No leaking equipment or vehicles shall be permitted on the airport.</p>
Air Pollution	<p>Dust: Dust resulting from work activities that could cause a nuisance to employees or the public shall be kept to a minimum.</p> <p>Odours and emissions: All practical measures shall be taken to reduce unpleasant odours and emissions generated from work related activities.</p> <p>Fires: No open fires shall be permitted on site.</p>
Noise Pollution	<p>All reasonable measures shall be taken to minimize noise generated on site due to work operations.</p> <ul style="list-style-type: none"> • The Contractor shall comply with the applicable regulations regarding noise.
Waste Management	<p>Waste shall be separated as general or hazardous waste.</p> <p>General and hazardous waste shall be disposed of appropriately at a permitted landfill site should recycling or re-use of waste not be feasible.</p> <p>Under no circumstances shall solid or liquid waste be dumped, buried or burnt.</p> <p>Contractors shall maintain a tidy, litter free environment always in their work area.</p> <p>Contractors must keep on file:</p> <p>The name of the contracting waste company</p> <p>Waste disposal site used</p> <p>Monthly reports on quantities – separated into general, hazardous and recycled</p> <p>Maintained file of all Waste Manifest Documents and Certificates of Safe Disposal</p>

	Copy of waste permit for disposal site This information must be available during audits and inspections.
Handling & Storage of Hazardous Chemical Substances (HCS)	All HCS shall be clearly labelled, stored and handled in accordance to Materials Safety Data Sheets. Materials Safety Data Sheets shall be stored with all HCS. All spillages of HCS must be cleaned-up immediately and disposed of as hazardous waste. (HCS spillages must be reported to ACSA immediately). All contractors shall be adequately informed with regards to the handling and storage of hazardous substances. Contractors shall comply with all relevant national, regional and local legislation regarding the transport, storage, use and disposal of hazardous substances.
Water and Energy Consumption	ACSA promotes the conservation of water and energy resources. The contractor shall identify and manage those work activities that may result in water and energy wastage.
Training & Awareness	The conditions outlined in this permit shall be communicated to all contractors and their employees prior to commencing works at the airport.

Penalties

Penalties shall be imposed by ACSA on Contractors who are found to be infringing these requirements and/or legislation. The Contractor shall be advised in writing of the nature of the infringement and the amount of the penalty. The Contractor shall take the necessary steps (e.g. training/remediation) to prevent a recurrence of the infringement and shall advise ACSA accordingly.

The Contractor is also advised that the imposition of penalties does not replace any legal proceedings, the Council, authorities, land owners and/or members of the public may institute against the Contractor.

Penalties shall be between R200 and R20 000, depending upon the severity of the infringement. The decision on how much to impose will be made by ACSA's Airport Environmental Management Representative in consultation with the Airport Manager or his/her designate, and will be final. In addition to the penalty, the Contractor shall be required to make good any damage caused due to the infringement at his/her own expense.

I, _____ (name & surname)
of _____ (company) agree to the above conditions and acknowledge ACSA's right to impose penalties should I or any of my employees or sub-contractors fail to comply with these conditions.

Signed: _____ on this date: _____ (dd/mm/yyyy)

at: _____ (airport name).



Company _____ Site _____

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
APPOINTMENT: PRINCIPAL CONTRACTOR

Construction Regulation 5(1) (k)

(1) *A client must:*

(k) *Appoint every principal contractor in writing for the project or part thereof on the construction site;*

Appointment

I, _____ (print name), for and on behalf of the
Client, _____ (Name of Client), hereby appoint _____
_____ (print name of company), as the Principal Contractor at the
following site:

_____ (Name & address of site).

Client
Signature: _____ Date: _____

ACCEPTANCE

I, _____ (print name), acting for and on behalf of the Principal
Contractor, hereby accept the above appointment.

Signature: _____ Date: _____

Designation: _____

C2.1 Pricing assumptions: Option A

1. The *conditions of contract*

1.1 How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract, June 2005 (ECC3) Option A states:

- Identified and defined terms 11.2
- (20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract.
- (27) The Price for Work Done to Date is the total of the Prices for
- each group of completed activities and
 - each completed activity which is not in a group.
- A completed activity is one which is without Defects which would either delay or be covered by immediately following work.
- (30) The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

This confirms that Option A is a lump sum form of contract where the work is broken down into activities, each of which is priced by the tendering contractor as a lump sum. Only completed activities are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date.

1.2 Function of the Activity Schedule

Clause 54.1 in Option A states: “Information in the Activity Schedule is not Works Information or Site Information”. This confirms that instructions to do work or how it is to be done are not included in the Activity Schedule but in the Works Information. This is further confirmed by Clause 20.1 which states, “The *Contractor* Provides the Works in accordance with the Works Information”. Hence the *Contractor* does **not** Provide the Works in accordance with the Activity Schedule. The Activity Schedule is only a pricing document.

1.3 Link to the programme

Clause 31.4 states that “The *Contractor* provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance”. Hence when compiling the *activity schedule*, the tendering contractor needs to show each activity on the programme he submits with his tender.

1.4 Preparing the *activity schedule*

The tendering contractor prepares the *activity schedule* and should study the ECC3 Guidance Notes pages 19 and 20 before doing so. The *Employer* may have instructed the tendering contractor to include particular activities which he has specified and requires the *Contractor* to identify them in his *activity schedule*.



Generally it is the Contractor who prepares the Activity Schedule as part of his tender by breaking down the work described within the Works Information into suitable activities which can be well defined, priced as a lump sum and shown on the programme. The Employer, in his Conditions of Tender or in a Tender Schedule, may have listed some items that he requires the Contractor to include in his activity schedule and be priced accordingly.

The Prices are defined in clause 11.2(20) as the lump sum for each activity in the activity schedule and the Price for Work Done to Date (PWDD) (the amount due to the contractor) is defined in clause 11.2(24) as the total of the Prices for each activity that has been completed. Hence activities in the activity schedule should be structured so as to provide an acceptable monthly cash flow as they are only assessed for payment on the assessment date if they have been completed.

As the Contractor has an obligation to correct Defects (core clause 43.1) and there is no compensation event for this unless the Defect was due to an Employer’s risk, the lump sum Prices must also include for the correction of Defects.

If the Contractor has decided not to identify a particular activity, the cost to the Contractor of doing the work must be included in, or spread across, the other Prices in order to fulfil the obligation to complete the works for the tendered total of the Prices.

There is no adjustment to the lump sum activity schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the contractor estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event. See Clause 60.1.

