



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

रजिस्टर्ड ए.डी. द्वारा/By Regd. A.D.

सं.सं. भाविप्रा/भोपाल/उप.म.प्र.(अभि.-वि.)/का.आ.-26/2023-24/1975(1-3)

दिनांक: 10.01.2024

Ref. No: AAI/BPL/DGM(E-E)/WO-26/2023-24

Date: 10.01.2024

सेवा में,

मेसर्स इंजिनियर्स इंडस्ट्रीज,
शॉप न.-8, राजा प्रेसीडेंसी, पंचवटी,
नासिक - 422003, महाराष्ट्र
ई-मेल: ingeniousacc@gmail.com

M/S Ingenious Industries,
Shop No.-8, Raja Presidency, Panchwati,
Nashik - 422003, Maharashtra
E-mail: ingeniousacc@gmail.com

विषय : “राजा भोज हवाई अड्डे भोपाल में मौजूदा टर्मिनल भवन का पुनः विन्यास | उपशीर्ष: निचले भूतल को आगमन हॉल में संशोधित करने से संबंधित एयर कंडीशनिंग कार्य |”

Subject: “Re-Configuration of Existing Terminal Building at Raja Bhoj Airport, Bhopal. SH: Air Conditioning works related to Modification of Lower ground floor into Arrival hall.”

संदर्भ : 1) आपकी निविदा दिनांक 04.01.2024 और रिवर्स ऑक्शन दिनांक 05.01.2024 को खोली गई |

Ref.: 1) Your tender opened on dt: 04.01.2024 and Reversed Auction dt: 05.01.2024

महोदय/Dear Sir

1. कृपया आपके द्वारा उपरोक्त कार्य में प्रस्तुत निविदा एवं तदुपश्चात रिवर्स ऑक्शन का संदर्भ लें |

May please refer your tender submitted by you for subject work & further reverse auction.

2. उल्लेखित कार्य हेतु आपकी ई-निविदा आपके द्वारा उद्धृत कुल ₹. 2,04,31,911/- (₹. दो करोड़ चार लाख इकतीस हजार नौ सौ ग्यारह मात्र) (रिवर्स ऑक्शन के अनुसार) की नियत मद दर पर अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से एतद् द्वारा स्वीकृत की जाती है, जो कि ई-निविदा की अनुमानित लागत ₹. 2,96,41,740/- (₹. दो करोड़ छियानबे लाख इकतालीस हजार सात सौ चालीस मात्र) से 31.07 % कम है |

Your E-Tender for the work mentioned above is hereby accepted on behalf of the Chairman, Airports Authority of India at the item rates quoted by you after reverse auction totaling to Rs. 2,04,31,911.00 (Rupees Two Crore Four Lakh Thirty One Thousand Nine Hundred Eleven only) which is 31.07% Below the estimated cost put to E-Tender of Rs. 2,96,41,740.00 (Rupees Two Crore Ninety Six Lakh Forty One Thousand Seven Hundred Forty Only)

3. उप. महाप्रबंधक (अभि.-विद्युत), भारतीय विमानपत्तन प्राधिकरण, राजा भोज विमानतल, भोपाल इस कार्य के इंजीनियरिंग प्रभारी होंगे। आपसे निवेदन है कि आप संविदा करार पर हस्ताक्षर करने एवं उसे पूरा करने हेतु 05.02.2024 तक उप. महाप्रबंधक (अभि.-विद्युत), भारतीय विमानपत्तन प्राधिकरण, भोपाल विमानपत्तन के कार्यालय में उपस्थित हो | संविदा करार ₹ 500/- (पाँच सौ रुपये) के न्यायिकेतर (नॉन-ज्युडिशियल) स्टांप पेपर पर बनाया जायगा तथा स्टांप पेपर की लागत आपके द्वारा वहन की जाएगी |


10/11/2024

Contd...2

//2//

Dy. Gen. Manager (Engg.-Elect.), Airports Authority of India, Raja Bhoj Airport, Bhopal shall be the Engineer-In-Charge of the work. You are requested to attend the office of the Dy. Gen. Manager (Engg.-Elect.), Airports Authority of India, Raja Bhoj Airport, Bhopal by **05.02.2024** to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value **Rs. 500/- (Rupees Five Hundred only)** and the cost of the stamp paper shall be borne by you.

