



भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

AAI/Engg.(E)/SAP Project/2023-24/W.O.-07 | 4500-4503

दिनांक: 14.07.2023

WORK ORDER

To,

M/s S & S Engineers,
A-12, Kanti Nagar Ext.,
Delhi- 110051

Email id: ssengineers31@gmail.com

GST no: 07ADDFS2352M1ZV

काम का नाम : नई दिल्ली के सफदरजंग हवाई अड्डे पर DGCA, BCAS, AAIB, AERA और AAI के लिए संयुक्त परिचालन कार्यालयों का निर्माण।

उपशीर्षक: विविध विद्युत कार्य

Name of Work: construction of combined operational offices for DGCA, BCAS, AAIB, AERA and AAI at Safdarjung Airport, New Delhi.

Sub: Miscellaneous Electrical Work.

Ref: Your Financial e- BID ID- 2023_AAI_155281_pack1 Opened on 30.05.2023

Dear Sir(s),

1. Your E-Tender (item rate) for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India, amounting to **1,18,68,981.00** excluding GST (**Rupees One Crores Eighteen Lakhs Sixty-Eight Thousand Nine Hundred Eighty-One Only**) which is **31.28 % (Thirty-One point Twenty-Eight)** below the Estimated cost put to tender of Rs. **1,72,71,815.00 (Rupees One Crores Seventy-Two Lakhs Seventy-One Thousand Eight Hundred Fifteen Only)**.
2. JGM (Engg. -E), Project Office, Safdarjung Airport, New Delhi, shall be the Engineer-in-Charge of the work. You are requested to attend the office of Jt. Gen. Manager (Engg-E), Project Office, Safdarjung Airport, New Delhi within 15 days from the date of issue of this letter to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value Rs. 100/- (Rupees One Hundred Only) and the cost of the stamp paper shall be borne by you.
3. Please deposit **11,86,898.00 (Rupees Eleven Lakh Eighty-Six Thousand Eight Hundred Ninety-Eight 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 no 1(A) at page no. GCC 18 of tender document.
4. 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, Child Labour (Prohibition & Regulation) Act 1986, construction workers (Regulation of Employment and Conditions of Service) Act 1996, Building and other Construction Workers Welfare Cess Act 1996 as specified in Clause-19 on page no. GCC 51 of tender document, minimum wages Act 1948 as specified in Clause- 20, page

no. GCC 57 of Tender documents, EPF Act 1952 & ESI Act 1948 as specified in clause 20 & 20 (A) on page no. GCC 57 of Tender documents and rules thereof of Central and State Governments.

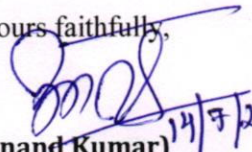
5. You are also directed to attend O/o Asstt. Gen. Manager (E-E), Project Office, Safdarjung Airport, New Delhi, to take over the site.
6. Please note that the time allowed for carrying out the work shall be 6 (six) Months and same shall be reckoned from 10th day after the date of issue of this letter.
7. All correspondence in connection with the contract should normally be addressed to the Engineer-in-Charge.
8. In case of non-compliance of GST provisions and blockage of any input credit, it shall be your responsibility to indemnify AAI.
9. The rates are inclusive of all taxes including GST.
10. All input credits will be passed on the AAI by you.
11. Please acknowledge the receipt and return the duly signed duplicate copy of this letter (enclosed) to the undersigned as a token of acceptance.
12. The above referred letters/documents shall form part of the agreement.

AAI GST No. 07AAACA6412D2Z9

Enclosure:

1. Computer generated BOQ.

Yours faithfully,


(Anand Kumar)

Astt. General Manager (Engg. -E)

For & on behalf of Chairman, Airports Authority of India

Tender Inviting Authority: Airports Authority Of India

Name of Work: Construction of Combined Operational Offices for DGCA, BCAS, AAIB, AERA & AAI at Safdarjung Airport, New Delhi.
SH: Miscellaneous Work

Contract No:

SCHEDULE OF WORK / ITEM(S)