Hence the Prices tendered by the Contractor in the *activity schedule* are inclusive of everything necessary and incidental to Providing the Works in accordance with the Works Information, as it was at the time of tender, as well as correct any Defects not caused by an Employer’s risk.

However, the Contractor does not have to allow in his Prices for matters that may arise as a result of a compensation event. It should be noted that the list of compensation events includes those arising as a result of an Employer’s risk event listed in core clause 80.1.

An activity schedule could have the following format:

Item No.	Programme Reference	Activity description	Price

C2.2 Activity Schedule

Option A (refer to Works Information C3 for more details)

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Works		
1	Subtotal Ps and Gs	R -
2	Sub-total A1	R -
3	Sub-total A1R	R -
4	Sub-total A2	R -
5	Sub-total A3	R -
6	Sub-total A4	R -
7	Sub-total A5	R -
8	Sub-total A6	R -
9	Sub-total A7	R -
10	Sub-total A8	R -
11	Sub-total A9	R -
12	Sub-total A10	R -
13	Sub-total A11	R -
14	Sub-total A12	R -
15	Sub-total A13	R -
16	Sub-total C1	R -
17	Sub-total C2	R -
18	Sub-total C3	R -
19	Sub-total C4	R -
20	Sub-total C5	R -
21	Sub-total C6	R -
22	Sub-total C7	R -
23	Sub-total C8	R -
24	Sub-total E1	R -
25	Sub-total E3	R -
26	Sub-total E6	R -
27	Sub-total E9	R -
28	Sub-total E12	R -
Grand Total A		R -

*All mounts to entered exclusive of VAT. Grand Total A to be carried over to Form of Offer

Ps and Gs in the activity schedule to include but not limited to the following: Provision for night work, Provision for scaffold hire, provision for safety requirements, provision for making good (ceilings, tiles, walls, etc), provision for breakages; provision for tools, consumables, equipment hire and staff travelling; provision for all other overheads related to the project.

C3 Works information

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Works Information</i>	17
C3.2	<i>Contractor's Works Information</i>	1
	Total number of pages	19



3.1 Description of the works

3.1.1 Executive overview

In brief, The project entails Design, Supply, Installation and Commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates at O.R. Tambo International Airport. The battery limits are between the rotunda of Apron drives or nose loader passenger loading bridges and the attachment to the terminal building.

3.1.2 Employer's objectives and purpose of the works

The objective is to install High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates at O.R. Tambo International Airport. The Contractor will ensure that the Design, Supply, Installation and Commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates is carried out in compliance with the regulations/ applicable laws over a 12-month period.

The Contractor will be appointed directly by the Airports Company of South Africa.

3.1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
ACSA	Airport Company South Africa
ORTIA	OR Tambo International Airport
SANS	South African National Standards
OHS ACT	Occupational Health and Safety Act
PO	Purchase Order
OEM	Original Equipment Manufacture
RSA	Republic of South Africa
UOM	Unit of Measure

3.2 Management and start up.

3.2.1 Management meetings

Regular meetings of a general nature may be convened and chaired by the ACSA *Project Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
-------------------	-----------------------------	----------	----------------



Risk register and compensation events	Weekly	ORTIA	<i>Employer, Contractor, Supervisor,</i>
Overall contract progress and feedback	Monthly	ORTIA	<i>Employer, Contractor, Supervisor,</i>

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *works*. Records of these meetings shall be submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

3.2.2 Documentation control

All correspondence between the Contractor, Consultant and the Employer shall be performed in an organized manner as defined below.

In this context, by correspondence is meant:

Letters

E-mail

All correspondence originating from a sub-contractor shall first be dealt with and coordinated by the Contractor and submitted as the contractor's correspondence.

For the purposes of distribution and archiving, a correspondence of any type shall not deal with a mixture of various subjects. This refers to both technical and commercial items, i.e. where practical, each technical and commercial subject shall be dealt with in separate correspondence.

All correspondence shall bear the Project Title and the Contract Number.

Furthermore, all correspondence shall bear the date of issuance, in DD.MM. YYYY format.

a) LETTERS

For official correspondence with contractual and/or financial implications, letters shall normally be used.

The Contractor shall address all his letters to the Consultant. The original shall be submitted to the Consultant and a copy to the Employer.

Letters to the Contractor shall usually be submitted by the Consultant, with a copy to the Employer. Should the Employer wish to write directly to the Contractor, he shall copy to the Consultant.

b) E-MAIL (Unofficial correspondence)

For ease of communication, e-mail will be the preferred medium for "normal" communication. However, any communication which the originator regards as Official and "for the record" needs to be on a letterhead,



signed and either faxed and/or submitted in hard copy to the recipient. Hence, in the case of a dispute, e-mailed correspondence shall not ipso facto be accepted as proof of error free communication. However, an e-mail shall be considered a valid document only once receipt has been acknowledged or after a response have been received.

The onus is on the sender to either scan confidential information or use Portable Document Format (.pdf).

Forms such as Payment Certificates and Invoices shall always either be scanned in or transmitted in .pdf files.

3.2.3 Health and safety risk management

The Contractor shall comply with the Employer's health and safety requirements as contained in Annexure C to this Works Information.

The Contractor shall submit with this Tender, a complete Health and Safety Plan for this project, for the Employer's approval.

The Employer and the Contractor hereby agree, in terms of the provisions of any relevant legislation governing safety or health, that the Contractor as an employer in its own right and in its capacity as contractor for the execution of the works, shall have certain obligations and that the following arrangement shall apply between them to ensure compliance by the contractor with the provisions of the legislation, namely: -

- (a) The Contractor undertakes to acquaint the appropriate officials and the employees of the contractor with all relevant provisions of relevant legislation and the regulations promulgated in terms thereof, and
- (b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the relevant legislation and regulations will be fully complied with, and
- (c) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the relevant legislation and regulations and expressly absolve the Employer from being obliged to comply with any of the aforesaid duties, obligations and prohibitions in respect of the work included in the contract.
- (d) The contractor shall be obliged to report forthwith to the Employer any investigation, complaint, or criminal charge which may arise as a consequence of the provisions of the relevant legislation and regulations pursuant to work performed on behalf of the employer and shall, on written demand, provide full details in writing of such investigation, complaint, or criminal charge.

The Contractor shall furthermore comply with all the Employer's requirements for security and safety. An active accident prevention programme shall be maintained. A responsible person shall be appointed, and he is to cooperate fully with the Engineers Representative in all matters pertaining to accident prevention.