4. कृपया इस पत्र के जारी होने के 10 दिनों के अंदर प्रतिभूति जमा के रूप में **रु. 14,50,356/- (रु. चौदह लाख पचास हजार तीन सौ छप्पन मात्र)** की राशि इस कार्यालय में जमा करा दें अन्यथा करारनामों की संविदा की सामान्य शर्त के पृष्ठ संख्या - 15 पर दी गई शर्त 1ए के अनुसार उक्त राशि आपके बिल से काट ली जाएगी ।

Please deposit **Rs. 14,50,356/- (Rupees Fourteen Lakh Fifty Thousand Three Hundred Fifty Six Only)** towards Security Deposit within 10 days from the date of issue of this letter, failing which, the same will be deducted as per condition of Clause 1A on page 15 of the contract document.

5. आपसे अनुरोध है कि आप ठेका श्रमिक (विनियम एवं उन्मूलन) अधिनियम 1970 के उपबंधों का अनुपालन करें । साथ ही ठेका श्रमिक (विनियम एवं उन्मूलन) केंद्रीय नियमावली 1971 एवं केंद्रीय एवं राज्य सरकारों के न्यूनतम वेतन तथा उससे संबंधित अन्य नियमों का पालन करें ।

You are requested to comply with the provisions of contract Labour (Regulation and Abolition) Act 1970 and Contract Labour (Regulation and Abolition) Central rules 1971 and minimum wages Act and rules thereof Central and State Governments.

6. आपको सहायक महाप्रबंधक (अभि.-वि.), भारतीय विमानपत्तन प्राधिकरण, राजा भोज विमानतल, भोपाल से तत्काल संपर्क करने का भी निर्देश दिया जाता है। आपको कार्यस्थल (साइट) सौंपने का कार्य उनके द्वारा किया जाएगा ।

You are also directed to contact Asstt. Gen. Manager (Engg.-Elect.), AAI, Bhopal Airport immediately who will arrange to hand over the site to you.

7. कृपया नोट करे की कार्य पूरा करने के लिए आपको **03 (तीन) माह** का समय प्रदान किया जाता है । यह समय इस पत्र के जारी करने की तिथि के **10वे दिन** से माना जाएगा ।

Please note that the time allowed for carrying out the work shall be **03 (Three) Months** to complete the work. The same shall be reckoned from 10th day from date of issue of this letter.

8. इस ठेके से संबंधित किसी भी प्रकार के पत्र व्यवहार के लिए **उप. महाप्रबंधक (अभि.-विद्युत), भा.वि.प्रा., राजा भोज विमानतल भोपाल - 462036** को संबोधित करें ।

Any further correspondence in connection with the contract should normally be addressed to the Dy. Gen. Manager (Engg.-Elect.), Airports Authority of India, R. B. Airport, Bhopal - 462036.



Contd...3



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

//3//

9. कृपया इस पत्र की प्राप्ति की सूचना दें तथा इसके साथ अनुलग्न अनुप्रति पर हस्ताक्षर करके टोकन के प्रतिग्रहण के रूप में अधोहस्ताक्षरी को वापस भेज दें।

Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

10. यदि कोई विसंगति पाई जाती है तो अंग्रेजी भाषा ही मान्य होगी।

In case any discrepancy is found, then English version will be taken as correct.

भवदीय / Yours Faithfully

(प्रमोद कुमार ठाकरे / Pramod Kumar Thakre)

उप. महाप्रबंधक (अभि.-विद्युत)

Dy. Gen. Manager (Engg.-Elect.)

भा.वि.प्रा., राजा भोज विमानतल, भोपाल - 462036

AAI, Raja Bhoj Airport, Bhopal - 462036.