Sl.No	Description of Work / Item(s)	No.of Qty	Units	Estimated Rate	S S Engineers(GSTN-07ADDFS2352M1ZV)		Edge Telecom Pvt Ltd(GSTN-NA)	
					Rate	Amount	Rate	Amount
1.00	Design, manufacture , supply , assembly at site , installation, testing and commissioning of following cubical type panels made of 2 mm thick CRCA sheet, base channel, doors & partitions complete with, Air Circuit Breaker, moulded case circuit breakers, meters, indicating lamps, current transformer etc. complete in all respects, insulated bus bars with heat shrinkable PVC sleeve in suitable bus chambers, interconnection, bus bar shrouds at joints, wiring, name plate, danger plate, earth bus etc. & comprising of compartments with hinged door for each feeder & its accessories, cable alley with hinged doors, bus chamber with bolted door etc. The panel shall be dust & vermin proof construction with rubber gasket and powder coated . The panel shall be completely modular and compartmentalised with Form 3 B Separation. The panel shall be free standing floor mounted type / wall mounted type as per relevant drawing. The above panel should be as per IEC-61439 (TTA).							
1.01	MV Panel - Main Distribution Panel for Data center Incomer : Two (2) Nos. 400A , 50 KA ,Four pole , MCCB with Microprocessor based relay for short circuit, over current and earth fault .Each incomer shall be provided with the following. One (1) No. Multi Function Meter with one set (3 Nos.) of CTs of ratio 400/5A Class 1.0, 15VA. One set (3 nos.) Phase indication lamps with control MCB. One set (3 nos.) ON/OFF/TRIP indication lamp Busbar : 500A , 50kA TP + N Al. Busbar insulated with heat shrinkable sleeves and shall be colour coded. The neutral busbar shall be 50% rated. Separate earth busbar of 32 x 6 mm of GI. shall be provided on the rear bottom of the panel. Bus Coupler : One (1) No. 400A , 50 KA ,Four pole , MCCB with Microprocessor based, with ON/OFF indication lamp and TNC control switch, Outgoings : Section- I: Two (2) Nos. 250A, 50 kA, TP + N ACB MDO with Microprocessor based relay for short circuit, over current protection . Section- II: Two (2) Nos. 100 A, 35 kA, Four pole, MCCB with continuous variable thermal magnetic for short circuit, over current and earth fault . Note:-Mechanical interlocking will be provided in incomings and bus-coupler.	1.00	Each		424004.00	424004.00	325985.00	325985.00