The Contractor shall comply with:

- The Occupational Health and Safety Act, 1993, and all regulations.
- The Construction Regulations, 2003.
- The Contractor undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures

When apparatus is in commission or is to be commissioned:

- The Contractor shall ensure that a team member on site of the Contractor is authorized as a Responsible Person.
- The Contractor shall ensure that the Responsible Person shall supervise the works at all times and be available to take permits where necessary.

The Employer may, at any stage during the duration of this contract, be entitled to:

- do safety audits at the Contractor's premises, its work-places and on its employees;



- refuse any employee, sub-contractor or agent of the Contractor access to its premises if such person has been found to commit any unlawful act or any unsafe working practice or is found to be not authorized or qualified in terms of the Act
- issue the Contractor with a work stop order should the Employer become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures referred to above by the Contractor or any of its employees, sub-contractors or agents.
- No extension of time will be allowed as a result of any action taken by the Employer in terms of the above and the Contractor shall have no claim against the Employer as a result thereof.
- An authorized Employer's representative will be on site for regular site visits to monitor the Contractor's implementation of health, safety and quality Standards.
- The works to be enclosed with chevron barricade tape supplied and installed by the Contractor and set out by the Employer.
- The Contractor shall be responsible for all expenses incurred to ensure adherence to Health and Safety Regulations as stipulated above.
- The Contractor shall comply with all the requirements of the CONSTRUCTION REGULATIONS.
- The Contractor shall adhere to the applicable standards and procedures attached to this contract.

3.2.4 Environmental constraints and management

The Contractor shall comply with the environmental criteria and constraints stated in the Employer's EMS included in Annexure H.

3.2.5 Quality assurance requirements

The Contractor needs to submit a quality plan indicating the control points for quality to ensure that the works are done according to specification.

The Contractor shall control his activities and processes in such a way as to ensure compliance with the Employer's Specifications and Standards. He shall carry out, as a minimum requirement all the tests laid down in the specifications and shall submit all the test results to the Employer.

The Employer's Specifications and Standards, as indicated in this document, are requirements of this contract.

The Contractor shall be responsible for the relevant Quality Assurance Requirements to be imposed on his sub-contractors and suppliers of materials in terms of the above standards.

The Contractor shall submit with this Tender, a complete list of sub-contractors, he intends to make use of for this project, for the Employer's approval. The Contractor will not appoint any sub-contractor without the acceptance of the Employer.

Only new, good quality materials may be used and where applicable materials must comply with the specifications of the South African Bureau of Standards or IEC Specifications.

3.2.7 Contractor's management, supervision and key people

Minimum requirements of people employed on the Site

A schedule of key personnel to this Contract will be provided to the Project Manager at commencement of this Contract. This will, as a minimum, include all persons from technician/artisan level to management level. For the full duration of this Contract, none of these persons will be replaced by a



person of lesser ability or qualification. All on-site staff leaves shall be reported and agreed with the Project Manager. The Project Manager may request the replacement of any person with unsatisfactory performance or fails to comply with this contract.

It is the contractor's responsibility to ensure that there is always sufficient competent staff to perform the works as planned. It shall be the Contractor's responsibility to ensure that all relevant labour and safety legislation is adhered to in rostering staff.

All key personnel are required to have personal access permit to access the site.

The Contractor shall not be compensated for costs relating to ACSA required permits, nor for labour/time spent in obtaining it. An allowance must be made in the tender price in this regard.

The Contractor must ensure that he/she is, at all times, familiar with ACSA's safety and security requirements relating to permits in order for no work to be delayed as a result thereof. This will include the permit application process.

Note that (within reason) the Contractor will have no claim against ACSA in the event that a permit request is refused.

Role Description	Minimum Qualification	Minimum Experience
Project Manager	BEng/BSC Mechanical and registered PRTECH (Mechanical)	10 years' experience post BENG/BSC/BTECH qualification, registered as a PRENG or BTECH, demonstrate experience of management of at least three completed Multidisciplinary relevant projects that are each above R10 million, demonstrate any experience with management of projects according to the National Treasury Standard for Infrastructure Procurement and Delivery Management.
BMS, Controls and Data Analytics Engineer	PR Tech Electronics/Electrical Light Current/Mechatronics	At Least 10 years' experience post qualification with specific experience in Edge computing systems, Cloud and Localised BMS, Engineering, Safety systems, fire detection/HVAC interfaces, Working with indoor air quality Limits in the HCS Regulations and application. Demonstrate knowledge of PART O of SANS 10400, Demonstrate knowledge of EN12101, Chiller controls, Cooling tower controls, PLCs, Controllers, VFDs, Online water quality analysis, Energy Optimisation, Actuators, HVAC Control Loops and Control Modes, Demonstrate experience with Communication Protocols, at least 3 years' experience in interfacing BMS with Data Analytics Platforms, Creating digital input forms, and creating web/mobile based performance dashboards
Air-conditioning and Refrigeration Mechanic	N2/N3/N4 and SAQA Accredited Trade test Refrigeration /air-conditioning mechanic	Demonstrate at least 5 years experience of completed installation and commissioning of central plants projects, packaged units, fan coils, fresh air ventilation fans and air distribution ducting. The experience must be demonstrated in a CV.
Electrician/Millwright	Electrical N2/N3/N4 and SAQA Accredited Trade test certificate (Electrician) and wireman's license.	Demonstrate 2 years' experience after obtaining a Wireman's License, Demonstrate experience of at least 8 years post qualification as an electrician and knowledge of switchgears, Distribution boards and protection systems.
Controls and Instrumentation Engineer	BTECH Electronics/Mechatronics and PRTECH registration	At least 10 years' experience as BENG/BSC Electronics/Mechatronics and at least 5 years post PRENG registration
High rope access Supervisor	Level 3 Rope access Technician- RAFAA/IWH Certification	Between 3- and 5-years' experience as a Level 3 Rope access Technician- IRATA or RAFAA or IWH Certification



Scaffolding Inspector	Valid Scaffolding Inspector certificate	Between 3 and 5 years' experience as Scaffolding Inspector
Occupational Health and Safety Practitioner	Construction related or safety related or environmental related diploma/degree with SACPCMP registration.	Between 6 months and 1 year as a Construction safety practitioner
Rigger	SAQA Accredited Trade (Rigger or Rigger- Ropes man)	At least 5 years' experience as a Rigger or Rigger- Ropes man

3.2.8 Invoicing and payment

Within seven days of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.