कृते तथा ओर से, अध्यक्ष,

For and on behalf of Chairman,

भारतीय विमानपत्तन प्राधिकरण.

Airports Authority of India.

Office No.: 0755-264073

Mob No.: 9748327209



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

//4//

N.O.O. / मूल प्रतिलिपि पर नहीं

Copy to/ प्रतिलिपि प्रेषित :-

1. संयुक्त महाप्रबंधक (सतर्कता), भा.वि.प्रा.
पश्चिमी क्षेत्र, सी.एस.आई. एयरपोर्ट, मुंबई-99 (निविदा प्रपत्र के शेड्यूल 'A' कि कॉपी सहित)
Jt. General Manager (Vigilance) AAI.
Western Region, C.S.I. Airport, Mumbai-99 (Along with copy of Schedule 'A' of tender document)
2. आयकर आयुक्त
आयकर कार्यालय, होशंगाबाद रोड,
मैदा मिल के सामने, भोपाल।
Commissioner of Income Tax,
Income Tax office, Hoshangabad Road, Opposite Maida Mill, Bhopal.

आंतरिक/ INTERNAL

1. विमानपत्तन निदेशक, भा.वि.प्रा, राजा भोज विमानतल, भोपाल-462036 जानकारी हेतु।
Airport Director, AAI, R. B. Airport, Bhopal – 462036 for information please
2. सहायक महाप्रबंधक (वित्त), भा.वि.प्रा, राजा भोज विमानतल, भोपाल-462036 जानकारी हेतु।
Asstt. Gen. Manager (Finance), AAI, R.B. Airport, Bhopal – 462036 for information please
3. सहायक महाप्रबंधक (अभि- विद्युत), भा.वि.प्रा, राजा भोज विमानतल, भोपाल-462036 कार्यस्थल सौंपने
करारानुसार हेतु।
Asstt. Gen. Manager (Engg.-Elect.), AAI, R.B. Airport, Bhopal – 462036 To handover the site
As per contract agreement
4. प्रबंधक (अभि- विद्युत), भा.वि.प्रा, राजा भोज विमानतल, भोपाल-462036 कार्यस्थल सौंपने एवं
ठेका करारानुसार कार्य निष्पादन हेतु।
Manager (Engg.-Elect.), AAI, R.B. Airport, Bhopal – 462036 To Supervise the work as
per contract agreement
5. करार प्रति/Agreement Copy.
6. कार्य फाईल/Works File.

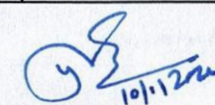
(प्रमोद कुमार ठाकरे / Pramod Kumar Thakre)

उप. महाप्रबंधक (अभि.-विद्युत)
Dy. Gen. Manager (Engg.-Elect.)

Bill of Quantities (BOQ)

Name of work: Re-Configuration of Existing Terminal Building at Raja Bhoj Airport, Bhopal: SH: Air Conditioning works related to Modification of lower ground floor into Arrival hall.

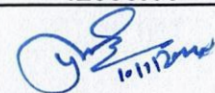
S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
1.00	Supply Installation, Testing & Commissioning of modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating, having all hermetically sealed inverter type Scroll Compressor(s), minimum two compressors for above 14 HP modules, microprocessor based Controller, top discharge type condensing unit(s), with R410A Refrigerant, vibration isolators, with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 50°C ambient temperature without tripping. The unit shall be suitable to work on 400V+/-10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. The unit shall be filled with first charge of the refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and IEER not less than 6.5.				
1.01	110 HP	2.00	Each	1756911.00	3513822.00
1.02	42 HP	1.00	Each	696027.00	696027.00
2.00	Supply, Installation, Testing & Commissioning of following capacity and external static pressure VRF/VRV ceiling mounted ductable type Indoor unit equipped with washable synthetic media pre - filter, fan section with low noise fan/dynamically balanced blower, multi speed motor, coil section with DX copper coil, electronic expansion valve, outer cabinet, vibration isolators, drain pan, other necessary supports etc., suitable for operation on single phase AC supply 230V±10%, 50Hz complete as required. The Unit Shall be complete with Expansion Kit integrated Electronic Expansion Valve The unit shall have automatic force shut down provision in case of fire on receiveing signal. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature.				
2.01	20 TR - 20 mm ESP	6.00	Each	250532.00	1503192.00
2.02	18 TR - 20 mm ESP	6.00	Each	165996.00	995976.00