2.00	Supplying, Erection & commissioning of External Feeder Pillar Outdoor Type Design, manufacture , supply , assembly at site , installation, testing and commissioning of following Feeder Pillar Outdoor Type made of 2 mm thick CRCA sheet, legs , double doors & partitions complete with, moulded case circuit breakers, meters, indicating lamps etc., insulated bus bars with heat shrinkable PVC sleeve in suitable bus bar chambers, interconnection, bus bar shrouds at joints, wiring, name plate, danger plate, earth bus etc. & comprising of compartments with hinged door for each feeder & its accessories, cable alley with hinged doors, bus chamber with bolted door etc. The feeder pillar shall be dust & vermin proof construction with rubber gasket and powder coated . The feeder pillar shall be completely modular and compartmentalised with Form 3 B Separation. The feeder pillar shall be free standing and installed on suitable foundation . Incomer : One (1) Nos. 100A, 35 kA, Four pole, MCCB with continuous variable thermal magnetic for short circuit, over current and earth fault. Each incomer shall be provided with the following. One (1) No. Multi Function Meter with one set (3 Nos.) of CTs of ratio 100/5A Class 1.0, 15VA. One set (3 nos.) phase indication lamps with control MCB. One set (3 nos.) ON/OFF/TRIP indication lamp Busbar : 160A , 25kA 4P Al. Busbar insulated with heat shrinkable sleeves and shall be colour coded. Separate earth busbar of 20 x 3 mm of GI. shall be provided on the rear bottom of the panel. Outgoings : Three (2) Nos. 32A, 25 kA, TP + N MCCB with continuous variable thermal magnetic for short circuit, over current protection. Three (4) Nos. 25A, 25 kA, TP + N MCCB with continuous variable thermal magnetic for short circuit, over current protection.	1.00	Each
3.00	Supplying, Erection & commissioning of External Feeder Pillar Outdoor Type Design, manufacture , supply , assembly at site , installation, testing and commissioning of following Feeder Pillar Outdoor Type made of 2 mm thick CRCA sheet, legs , double doors & partitions complete with, moulded case circuit breakers, meters, indicating lamps etc., insulated bus bars with heat shrinkable PVC sleeve in suitable bus bar chambers, interconnection, bus bar shrouds at joints, wiring, name plate, danger plate, earth bus etc. & comprising of compartments with hinged door for each feeder & its accessories, cable alley with hinged doors, bus chamber with bolted door etc. The feeder pillar shall be dust & vermin proof construction with rubber gasket and powder coated . The feeder pillar shall be completely modular and compartmentalised with Form 3 B Separation. The feeder pillar shall be free standing and installed on suitable foundation . Incomer : One (1) Nos. 63A, 35 kA, TP+N Pole, MCCB with continuous variable thermal magnetic for short circuit, over current and earth fault . Incomer shall be provided with the following. One (1) No. Multi Function Meter with one set (3 Nos.) of CTs of ratio 63/5A Class 1.0, 15VA. One set (3 nos.) phase indication lamps with control MCB. One set (3 nos.) ON/OFF/TRIP indication lamp Busbar : 100A , 25kA, 4 Pole, Al. Busbar insulated with heat shrinkable sleeves and shall be colour coded. The neutral busbar shall be 100% rated. Separate earth busbar of 20 x 3 mm of GI. shall be provided on the rear bottom of the panel. Outgoings : Ten (10) Nos. 10A, 10 kA, SP MCB Ten (10) Nos. 16A, 10 kA, SP MCB Timers for ON/OFF will be installed which will be measured under relevant item. External Lighting Feeder Pillar as described above.	1.00	Each

31271.00	31271.00	272150.00	272150.00
15843.00	15843.00	280430.00	280430.00

Qm

4.00	Supply of 15W LED street lights epoxy powder coated high pressure die - cast aluminium housing with weather proof gasket, control gear, toughend glass cover/ clear polycarbonate front cover , with IP-65 protection and a colour temperature CCT of 5700 +_ 300K and LED efficiency > 80 Lumen/ per watt. and voltage range of 140- 280V AC with suitable fixing on 32 mm dia GI pipe (Make. Havells cat no LHETAXU7IN6W015/ Bajaj cat Ref : BCLST 15w/ Halonix Cat No HLSLD-9-15CWL)	32.00	Each
5.00	Installation, Testing and Commissioning of 15 W LED type fitting on 2.60 Mtr (Approx) GI Pole i/c wiring with 2 x 1.5 sqmm PVC insulated copper conductor wire of suitable length upto loop in loop out box including necessary connection etc complete as required.	32.00	Each
6.00	Supply of 3.0 metre high, hot dip galvanised octagonal poles with 130 mm bottom A/F & 70 mm top A/F made up of 3 mm thick sheet, along with base plate of size 200 mm X 200 mm X 12 mm thick, along with suitable length single arm bracket of 40NB A-class pipe for fixture mounting height of 3 metres, welded to collar plate of the pole and with suitable end to mount LED fitting at suitable angle as per lux level design, suitably designed door with space for internal junction box and as per technical specifications etc. as required comprising following accessories: (a) Supply of 4 nos of M16 X 450 long 'J' type EN 8 grade foundation bolts along with template, 12 nuts and washers. (b) Bakelite sheet with 1 Nos of 6A DP MCB and stud type connector suitable for looping of 4Cx 6 Sq mm cable. Note- Material of construction for pole shall be as per IS 2062/BSEN 10025 with yield strength of 350 N/Sq.mm.	32.00	Each
7.00	Making of pole foundation with 1:3:6 (1 Cement: 3 coarse sand : 6 graded stone aggregate 40mm nominal size) cement concrete (excluding reinforcement) size 400 x 400 x 750mm (Depth), excavation centering and shuttering etc. with neat surface i/c providing and grouting of 4 nos, 12 mm Ø, 200mm (long) GI nut bolt and fixing of G.I. Pole of item no.1 SH-II complete etc. as required.	32.00	Each
8.00	Supply of 1100 Volts grade, of following sizes of Aluminium conductor XLPE insulated , galvanised flat steel strip / wire Armoured , inner and out sheath of FRLS PVC cable as per IS 7098 Part -I with latest amendment and as per other relevant standards and tender specification.		
8.01	4 X 6 sq. mm	600.00	mtr
8.02	3½ X 25 sq. mm	200.00	mtr
9.00	Execution of items of schedule of rates CPWD DSR-2022 as and when required for site work of internal and external electrical installations as per direction of E-I-C at different locations in the building and the technical specification as per CPWD2013 will be followed for DSR work. [If the agency wants to quote the rates at par with CPWD SR (Electrical) 2022 then 1.00 should be written in the Column box of Rate, If agency wants to quote 5% below to the rates of CPWD SR (Electrical) 2022 then 0.95 should be written in the column box of Rate, If agency wants to quote 5% above to the rates of CPWD SR (Electrical) 2022 then 1.05 should be written in the column box of Rate. This information is only for guidance purpose to the contractor for filling up rates for this item only. However contractor is free to quote the rates any percentage above / below or at par with the rates of CPWD SR (Electrical) 2022].	4000000.00	Rs