The *Contractor* shall address the tax invoice to Airports Company South Africa SOC Ltd. and include on each invoice the following information:

Name and address of the *Contractor* and the *Project Manager*;
 The contract number and title;
Contractor's VAT registration number;
 The *Employer's* VAT registration number 493 013 8393;
 Description of work done by cross reference to *Project Manager's* certificate;
 Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

3.2.9 Contract change management

None

3.2.10 Provision of bonds and guarantees

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Project Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

3.2.11 Training workshops and technology transfer

The operation of all the equipment supplied under this contract shall be demonstrated at length to the local maintenance personnel to the satisfaction of the employer.

3.3 Engineering and the *Contractor's* design

3.3.1 *Employer's* design

The Employers' design is limited to the following:

Layout of the existing buildings and equipment.

Scope of work



In brief, the Contractor will be responsible for Design, Supply, Installation and Commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates at O.R. Tambo International Airport.

The activities which comprise the scope of work are as follows:

3.3.1.1. Alpha 1 to Alpha 13 and Echo 1 to Echo 12

Design Works

- Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech. This includes but not limited to determination of cooling loads, determination of fresh air requirements, selection of equipment, sizing of ducts, determination of the number of swirl diffusers and producing required drawings.
- Design of the controls and selection of an industrial SCADA by controls engineer who is registered as a PRENG or PRTech.
- Design of concrete pads or selection of movable pads for placement of the outdoor VRV/VRF condenser units, integrity assessment of existing slabs for placement of outdoor units.
- Design of the electrical reticulation system by a registered PRENG/PRTech.

Mechanical Works

- Supply and Installation of Outdoor VRV Condensor Units.
- Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping
- Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person
- Supply and installation of supply and return air ducting including external insulation
- Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers
- Supply and installation of fresh air fan, ducting and filtered weather louvre(s)
- Supply of as-built drawings

Controls and Instrumentation Works

- Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct.
- Supply and installation of a static pressure indicator and Transmitter on the supply and return duct
- Supply and installation of a temperature sensor and transmitter on the supply and return duct
- Supply and installation of an aesthetic display hygrometers
- Supply and installation of a control panel including a panel PLC, panel wifi module and power supply
- Linking of a control panels to Industrial SCADA
- Wiring of all airflow, pressure, temperature sensors and power metering to the control panel
- Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA IMC (Infrastructure Monitoring Centre)
- Supply and installation of all cable labelling, trunking and or trays
- Supply of As-built wiring diagrams and a digital PLC logic or program file.

Electrical Works

- Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera
- Supply and installation of all cabling and joints
- Supply and installation of all isolators
- Supply and Installation of all trunking and or trays
- COC test certificate from DB to the supplied units

Building and facilities Works

- Configuration of ACSA IMC desks to allow for sitting of and HVAC plant operator and controller
- Replacement of all damaged suspended ceiling
- Daily cleaning of the bridge to ensure readiness for airport operations
- Making of the building good
- All hoarding to ensure that potential hazards to the safety of airport is intact.

Civil Works

- Design/supply of Concrete pads and or potable pads for outdoor units

Existing Services Works

- Provision for restoration of fire detectors
- Provision for restoration of ceiling lights

3.3.1.2. Charlie 1 to Charlie 8

Design Works

- Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech. This includes but not limited to determination of cooling loads, determination of fresh air requirements, selection of equipment, sizing of ducts, determination of the number of swirl diffusers and producing required drawings.
- Design of the controls and selection of an industrial SCADA by controls engineer who is registered as a PRENG or PRTech.
- Design of concrete pads or selection of movable pads for placement of the outdoor VRV/VRF condenser units, integrity assessment of existing slabs for placement of outdoor units.
- Design of the electrical reticulation system by a registered PRENG/PRTech.

Mechanical Works

- Supply and Installation of Outdoor VRV Condenser Units.
- Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping
- Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person
- Supply and installation of supply and return air ducting including external insulation
- Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers
- Supply and installation of fresh air fan, ducting and filtered weather louvre(s)
- Supply of as-built drawings

Controls and Instrumentation Works

- Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct.
- Supply and installation of a static pressure indicator and Transmitter on the supply and return duct
- Supply and installation of a temperature sensor and transmitter on the supply and return duct
- Supply and installation of an aesthetic display hygrometers
- Supply and installation of a control panel including a panel PLC, panel wifi module and power supply
- Linking of a control panels to Industrial SCADA
- Wiring of all airflow, pressure, temperature sensors and power metering to the control panel
- Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA IMC (Infrastructure Monitoring Centre)
- Supply and installation of all cable labelling, trunking and or trays
- Supply of As-built wiring diagrams and a digital PLC logic or program file.

Electrical Works

- Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera
- Supply and installation of all cabling and joints
- Supply and installation of all isolators
- Supply and Installation of all trunking and or trays
- COC test certificate from DB to the supplied units

Building and facilities Works

- Configuration of ACSA IMC desks to allow for sitting of and HVAC plant operator and controller
- Replacement of all damaged suspended ceiling
- Daily cleaning of the bridge to ensure readiness for airport operations
- Making of the building good
- All hoarding to ensure that potential hazards to the safety of airport is intact.

Civil Works

- Design/supply of Concrete pads and or potable pads for outdoor units

Existing Services Works

- Provision for restoration of fire detectors
- Provision for restoration of ceiling lights

3.3.1.3. General Services

- Securing of the construction permit from the department of labour
- Selection, supply and configuration of an industrial SCADA including training of ACSA designated personnel.
- The Contractor shall ensure that all plant and equipment are secured for execution of the works

3.3.2 Parts of the works which the Contractor is to design

The Contractor is responsible for the detail design of the following:

Design and selection, supply, installation, and commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates

Design/selection, supply, and installation of HVAC controls and panels

Ensure all Designs/selections, supply, and installation comply with the following standards but not limited to:

Standard Number	Description
EN 12101	Smoke and heat control systems
SANS 193 and 1238	Fire dampers
SANS 10147	Refrigerating systems, including plants associated with air-conditioning systems
SANS 10173	The installation, testing and balancing of air-conditioning ductwork
SANS 10400 Part O	Application of the National Building Regulations Part O – Lighting and Ventilation
ASHRAE 154 – 2016	Ventilation for Commercial cooking operations

3.3.3 Procedure for submission and acceptance of *Contractor's* design

The Contractor shall as a minimum submit the following for approval (as per returnable documents on T2.1):

- Equipment and structure drawings layout, etc).
- Dimensional drawings showing the dimensions of equipment to be supplied by the contractor.
- Manufacturing programme.
- Quality control plan.
- QA Plan for the equipment to be manufactured

3.3.4 Other requirements of the *Contractor's* design

None.

3.3.5 Use of *Contractor's* design

See core clause 22.1 of NEC.