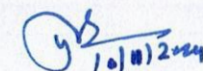
S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
3.00	Supplying, of factory built, of double skin ceiling suspended double skin type Air Handling Units with CHILLED WATER coil. The AHU housing shall be made of 45±2mm thick panels consisting of 0.8 mm thick galvanized pre-plasticised/powder coated sheet on outside and 0.63 mm thick plain GI sheet inside with polyurethane foam (PUF) 40±2 kg/m ³ density insulation factory injected between them by injection moulding machine. AHU housing framing structure shall be thermal break structure type. The AHU shall have Plug Fan with, TEFC drive, IE-3 motor suitable for 215/415+ 10% volts, 1/3 phase 50 Hz AC supply, motor mounting arrangement inside the casings, stainless steel (18G) drain pan with PUF insulation, belt drive system and with vibration isolators, Coil section with ARI 410A compliant Cu Tube / Al finned 6 Row deep -12 FPI Chilled water coil, with suitable for Chilled water Unit connective, aluminium damper on the outlet of AHU, filter section with 50mm thick metal viscous/ washable synthetic type air prefilters, double fire retardant canvas connections and access doors to attend the motor/fan, etc. complete as per drawings and specifications. The Agency shall provide suitable rating VFD for AHUs.				
3.01	20 TR (8000 CFM, SP: 50 mm)	5.00	Each	225000.00	1125000.00
3.02	25 TR (10000 CFM, SP: 50 mm)	4.00	Each	250000.00	1000000.00


10/11/2024

S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
4.00	Supplying, installation, testing and commissioning of factory built, of double skin Horizontal floor mounted double skin type Air Handling Units with Chilled Water coil. The AHU housing shall be made of 48±2mm thick panels consisting of 0.8 mm thick galvanized pre- plasticised/powder coated sheet on outside and 0.63 mm thick plain GI sheet inside with polyurethane foam (PUF) 45±2 kg/m3 density insulation factory injected between them by injection moulding machine. AHU housing framing structure shall be thermal break structure type. The AHU shall have a fan section with Plug Fan, TEFC drive, IE-3 motor suitable for 215/415+ 10% volts, 1/3 phase 50 Hz AC supply, motor mounting arrangement inside the casings, stainless steel (18G) drain pan with PUF insulation, belt drive system and with vibration isolators, Coil section with ARI 410A compliant Cu Tube / Al finned 6 Row deep -12 FPI CHW coil, suitable for Chilled Water application, aluminium damper on the outlet of AHU, filter section with 50mm thick metal viscous/ washable synthetic type air prefilters, double fire retardant canvas connections and access doors to attend the motor/fan, etc. complete as per drawings and specifications. Filters shall have efficiency of 90 % down to 10 micron as per ASHRAE standard. AHU should be designed in such a way considering 20 to 30% clogged filters. The AHU shall be complete in all respects with Return Air Box suitable for required CFM with Volume Control Damper. The motor shall be suitable for operation with VFD.				
4.01	40000 CFM, 6RD Cooling Coil, Plug Fan, 65 mm SP, 2 x 15 HP x 1 speed motor, Three phase power supply	2.00	Each	525000.00	1050000.00
4.02	32000 CFM, 6RD Cooling Coil, Plug Fan, 65 mm SP, 2 x 10 HP x 1 speed motor, Three phase power supply	2.00	Each	495000.00	990000.00
4.03	26000 CFM, 6RD Cooling Coil, Plug Fan, 65 mm SP, 1 x 20 HP x 1 speed motor, Three phase power supply	1.00	Each	425000.00	425000.00
5.00	Supply Installation, testing and commissioning of Y-joints of suitable size as per site requirements.	18.00	Set	3500.00	63000.00
6.00	SITC of Remote Controls with large liquid crystal display, start, stop programming, thermostat, sensors, operating mode setting control, self diagnosis functions				
6.01	Corded Remote Control for Ducted Units	12.00	Set	3500.00	42000.00