2394.00	76608.00	999.00	31968.00
280.00	8960.00	555.00	17760.00
5510.00	176320.00	5272.50	168720.00
2550.00	81600.00	3885.00	124320.00
150.00	90000.00	91.64	54964.00
300.00	60000.00	161.97	32394.00
1.00	4000000.00	.93	3720000.00

3m

10.00	SITC of DG Type MODULAR CABLE SEALING SYSTEM suitable for installation in floors / walls including fixing of Galvanised steel frames of packing space of (120mm (w) and upto 220mm (h)) consisting of Un-grooved Peelable type factory fitted Variable diameter Peelable Blocks brown / black with centre core made up with EPDM halogen free rubber, galvanized steel Stayplates for separation, one single piece Wedge with galvanized bolts for adjusting the tightness after fixing the cables - ventilation shaft - 6 X (120 X upto 220mm)	1.00	Each
11.00	SITC of DG Type MODULAR CABLE SEALING SYSTEM suitable for installation in floors / walls including fixing of Galvanised steel frames of packing space of (120mm (w) and upto 220mm (h)) consisting of Un-grooved Peelable type factory fitted Variable diameter Peelable Blocks brown / black with centre core made up with EPDM halogen free rubber, galvanized steel Stayplates for separation, one single piece Wedge with galvanized bolts for adjusting the tightness after fixing the cables - ventilation shaft - 7 X (120 X upto 220mm)	1.00	Each
12.00	SITC of DG Type MODULAR CABLE SEALING SYSTEM suitable for installation in floors / walls including fixing of Galvanised steel frames of packing space of (120mm (w) and upto 220mm (h)) consisting of Un-grooved Peelable type factory fitted Variable diameter Peelable Blocks brown / black with centre core made up with EPDM halogen free rubber, galvanized steel Stayplates for separation, one single piece Wedge with galvanized bolts for adjusting the tightness after fixing the cables - ventilation shaft - 4 X (120 X upto 220mm)	1.00	Each
13.00	SITC of DG Type MODULAR CABLE SEALING SYSTEM suitable for installation in floors / walls including fixing of Galvanised steel frames of packing space of (120mm (w) and upto 220mm (h)) consisting of Un-grooved Peelable type factory fitted Variable diameter Peelable Blocks brown / black with centre core made up with EPDM halogen free rubber, galvanized steel Stayplates for separation, one single piece Wedge with galvanized bolts for adjusting the tightness after fixing the cables - ventilation shaft - 5 X (120 X upto 220mm)	1.00	Each
14.00	SITC of DG Type MODULAR CABLE SEALING SYSTEM suitable for installation in floors / walls including fixing of Galvanised steel frames of packing space of (120mm (w) and upto 220mm (h)) consisting of Un-grooved Peelable type factory fitted Variable diameter Peelable Blocks brown / black with centre core made up with EPDM halogen free rubber, galvanized steel Stayplates for separation, one single piece Wedge with galvanized bolts for adjusting the tightness after fixing the cables - ventilation shaft - 8 X (120 X upto 220mm)	1.00	Each
15.00	Supply, installation, testing and commissioning of Vertical Wall mounted storage following type Electric water Heater (Geyser) as per technical specifications. Including supply and fixing of Anchor fastners, nut bolts, supply of accessories, modification/rectification of civil works such as plumbing ,wiring etc.if any required to install the Geyser at desired location.		
15.01	25 ltr	5.00	Each
15.02	25 ltr	46.00	Each
16.00	Supply, installation, testing and commissioning of Vertical Wall mounted Instant gyser 3 ltr Electric water Heater (Geyser) as per technical specifications. Including supply and fixing of Anchor fastners, nut bolts, supply of accessories, modification/rectification of civil works such as plumbing ,wiring etc.if any required to install the Geyser at desired location.	25.00	Each