3.3.6 Design of Equipment

None

3.3.7 Equipment required to be included in the works

None

3.3.8 As-built drawings, operating manuals and maintenance schedules

Three copies of the complete instruction manuals inclusive of all drawings for the operation and maintenance of the equipment shall be handed over to the Engineer (Acsa).

Two CD's containing the following shall also be handed over to the Engineer (Acsa):

A soft copy and hard copy of the complete selection / design, installation, commissioning & instruction manual and drawings.

Other related documentation

All as-built and CAD data produced for this project adhere to the standards and requirements set out in the CAD Standards and ensure that throughout the project life a complete set of drawings is updated with "As-built" information in the required format.

The CAD Standards:

1. Title block should clearly specify the project name & number; the project stage, i.e. (Approval/ Construction/ As-builts) and the dates of any up-dating done in the drawing. The contractors/ consultants will be issued with the ACSA Logo.
2. The ACSA logo and the Title block will be provided to the appointed service provider when requested, as well as the drawing register and project hand-over acceptance criteria sheet.
3. Title block should clearly specify the consultants/ contractors working in the project, their contact details and physical address. And the responsibilities of the consultants/ contractors. This will help with the tracking and tracing the project data if we might need in the future and for references.
4. Line scale and line type must be clear.
5. The components in the drawings should be in their own layers and we should be able to switch them on/off. They should be indicated on the plans specially and must have attribute data to identify them. This makes it easy to work on and extract only the specific layers needed.
6. If XREF's are used, they should be attached/ bind on the drawing.
7. The text type and dimensions must be in ISO Standard and, also in their own layers.
8. At the hand over stage 3 X discs/ CDs with as-builts / Project must be issued by the contractor/ consultant to the ACSA project manager, who will then issue 1 X discs/ CDs directly to the Assets Information Management Office/ GIS.
9. All As-builts/ project data can also be handed over via MICROSOFT TEAMS.
10. The issued As-built drawings/ Project Data, depending on the scope of the project should include Services Drawings:(Water; Sewer; Electrical; Electronics – Sound & Public Announcement; HVAC; CCTV; Fire Detection); Architect drawings; Close out Reports and Certificates of compliance. Close out project Reports, maintenances and certificates of compliance must be in pdf.

Kindly note that all service providers are requested to submit all As-built drawings to the ACSA project manager and/ CAD Office/ AIM Officer-Department within 14 working days after the completion of the project. The As-builts must submitted in both AutoCAD-2004 to 2016 version and PDF format, as indicated in the above points. Should the above not be met by the service provider, it will jeopardize approval and appointments of future applications.

3.4 Procurement

3.4.1 People

3.4.1.1 Minimum requirements of people employed on the Site

The Contractor is to be registered on the ACSA database for contractors and permits are to be obtained from ACSA for all workers on site.

3.4.1.2 BBBEE

Requirements are included in the Invitation to Bidders

3.4.2 Subcontracting

3.4.2.1 Mandatory manufacturers

None

3.4.2.2 Subcontract documentation, and assessment of subcontract tenders

None

3.4.2.3 Limitations on subcontracting

None

3.4.2.4 Attendance on subcontractors

None

3.4.3 Plant and Materials

3.4.3.1 Quality

As per company quality plan or standard.

3.4.3.2 Plant & Materials provided “free issue” by the *Employer*

The Employer will provide the following items:

None

3.4.3.3 *Contractor’s* procurement of Plant and Materials

None

3.4.3.4 Spares and consumables

Spare parts as detailed in Section 6 of this Works Information will be supplied.

3.4.4 Tests and inspections before delivery

The whole of the materials used in the Project shall be subject to such inspection and test at the manufacturer’s works as prescribed in the appropriate material standards, required in the specific clauses of the Contract or the Engineer may direct from time to time as the work proceeds.



The manufacturer shall perform all tests as prescribed by IEC or other standards applicable to the equipment. In addition to these tests the manufacturer shall perform the tests specified in the manufacturer's own factory standard for quality control.

The Employer reserves the right to witness any or all tests and the Contractor shall inform the Employer at least **60 days in advance of any tests which will be performed.**

The cost of such inspection and tests, including the provision and use of test equipment, with a quantified number of visits by the Employer shall be included in the Tender Price.

If, due to the Contract work and/or component materials not complying with this specification, further tests are necessary, the Contractor shall pay all additional costs which may be incurred in re-testing.

The approval by the Employer of the results of such inspection and tests shall not relieve the Contractor of his obligations under the Contract for the satisfactory performance of the plant and materials.

During the execution of the Contract, test specimens, if required by the Employer, shall be taken from the materials for the purpose of check tests or analyses by Independent Authorities. Such specimens shall be prepared for testing and forwarded at the expense of the Contractor to the Testing Authorities selected by the Employer. The Contractor shall deliver to the Employer three copies of the test certificates covering all tests. In case the original certificate is not in the English language, three copies of a translation into English of the certificate plus one copy in the original language shall be delivered to the Employer.

3.4.5 Marking Plant and Materials outside the Working Areas

None

3.4.6 Contractor's Equipment (including temporary works).

None

3.5 Construction

3.5.1 Temporary works, Site services & construction constraints

3.5.1.1 Employer's Site entry and security control, permits, and Site regulations

All contractor Employees shall obtain permits from ACSA for access to site.

3.5.1.2 Restrictions to access on Site, roads, walkways and barricades

All deliveries that will obstruct portions of the roadways or public routes for any period of time are to be restricted between 00h00 and 04h00. All logistics affecting operations are to be approved by the relevant ACSA Managers.

All vehicles related to the contractor's works are to be parked within the contractor's hoarded site or in public parking with costs for the contractor's account. Any contractor vehicle towed for illegal parking will be for the contractor's account.

3.5.1.3 People restrictions on Site; hours of work, conduct and records

Contractors are limited to their actual site establishment areas and places of work and under no circumstances will materials, equipment, tools, cooking or any other disturbance be allowed in public areas and delivery of materials via the normal airport traffic routes is strictly prohibited. Use of the public people mover infrastructure is prohibited.



Contractor's employees are to be clearly identifiable, and they must be discouraged from visiting the public areas of the airport.

3.5.1.4 Health and safety facilities on Site

None

3.5.1.5 Environmental controls, fauna & flora, dealing with objects of historical interest

None

3.5.1.6 Title to materials from demolition and excavation

The Contractor has no title to materials from demolition and excavations.

3.5.1.7 Cooperating with and obtaining acceptance of Others

The Employer has various contracts in progress and the Contractor may be required to adjust his program and activities to coordinate with others.

All hoarding is to comply with the ACSA standard *Project Manager*.