S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
6.02	CENTRALISED CONTROLLER Supply testing and commissioning of main centralised controller as per specifications to hook up indoor units as mentioned. Controller shall have unified ON -OFF and schedule timer feature. Controller shall however, be suitable for minimum 64 groups of indoor units. Controller shall be suitable to autosequence the outdoor as well as indoor units catering to Server Room and UPS room as required.	1.00	Set	27800.00	27800.00
7.00	Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping inside the building (with necessary clamps, vibration isolators and fittings but excluding valves, strainers, gauges etc.) duly insulated with following closed cell elastometric nitrile rubber of minimum 45 Kg / cum density, thermal conductivity 0.037 W/MK or better at 20 deg mean temperature class 'O' insulation applied by suitable adhesive complete including repairing of damage to building etc. as per specifications and as required complete in all respect.				
7.01	125 mm dia. (32 mm thick insulation)	80.00	Meter	4200.00	336000.00
7.02	100 mm dia. (32 mm thick insulation)	130.00	Meter	3500.00	455000.00
7.03	80 mm dia. (32 mm thick insulation)	110.00	Meter	2400.00	264000.00
7.04	65 mm dia. (32 mm thick insulation)	100.00	Meter	1800.00	180000.00
7.05	50 mm dia. (32 mm thick insulation)	150.00	Meter	1450.00	217500.00
8.00	Supply, installation, testing and commissioning U-PVC pipe with fittings of 10 kg /cm ³ . with 6mm thick Nitrile rubber of Class "1" including all fittings and jointing with solvent cement and , including cutting chieseling / holes in walls ,wherever required and making good the same, complete as directed by the Engineer in charge.				
8.01	40 mm nominal dia Pipes	100.00	Meter	320.00	32000.00
8.02	32 mm nominal dia Pipes	160.00	Meter	310.00	49600.00
8.03	25 mm nominal dia Pipes	300.00	Meter	275.00	82500.00
9.00	Supplying, fixing, testing and commissioning of Butterfly Valve (Manual) with C I body SS Disc, Nitrile Rubber Seal & O- Ring PN 16 pressure rating for chilled water/hot eater circulation as specified., strainers, gauges in the chilled water plumbing duly insulated to the same specifications as the connected piping and adequately supported as per specifications.				
9.01	150 mm dia	1.00	Each	7500.00	7500.00

 10/11/2024

S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
9.02	125 mm dia	4.00	Each	7000.00	28000.00
9.03	100 mm dia	6.00	Each	6500.00	39000.00
9.04	80 mm dia	6.00	Each	6000.00	36000.00
9.05	65 mm dia	1.00	Each	5500.00	5500.00
9.06	50 mm dia	10.00	Each	5000.00	50000.00
10.00	Providing and fixing following size ball valve (brass) of approved quality, High or low pressure, with plastic floats complete.				
10.01	50 mm nominal bore	6.00	Each	2500.00	15000.00
10.02	25 mm nominal bore	10.00	Each	1200.00	12000.00
11.00	Supplying, fixing, testing and commissioning of Balancing Valve with built in measuring facility with CI body flanged construction with EPDM coated disc with long pitch with protected out pipe insulation & PN 16 pressure rating for chilled / hot water circulation as specified.				
11.01	125 mm dia	2.00	Each	35000.00	70000.00
11.02	100 mm dia	3.00	Each	27500.00	82500.00
11.03	80 mm dia	2.00	Each	15000.00	30000.00
11.04	50 mm dia	5.00	Each	12000.00	60000.00
12.00	Providing & fixing of C.I double flange suction " Y" type strainer fabricated out of minimum 1.6 mm thick Stainless Steel sheet with 3 mm dia. perforation holes with stainless steel flange including nuts, bolts and 3 mm thick rubber insertion complete & tested to 16 Kg/Sq.cm pressure complete as required and as per tender specification.				
12.01	125 mm dia	2.00	Each	8500.00	17000.00
12.02	100 mm dia	3.00	Each	5500.00	16500.00
12.03	80 mm dia	2.00	Each	5000.00	10000.00
12.04	50 mm dia	6.00	Each	4500.00	27000.00
13.00	Providing and fixing in position the industrial type pressure guages with gun metal / brass valves complete as required.	22.00	Each	1800.00	39600.00
14.00	Providing & fixing in position the mercury in glass industrial type thermometers	22.00	Each	1800.00	39600.00
15.00	Providing & fixing of Auto Air Vent 15mm complete as required	10.00	Each	1800.00	18000.00
16.00	Supplying and erection of MS channel/ angle iron of suitable size including with MS flat iron clamps nut and bolts, washer, drilling of holes, complete with 2 coats of red oxide and 2 coats of Aluminium paint etc as reqd.	1000.00	Kg	125.00	125000.00