98235.00	98235.00	33300.00	33300.00
114607.00	114607.00	33300.00	33300.00
65490.00	65490.00	33300.00	33300.00
81862.00	81862.00	33300.00	33300.00
130980.00	130980.00	33300.00	33300.00
6458.00	32290.00	8880.00	44400.00
7886.00	362756.00	7992.00	367632.00
2770.00	69250.00	3219.00	80476.00

17.00	Supply, Installation, Testing and Commissioning of following capacity (±2%) inverter type, 5-star rated split air-conditioner suitable for operation on 230 V, 50 Hz single phase AC supply with energy efficient rotary copper compressor filled with R32 Gas and having remote operation for indoor temperature adjustment, indoor unit blower speed, swing adjustment, auto start, sleep mode, turbo mode, with LED display for temperature including length of copper refrigerent piping, copper electrical cable wire & drain pipe and including dully powder coated MS stand for out door unit, complete etc. complete as required. (Make of Spit AC: HITACHI/ Voltas/ Blue Star/ LG/ Carrier Aircon/ Daikin)		
17.01	1.5 TR	8.00	Each
17.02	1.0 TR	4.00	Each
18.00	Supply, installation, testing and commissioning of room Oil Filled Heater with PTC fan radiator etc as per specifications and complete as required.	26.00	Each
19.00	Supply, installation, testing and commissioning of Hand dryer etc as per specifications and complete as required.	108.00	Each
20.00	Supply, installation, testing and commissioning of Room Air purifier etc as per specifications and complete as required.	44.00	Each
21.00	Providing and fixing of following complete with suitable for operation on 220V, 50 HZ, single phase AC Supply with double pole ball bearing, motor, blades, capacitor etc.including all accessories as required & as per enclosed specification.		
21.01	400 mm Wall fans	10.00	Each
21.02	400 mm Pedestrian Fan	5.00	Each
22.00	Supply Temperature & Humidity Digital Meters with LCD display, temp. range -40° C to 70° C, humidity range to 95 R.H. and accuracy ±5 % C in temp. and ±3 % RH in humidity etc.including all accessories as required & as per enclosed specification.	83.00	Each
23.00	Supply, installation, testing and commissioning of Automatic Shoe Polish machine with Sole cleaner (Heavy duty) etc as per specifications and complete as required.	44.00	Each
24.00	supply of Electric scissor lift table capacity Min. 300 kg. , as per specification min. plateform lifted height 9.7 mtr, min. working height 11.7, dim of table 2.25 x 1.15 x 1.1 mtr etc.including all accessories as required & as per enclosed specification.	1.00	Each
25.00	Portble Aluminium Ladder of following size-		
25.01	6 Feet Step Ladder A Type	6.00	Each
25.02	8 Feet Step Ladder A Type	6.00	Each
25.03	12 Feet Step Ladder A Type	2.00	Each