The hoarding is to be maintained to ACSA's specifications at all times. Any costs incurred by ACSA for repairing the Contractor's hoarding will be forwarded to the contractor for payment. To avoid this, the contractor is to ensure that the hoarding is maintained on a daily basis.

No existing finishes outside the defined site are to be changed without prior approval by ACSA.

All electrical installations and loading is to be approved by ACSA Electrical Division *Project Manager*, prior to any work being executed.

All cable installations are to comply with the ACSA specification as a minimum and be approved by ACSA IT and Electrical.

All mechanical alterations or impact thereon, i.e. air-conditioning, are to be approved by the ACSA Mechanical Division *Project Manager*, prior to any work being executed.

The use of any people mover infrastructure for delivery is to be approved by Mechanical (*Project Manager*).

All alterations to fire detectors and sprinklers or impact thereon are to be approved by ACSA Mechanical Division *Project Manager*, prior to any work commencing.

3.5.1.8 Publicity and progress photographs

None

3.5.1.9 Contractor's Equipment

The Contractor shall as part of his reporting includes a list of Contractors Equipment and material on site. The list shall include Registration numbers, serial numbers, whether it is rented with the provider's details.

3.5.1.10 Equipment provided by the Employer



The Employer will provide only equipment listed in 4.3.2.

3.5.1.11 Site services and facilities

The site as detailed on the drawings will be available to the Contractor for the execution the Works. Limited power will be available within the rooms. The Contractor is to source his own water and will be responsible for his own waste disposal. The Contractor shall be responsible for the supply on site of his own telephone or cellular phone.

Existing cable trenches and cable ladders and trays are to be utilized for cable routes. The Contractor is to open cable trenches and include the cost in his rates. All cable trench covers are to be returned to their positions, all covers damaged or broken by the Contractor is to be replace by the contractor at his costs. All cable trays and ladders are to be tidied after cable installation.

3.5.1.12 Facilities provided by the Contractor

The Contractor shall erect and maintain at his costs his own covered storage and office that he may require. The yard shall be fenced by the Contractor and maintenance of the yard will be his responsibility. The yard shall be kept in a clean and tidy condition at all times to the satisfaction of the Engineer. On completion of the Project, all structures and installations shall be removed from site to the satisfaction of the Engineer.

3.5.1.13 Existing premises, inspection of adjoining properties and checking work of Others

None

3.5.1.14 Survey control and setting out of the works

The Contractor will be responsible for setting out the positions of the new equipment. The Engineer is to approve such positions before actual installation commence.

3.5.1.15 Excavations and associated water control

None

3.5.1.16 Underground services, other existing services, cable and pipe trenches and covers

The Contractor shall be liable for all damage and breakage to other services. Repair will be done by adequately qualified personnel or contractors. If the damages or breakage is not repair / replaced to the satisfaction of the Engineer within a reasonable time, the Engineer shall be entitled to appoint another Contractor to repair such damage or breakage and debit the account of the Contractor. All damages and breakages are to be reported to the Engineer.

3.5.1.17 Control of noise, dust, water and waste

The contractor shall keep noise to a minimum and to between 00h00 and 04h00.

The site is to be maintained in a reasonable state of tidiness at all times.

Rubble may not be accumulated on site. Suitable skips are to be provided for the works. All dust and debris resulting from construction work is to be contained within the hoarded site. Any materials and rubble outside the hoarded site will be removed by ACSA from the Airport without notice to the contractor and will be for the contractor's account.



The Contractor will ensure the proper handling and carting away of spoil material, and the cleaning of ablation areas set aside for the use of the contractor's staff.

3.5.1.18 Sequences of construction or installation

To be finalised by awarded bidder and submitted for approval.

3.5.1.19 Giving notice of work to be covered up

Notice of work to be covered up is to be given by the Contractor to the Engineer.

3.5.2 Completion, testing, commissioning and correction of Defects

3.5.2.1 Work to be done by the Completion Date

On or before the Completion Date the *Contractor* shall have done everything required to Provide the Works except for the work listed below which may be done after the Completion Date but in any case before the dates stated. The *Project Manager* cannot certify Completion until all the work except that listed below has been done and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *works* and Others from doing their work.

	Item of work	To be completed by
	Handover and Closure Report	Within 10 days after Completion
	Submission of Legal Documentation	Within 5 days after Completion
	Handover of technical drawing and Maintenance Manuals	Within 5 days after Completion

3.5.2.2 Use of the *works* before Completion has been certified

The Employer will only take over fully tested and commissioned operational boards. The existing equipment is in operation and any outages during the day between 04h00 and 22h00 cannot be accommodated. A gradual transfer of cables from the existing to the new distribution boards is required.

3.5.2.3 Materials facilities and samples for tests and inspections

The Contractor will provide all materials, facilities and samples for tests and inspections as described in the Works Information and Detail Specification.

3.5.3.4 Commissioning

Commissioning will be done in phases and is to be completed before completion.

3.5.2.5 Start-up procedures required to put the *works* into operation

None

3.5.2.6 Take over procedures

All documentation as required by the Employer and Engineer is to be submitted.

3.5.2.7 Access given by the *Employer* for correction of Defects

All access and outages are to be pre-arranged with ACSA before entering buildings

3.5.2.8 Performance tests after Completion



None

3.5.2.9 Training and technology transfer

The Contractor is to provide hands-on training on the equipment during installation.

3.5.2.10 Operational maintenance after Completion

None

3.6 Plant and Materials standards and workmanship

Plant and Material standards and workmanship to be industry best practice

3.6.1 Investigation, survey and Site clearance

The Contractor shall visit the site during the equipment detail design phase to ensure that the equipment will fit within the existing building structures.

3.6.2 Building works

None.

3.6.3 Civil engineering and structural works

Not applicable

3.6.4 Electrical & mechanical engineering works

The specifications are all included in the Annexure A: Detail Technical Specification of this document.



3.2 Contractor's Works Information

3.2.1 Work to be performed for Design, Supply, Installation and Commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates.

Design/selection, supply, Installation and Commissioning of the High Efficiency VRV/VRF Air-Conditioner units in the Airside Corridors beyond boarding gates at O.R. Tambo International Airport.

3.2.1.1 Removal of building rubbles

All items that are re-usable must be disconnected and delivered to ACSA Storeroom

All damaged/ old equipment must be safely disposed, and certificates issued to ACSA or using ACSA appointed disposal contractor. All costs for disposable must be included when pricing.