10/12/24

S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
17.00	Supply, Installation, testing and commissioning of Pressure independent type 2 way Balancing and modulating Control valves in a single Unit of Valve along with Digital thermostat & its connecting wiring. PN10 Rating. DN 15 to DN 32 in Brass Body Ext. Threaded, DN 40 & DN 50 in Cast Iron Body, Ext. Threaded DN 65 to DN 100 Cast Iron body, flanged connection Duly mounted with Modulating actuator IP42/54. Accordingly type suitable for 24V/230V AC. As per specifications of following sizes:				
17.01	100 mm	2.00	Each	85000.00	170000.00
17.02	80 mm	2.00	Each	65000.00	130000.00
17.03	65 mm	3.00	Each	60000.00	180000.00
17.04	50 mm	2.00	Each	45000.00	90000.00
17.05	40 mm	1.00	Each	35000.00	35000.00
17.06	25 mm	1.00	Each	25000.00	25000.00
18.00	Supply, Installation, testing and Commissioning including vaccumiazation and Nitrogen testing of following nominal sizes of soft/harddrawn copper refrigerant piping for VRV/VRF system, complete with fittings, with suitable adjustable ring type hanger supports, jointing/brazing including accessories, insulated with XPLE Class-O tubular insulation/with Class-O closed cell elastometric nitrile rubber tubular sleeves sections of specified thickness as given below for Suction and Liquidlines, all accessories as per specifications etc. as required :				
18.01	41.27 mm dia(OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	40.00	RMT	2400.00	96000.00
18.02	38.10 mm dia(OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	40.00	RMT	2100.00	84000.00
18.03	34.90 mm dia(OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	215.00	RMT	1800.00	387000.00
18.04	31.60 mm dia(OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	55.00	RMT	1600.00	88000.00
18.05	28.58 mm dia(OD) (Hard drawn) with tube thickness 1.20 mm with 19 mm thick insulation	80.00	RMT	1400.00	112000.00
18.06	25.20 mm dia(OD) (Hard drawn) with tube thickness 1.20 mm with 19 mm thick insulation	75.00	RMT	1300.00	97500.00