40825.00	326600.00	42180.00	337440.00
45655.00	182620.00	35520.00	142080.00
10522.00	273572.00	11100.00	288600.00
14204.00	1534032.00	5138.88	554999.04
15295.00	672980.00	49950.00	2197800.00
4341.00	43410.00	2158.95	21589.50
3847.00	19235.00	2651.79	13258.95
864.00	71712.00	2072.89	172048.87
17941.00	789404.00	20181.82	888000.08
1520000.00	1520000.00	1387500.00	1387500.00
4389.00	26334.00	3330.00	19980.00
5852.00	35112.00	4440.00	26640.00
8778.00	17556.00	6660.00	13320.00

26.00	SITC of Static White (3000 K) surface mounted Narrow/Medium/Wide beam luminaire suitable for outdoor applications of Facade Lighting, depending on design and site requirement. Luminaires should be enabled with high power LEDs, should consists of anti-aging and anti-UV high optical efficiency temperature-resistant lenses, suitable for architectural lighting as per design requirement. The luminaire should have beam angle options between 10° to 60°, actual will depend on the design and site requirement. Power consumption should be between 35W to 38W at steady state full intensity, Luminaire luminous flux range of 2880- 2910 Lm. Color rendering index CRI ≥ 70 for white LEDs's and power factor of complete luminaire ≥ 0.90, at full intensity. Luminaire should be provided with suitable integral power supply unit having Built-in Surge protection of 4 kV with additional External Surge Protection of 10 kV. Lumen maintenance of at least L70@50,000 burning hours at 25°C. The luminaire should have grey powder coated pressure die cast aluminium housing with minimum 3-4mm thick safety glass. Ingress Protection ≥ IP 66. Impact resistance level ≥ IK 08. Adequate heat sink with proper thermal management shall be provided. Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%. THD should be less than 10%. Housing to have adjustable base bracket for angle adjustment so that the light direction can be adjusted to illuminate desired structural elements. The LED Luminaires and external drivers' drivers if used should be BIS certified. The fixtures proposed must have passed LM 79 & LM-80, Reports from NABL laboratory will be submitted post the issuance of LOA to the successful bidder and before the supply of material. Make of LEDs -LEDs of CREE / LUMINOUS / OSRAM / SEOUL / SAMSUNG/LUMILED /NICHIA. Similar to BAJAJ model no. BA SP IN1 S 36W VVV B3	45.00	Each
27.00	SITC of Static White (3000 K) surface mounted Narrow/Medium/Wide beam luminaire suitable for outdoor applications of Facade Lighting, depending on design and site requirement. Luminaires should be enabled with high power LEDs, should consists of anti-aging and anti-UV high optical efficiency temperature-resistant lenses, suitable for architectural lighting as per design requirement. The luminaire should have beam angle options between 10° to 60°, actual will depend on the design and site requirement. Power consumption should be between 70W to 80W at steady state full intensity, Luminaire luminous flux range of 6050- 6150 Lm. Color rendering index CRI ≥ 70 for white LEDs's and power factor of complete luminaire ≥ 0.90, at full intensity. Luminaire should be provided with suitable integral power supply unit having Built-in Surge protection of 4 kV with additional External Surge Protection of 10 kV. Lumen maintenance of at least L70@50,000 burning hours at 25°C. The luminaire should have grey powder coated pressure die cast aluminium housing with minimum 3-4mm thick safety glass. Ingress Protection ≥ IP 66. Impact resistance level ≥ IK 08. Adequate heat sink with proper thermal management shall be provided. Operating Temperature : -10°C to +50°C, Operating Humidity : 10%-90%. THD should be less than 10%. Housing to have adjustable base bracket for angle adjustment so that the light direction can be adjusted to illuminate desired structural elements. The LED Luminaires and external drivers' drivers if used should be BIS certified. The fixtures proposed must have passed LM 79 & LM-80, Reports from NABL laboratory will be submitted post the issuance of LOA to the successful bidder and before the supply of material. Make of LEDs -LEDs of CREE / LUMINOUS / OSRAM / SEOUL / SAMSUNG/LUMILED /NICHIA. Similar to BAJAJ model no. BA FL IN1 S 75W VVV B2	21.00	Each

5985.00	289325.00	20966.67	943500.15
7953.00	167013.00	29071.43	610500.03

Total in Figures

11868981.00

13304975.62