ANNEXES to C3 (Works information)

Title	Annex number	Applicable or N/A
Detail Technical Specification	Annexure A	Applicable
Affected Bridges	Annexure B	Applicable
BOQ for individual Bridges	Annexure C	Applicable

Detail Technical Specification**Regulation and Standards**

When carrying out any refurbishment or installation of the people movers, the following Regulatory Standards shall be adhered to,

Standard Number	Description
EN 12101	Smoke and heat control systems
SANS 193 and 1238	Fire dampers
SANS 10147	Refrigerating systems, including plants associated with air-conditioning systems
SANS 10173	The installation, testing and balancing of air-conditioning ductwork
SANS 10400 Part O	Application of the National Building Regulations Part O – Lighting and Ventilation
ASHRAE 154 – 2016	Ventilation for Commercial cooking operations

VRV and VRF System specification

A VRV/VRF system is a multi-split type air conditioning system. For air conditioning applications at airports and commercial buildings, cooling only or heat recovery VRV/VRF systems may be selected. The performance rating of the selected VRV/VRF systems shall comply with AHRI Standard 1230, *Performance Rating of Variable Refrigerant Flow Multi-Split Air-conditioning and Heat Pump Equipment* or the equivalent or stringent standard. These systems may be water-cooled or air-cooled depending on application.

Minimum specifications of VRV/VRF Systems selected for airport applications are as follows:

Energy Source:	Dual (Mains and Solar capable)
Max Sound Pressure level of outdoor unit:	<80 dB-A
Max sound pressure level of indoor units:	<50 dB-A
Refrigerant:	Environmentally friendly and chlorine free
Minimum COP:	3.5
Voltage and frequency	380/400V – 50Hz
Local site BMS Interface:	Yes
Rotation Function on outdoor modular units:	Yes
Redundant Compressor Bank:	Yes, At least >1 compressor)
Inverter Driven Compressor:	Yes
Lead-free soldering on control print boards:	Yes
Compressor Sound attenuation:	Yes
Fans:	Direct drive type
HMI and compatible (at site) communication protocol:	Yes
Instantaneous and cumulative (Monthly) COP display:	Yes
Time of day scheduling capability:	Yes
Refrigerant level monitoring:	Yes
Rigging support points on outdoor units:	Yes



Vibration isolation pads/Springs:	Yes
Heat recovery (Double or single heat recovery):	Optional and dependent on application.
Fan motor protection:	Over-current protection
Compressor protection:	Over-heat protection
Operating temperature range:	As per specific area's seasonal outdoor temperatures
High pressure protection:	High pressure sensor and switch
Indoor unit useful life:	5 years
Outdoor unit useful life:	10 years
VRV/VRF guaranteed spares supply period (outdoor units):	10 years

ANNEXURE B**SCHEDULE OF EQUIPMENT**

Boarding gate A1
Boarding gate A1R
Boarding gate A2
Boarding gate A3
Boarding gate A4
Boarding gate A5
Boarding gate A6
Boarding gate A7
Boarding gate A8
Boarding gate A9
Boarding gate A10
Boarding gate A11
Boarding gate A12
Boarding gate A13
Boarding gate C1
Boarding gate C2
Boarding gate C3
Boarding gate C4
Boarding gate C5
Boarding gate C6
Boarding gate C7
Boarding gate C8
Boarding gate E1
Boarding gate E3
Boarding gate E6
Boarding gate E9
Boarding gate E12

ANNEXURE C

Ps and Gs AND Other General works

Item No	Activity Description	Frequency	Total (Excl VAT) [ZAR]
1	Site Establishment	Once off	
2	Site de-establishment	Once off	
3	Project Management, Site Management, Safety Management and Contract Administration	Monthly for duration of Project	
3,1	Month 1		
3,2	Month 2		
3,3	Month 3		
3,4	Month 4		
3,5	Month 5		
3,6	Month 6		
3,7	Month 7		
3,8	Month 8		
3,9	Month 9		
3,10	Month 10		
4	All Plant and Equipment	Monthly for duration of Project	
4,1	Month 1		
4,2	Month 2		
4,3	Month 3		
4,4	Month 4		
4,5	Month 5		
4,6	Month 6		
4,7	Month 7		
4,8	Month 8		
4,9	Month 9		
4,10	Month 10		
5	All required Contract Insurances	Once off	
6	All Forex cover provisions	Once off	
7	Supply and Configuration of an Industrial SCADA including Training of nominated Personnel	Once off	
8	Application and securing of a construction permit from Department of Labour	Once off	
Subtotal Ps and Gs			R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of ACSA IMC desks to allow for sitting of and HVAC plant operator and controller	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
	Sub-total A1	R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A1R		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A2		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A3		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	

17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A4		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A5		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A6		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A7		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A8		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A9		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A10		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	

18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
	Sub-total A11	R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	

15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A12		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	

16	Linking of a control panel to SCADA	
17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total A13		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
15	Supply and installation of an aesthetic display hygrometers	

16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		
27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
	Sub-total C1	R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
15	Supply and installation of an aesthetic display hygrometers	

16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		
27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
	Sub-total C2	R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
15	Supply and installation of an aesthetic display hygrometers	

16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		
27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
	Sub-total C3	R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
15	Supply and installation of an aesthetic display hygrometers	

16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		
27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
Sub-total C4		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
15	Supply and installation of an aesthetic display hygrometers	

16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		
27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
	Sub-total C5	R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	

13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
15	Supply and installation of an aesthetic display hygrometers	
16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		

27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
Sub-total C6		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	

15	Supply and installation of an aesthetic display hygrometers	
16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		
27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
Sub-total C7		R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
11	Supply and installation of fire rated ducting and Aluminium weather louvres for the existing smoke fans	
Controls and Instrumentation Works		
12	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
13	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
14	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
15	Supply and installation of an aesthetic display hygrometers	

16	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
17	Linking of a control panel to SCADA	
18	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
19	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
20	Supply and installation of all cable labelling, trunking and or trays	
21	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
22	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit,power supplies etcetera	
23	Supply and installation of all cabling and joints	
24	Supply and installation of all isolators	
25	Supply and Installation of all trunking and or trays	
26	COC test certificate from DB to the supplied units	
Building and facilities Works		
27	Replacement of all damaged suspended ceiling	
28	Daily cleaning of the bridge	
29	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
30	Making of the building good	
31	All hoarding	
Civil works		
32	Concrete pads/potable pads for outdoor units	
Existing services works		
33	Provision for restoration of fire detectors	
34	Provision for restoration of ceiling lights	
	Sub-total C8	R -