10/11/2024

S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
18.07	22.20 mm dia(OD) (Hard drawn) with tube thickness 1.20 mm with 19 mm thick insulation	235.00	RMT	1100.00	258500.00
18.08	19.00 mm dia(OD) (Hard drawn) with tube thickness 1.20 mm with 19 mm thick insulation	125.00	RMT	1000.00	125000.00
18.09	15.86 mm dia(OD) (Soft drawn) with tube thickness 1.20 mm with 19 mm thick insulation	125.00	RMT	775.00	96875.00
18.10	12.70 mm dia(OD) (Soft drawn) with tube thickness 1.20 mm with 19 mm thick insulation	200.00	RMT	600.00	120000.00
18.11	9.50 mm dia(OD) (Soft drawn) with tube thickness 1.20 mm with 19 mm thick insulation	200.00	RMT	525.00	105000.00
18.12	6.40 mm dia(OD) (Soft drawn) with tube thickness 1.20 mm with 19 mm thick insulation	200.00	RMT	475.00	95000.00
19.00	Supply, Installation, testing and Commissioning of Communication cable between indoor to outdoor 2C x 1.0 Sqmm Copper Shielded cable in medium class PVC Conduit Complete etc as required.	1650.00	RMT	155.00	255750.00
20.00	SITC of MS Stands for outdoor units made in 100 mm wide C Channel duly painted with one coat of red oxide & two coats of synthetic enamel paint.	10.00	Each	12500.00	125000.00
21.00	GSS RECTANGULAR DUCTING Supply, Installation, Balancing & Commissioning of factory fabricated GSS sheet metal ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness including all accessories complete as required for installation. Splitter & vanes etc .shall be apart of ducting no extra cost shall be paid for the same. All support selection shall be based on gripple wire. No other support shall be acceptable.				
21.01	1.25 mm sheet duct	150.00	Sq.Mtr	1250.00	187500.00
21.02	1.00 mm sheet duct	200.00	Sq.Mtr	1100.00	220000.00
21.03	0.80 mm sheet duct	400.00	Sq.Mtr	950.00	380000.00
21.04	0.63 mm sheet duct	750.00	Sq.Mtr	850.00	637500.00

Y8
10/11/2024

S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
22.00	GSS RECTANGULAR DUCTING Supply, Fabrication, installation and testing of sheet metal ducts (Site FABRICATED DUCTS For Connection /Plenum etc.) in accordance with the approved shop drawings complete with all accessories like vanes, flanges, suspension rods, anchor bolts, GI bolts & nuts, etc., as per specifications.				
22.01	1.25 mm sheet duct	125.00	Sq.Mtr	1300.00	162500.00
22.02	1.00 mm sheet duct	150.00	Sq.Mtr	1150.00	172500.00
22.03	0.80 mm sheet duct	200.00	Sq.Mtr	980.00	196000.00
22.04	0.63 mm sheet duct	550.00	Sq.Mtr	880.00	484000.00
23.00	INSULATION WORK Supply & Installation of Thermal Insulation on Duct using Closed Cell Class O Nitrile Rubber Elastomeric Insulation of Density 40 Kg/m ³ (Minimum), Thermal Conductivity as per ASTM / EN standard and with Factory Laminated Aluminium Foil of 60 microns using manufacturer's recommended Rubber based Adhesive in a blend of solvents complete as per Specifications. 16mm thick Class O Nitrile Rubber Insulation with Alu Foil of 60 microns	1700.00	Sq.Mtr	725.00	1232500.00
24.00	Supply and Application of Acoustic Insulation Inside the Duct with Nitrile Rubber open cell foam with minimum Density 140 Kg/m ³ , passing Class 1 Fire Performance test as per BS 476 Part 7 and with built-in EPA approved Microban antimicrobial protection; to be applied using manufacturer's recommended Rubber based Adhesive in a blend of solvents. 15 mm thickness (Internal Lining of Ducts)	825.00	Sq.Mtr	800.00	660000.00
25.00	Supply, fabrication, installation and testing of 50 micron powder coated, aluminum extruded linear fixed horizontal bar/grill with all side flanges & Louvers as per approved shop drawings.	45.00	Sq.Mtr	6800.00	306000.00
26.00	Supply, installation, testing and commissioning of 50 micron Powder coated Aluminum extruded Circular Diffuser for supply and return air as per specification & the sizes will be as per the drawing Circular Diffuser 375mm Dia with damper	65.00	Each	3800.00	247000.00
27.00	Supply, Installation and Testing of multiblade box type extruded Al construction of volume Control Damper, to be provided with suitable links and quadrants for control of volume of air.	27.00	Sq.Mtr	6200.00	167400.00