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	

17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total E1		

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	

17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total E3		

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	

17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total E6		

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	

17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total E9		

Activity Number	Activity Description	Total Price (Excl VAT) [ZAR]
Design Works		
1	Design of the VRV/VRF HVAC system signed off by Mechanical PRENG/PRTech	
2	Controls design signed off by Controls PRENG/PRTech	
3	Civil and structural Engineering signed off by PRENG Civil	
4	Electrical Designs and wiring diagram signed off by PRENG/PRTech Electrical	
Mechanical Works		
5	Supply and Installation of Outdoor VRV Condensor Units	
6	Supply and installation of Indoor hideaway ducted units with return and fresh air plenum box(es) including condensate PVC piping	
7	Supply, Installation of insulated refrigeration Piping and accessories, Installation of refrigerant distribution boxes, testing and issuing of a certificate of conformity by an SAQCC Refrigeration and air-conditioning registered person	
8	Supply and installation of supply and return air ducting including external insulation	
9	Supply and installation of all spigot dampers, round ducts, flexible ducting and swirl diffusers	
10	Supply and installation of fresh air fan, ducting and filtered weather louvre(s)	
Controls and Instrumentation Works		
11	Supply and Installation of airflow sensor and transmitter on the supply and return duct including fresh air supply duct	
12	Supply and installation of a static pressure indicator and Transmitter on the supply and return duct	
13	Supply and installation of a temperature sensor and transmitter on the supply and return duct	
14	Supply and installation of an aesthetic display hygrometers	
15	Supply and installation of a control panel including a panel PLC , panel wifi module and power supply	
16	Linking of a control panel to SCADA	

17	Wiring of all airflow, pressure, temperature sensors and power metering to the control panel	
18	Supply and installation of a Server, 2x 85 Inch LED screens at a designated ACSA office on the Mezanine level	
19	Supply and installation of all cable labelling, trunking and or trays	
20	Supply of As-built wiring diagrams and a digital PLC logic or program file	
Electrical Works		
21	Supply of a DB Box equipped with all relays, Circuit breakers, earth leakage, smart consumption meters for the fresh air fan, outdoor and Indoor unit, power supplies etcetera	
22	Supply and installation of all cabling and joints	
23	Supply and installation of all isolators	
24	Supply and Installation of all trunking and or trays	
25	COC test certificate from DB to the supplied units	
Building and facilities Works		
26	Replacement of all damaged suspended ceiling	
27	Daily cleaning of the bridge	
28	Configuration of a designated ACSA office at Mezanine level to an HVAC control room	
29	Making of the building good	
30	All hoarding	
Civil works		
31	Concrete pads/potable pads for outdoor units	
Existing services works		
32	Provision for restoration of fire detectors	
33	Provision for restoration of ceiling lights	
Sub-total E12		

C4: Site Information

C4.1: Information about the *site* at time of tender which may affect the work in this contract

The Works are located at OR Tambo International Airport, which is a restricted and access controlled area. It is crucial for the Contractor to note that OR Tambo International Airport is a National Key Point and governed as such. The contractor will have to adhere to all airport requirements regarding access control, security, fire, health and safety.

4.1.1 Access limitations

General

- The works is within the security area of the Airports Company South Africa (ACSA) and access to the site is governed by the terms and conditions laid down by ACSA Security Officials from time to time. The *Contractor* shall satisfy himself as to these terms and conditions.
- The *Contractor* shall liaise with the ACSA Security Staff in order to obtain access permits for his staff and vehicle, which will be working within the airport. Personnel and vehicles entering and leaving the site are subject to routine searches.
- The *Contractor* will have to obtain a “gate permit” from the *Project/Service Manager*, before materials and equipment can be removed from the site. The “gate permit” gives an itemized list of materials and equipment to be removed from site.
- The *Contractor* shall make his own assessment of, and shall allow in his rates for those access problems which may be encountered and no extra payment or claim of any kind will be allowed on account of difficulties of access to the Works.

Permits

The Contractor shall ensure that he/she is, at all times, familiar with ACSA’s safety and security requirements relating to permits in order prevent work delay as a result thereof.

This shall include the permit application process.

The Contractor shall have no claim against ACSA in the event that a permit request is refused.

The following table is not all inclusive, but is provided for illustration purposes:

Permit	Required by/for	Department
AVOP – Airside Vehicle Operator permit	All drivers of vehicles on airside	ACSA Safety
Airside Vehicle Permit	All vehicles that enter airside	ACSA Safety
Basement Parking permit	All vehicles allowed to enter the delivery basement	ACSA Parking

Personal permit	All persons employed on the airport	ACSA Security
Cell phone permit	All persons taking cell phones to airside	ACSA Security
Tools permit	All persons taking cell phones to airside	ACSA Security
Lap top permit	All persons taking lap top computers to airside	ACSA Security
Camera permit	All persons taking cameras or camera equipment to airside	ACSA Security
Hot Works Permit	All welding and/metal cutting work	ACSA Safety
Airside Projects/Works Permit	For All projects on the Airside	ACSA Airport Operations/Safety
Low /Medium Voltage Permit to Work	For all work on Substation, Distribution Boards and Cables	ACSA Electrical Maintenance

Proof of having attended the airside induction training course is required for all personal permit applications.

Persons applying for an AVOP must provide proof of having attended an AVOP course.

Fees are levied for these courses. Fees are further levied for all permit renewals and refresher courses - where applicable.

No work shall be done without a written permission in the form of a permit/works order, displayed on the wall or in a visible area in the work area.

c. Cell phones and two-way radios

Use of cell phones on airside is **not** permitted unless the user is in possession of an appropriate Airport permit for the device.

Cell phone permit issuing authority lies with the ACSA Security department.

The Contractor will **not** be allowed to use two-way radios at the Airport unless these radios are of the type, model and frequency range as approved by the ACSA IT department.

Approved radios may be arranged via said department - payment will be for the account of the Contractor.

4.1.2 Ground conditions in areas affected by work in this contract

There are no excavations activities in this project.

4.1.3 Hidden and other services within the site

There might be water and sewer pipes crossing under or above the substation. Also there are a lot of other cables going through the substation 5 to other substations and these must be treated as live cables. There are also communication cables connecting the substation with the other substations.



4.1.4 Safety Management

The *Contractor* must be registered with the Occupational Health and Safety Commission.

The *Contractor* submits a Health and Safety Plan to the *Employer* for work to be performed.

The Health and Safety plan must include a Risk Assessment of the activities with mitigating methods that will be used to prevent accidents.

The Health and Safety plan must be implemented and monitored to ensure its integrity.

Details of *Contractor's* appointed Health and Safety Committee members must be included and appointed in writing.

The *Contractor* in writing must appoint all competent person/s.