10/11/24

S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
28.00	Supply, Installation and Testing of multiblade box type GSS construction of volume control damper, to be provided with suitable links and quadrants for control of volume of air	10.00	Sq.Mtr	6500.00	65000.00
29.00	Supply, fixing, testing and commissioning of Motorised dampers with 150 mm sleeves as where required of required sizes . The damper shall be motorized and spring return so as to close the damper in the event of power failiure automatically and open the same in case of power being restored. The spring return action shall be built mechanism and not externally mounted. The damper shall also be closed in the event of a fire signal which shall be provided by Fire Alarm System in each AHU's/ Smoke extract fans panel etc. as per specifications as required. (Makes: / Dynamic Equipments/Ecoair/Swirl Air Equipments Pvt. Ltd.)				
29.01	Motorized Damper	21.00	Sq.Mtr	7500.00	157500.00
29.02	Actuator with control panel	34.00	Each	2500.00	85000.00
30.00	Supply, Installation, testing and Commissioning of Canvass connection	18.00	Each	3500.00	63000.00
31.00	Supply, Testing & charging of VRF system with Additional Gas (Honeywell/Dupont)	165.00	Kg	900.00	148500.00
32.00	INLINE FAN WITH SPEED REGULATOR Supply, Installation, Testing and Commissioning of Inline Fan with direct/belt driven motor, belt guard, motor mount & vibration isolation type mounting. Casing shall be of 14 gauge steel sheet with min. 20 mm thick motor mounting plate. Vanes shall be Aerodynamically designed for max. efficiency the casing shall be bonderized, primed & coated with enamel paint. Hub & blades will be of Aluminium, blades shall be Aerofoil section for max. efficiency. Max clearance between blade tip & fan housing shall be 5 mm. The blade shall be tested at speed of 25% above the design operation speed. Motor shall be IE3 415/220 + 10% volts, 50 cycles, 3 phase with class F insulation. Max. speed of motor shall be 1500 RPM, complete as per specifications & drawings. Fan should be complete with fire retardant, water proof double flexible connection between fan & duct.				
32.01	Capacity: 900 CFM Static Presure : 20 mm Of wg Kw : 0.7 KW	2.00	Each	35000.00	70000.00


 10/1/2024

S. No.	DESCRIPTION OF ITEMS	QTY	UNIT	RATE	AMOUNT
33.00	Dismantling of Existing following rating AHUs and keep in AAI store at the lead of 5 KM and MS Chilled Water Piping				
33.01	40000 CFM	2.00	Nos.	5000.00	10000.00
33.02	32000 CFM	2.00	Nos.	5000.00	10000.00
33.03	36000 CFM	1.00	Nos.	5000.00	5000.00
34.00	MS Piping	1.00	Lot	5980.00	5980.00
35.00	Providing detailed design as per site requirement with study of existing Air conditioning system including submission of heat load calculation, GFC drawing including detailed layout showing placements of various AHUs, VRF systems and further to give of various equipments along with Ducting, Piping, Air distribution etc. complete in all respects for Lower Ground Floor. Tentative Quantity as per above mentioned items considered in the estimate. Scope of items includes submission of detailed design, drawing & BOQ with measurement considering above item complete as per site requirement and instruction of Engineer-In-Charge.	1.00	Job	106789.00	106789.00
(a)	Total Sum - Rate Quoted Before RA				2,22,31,911.00
(b)	Discount / Rate Reduction in Reverse Auction Process (Initial Quoted Rs. 2,22,31,911.00 / After Reverse Auction Rs. 2,04,31,911.00 = % Reduction = <u>8.09647%</u>)				(18,00,000.00)
(c)	Net Quoted Amount after Reduction of Rate / Amount as per RA				2,04,31,911.00

(Rupees Two Crore Four Lakh Thirty One Thousand Nine Hundred Eleven Only)



(Pramod Kumar Thakre)
Dy. Gen. Manager (Engg-E)
AAI, R. B. Airport, Bhopal