



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

No: AAM/ENGG/ELECT/AMED-XI/SVDGS/2024-25/A-21/283 Date: 27.08.2024

WORK ORDER

By Speed post/ e-mail

To
M/s. Balaji Engineering,
Flat No.18, 3rd Floor Queens Castle,
100 Feet Road, Lakshmi Nagar,
Nanganallur, Chennai -600 061.

Name of Work: SITC of Smart Visual Docking Guidance System at Chennai Airport.
SH: Provision of power supply, laying of OFC cable and allied works for integration of
AVDGS/ SVDGS with AOCC at Chennai International Airport.

Ref: 1) e-Tender ID: 2024_AAI_198700_1
2) Price Bid opened on 19.07.2024.

Dear Sir(s),

1. Your e-tender for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India, at the item rate quoted by you totaling to **Rs.1,53,60,650.00** (Rupees One Crore Fifty Three Lakhs Sixty Thousand Six Hundred and Fifty Only) (Excluding GST)
2. Joint General Manager (Engg-Elect)-I, AMED, AAI, Chennai Airport shall be the Engineer-In-Charge of the work. You are requested to attend the office of Joint General Manager (Engg. -Elect)-I, AAI, Chennai Airport by 06.09.2024 to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value of Rs.100.00 (Rupees One Hundred Only) and the cost of the stamp paper shall be borne by you.
3. Please deposit an amount of Rs.15,36,065.00 (Rupees Fifteen Lakh Thirty Six Thousand and Sixty Five Only) towards Security deposit within 10 days from the date of issue of this letter failing which the same will be deducted as per conditions of Clause 1A of AAI GCC of contract agreement.
4. You are requested to comply with the Provision 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 Condition of Service) Act 1996, Building and other Construction Workers Welfare Cess Act 1996 as specified in Clause No.19 of GCC of AAI and rules of Central and State Government.
5. You are also requested to contact the Asst. General Manager (Engg. - Elect), AMED-XI immediately, who will arrange to handover the site.

एम. कृष्णमूर्ति / M. KRISHNAMOORTHY
संयुक्त महाप्रबन्धक (अभि-विद्युत)
Jt. General Manager (Engg-Elect)
भा.वि.प्रा, चेन्नई हवाई अड्डा, चेन्नई - 600 016
AAI, CHENNAI AIRPORT, CHENNAI - 600 016

27/08/24
Jt. Gen. Mgr. I

फैक्स: 044 - 2256 0008 ईपीएबीएक्स: 2256 0551, चेन्नई हवाई अड्डा, चेन्नई - 600 016.
Fax: 044 - 2256 0008 EPABX: 2256 0551, Chennai Airport, Chennai - 600 016.



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(2)

6. Please note that the time allowed for carrying out the work shall be **04 (Four) Months**

7. Any further correspondence in connection with the contract should normally be addressed to the Engineer-in-charge i.e., Joint General Manager (Engg-Elect)-I, AMED, Chennai Airport.

8. All other Terms and Conditions shall be as per Agreement.

9. 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.

Encl: Schedule of Quantities (04 Pages)

Yours faithfully,

(M. KRISHNAMOORTHY)
Jt. General Manager (Engg-Elect.)-I
AMED, AAI, Chennai Airport
For and on behalf of the Chairman,
Airports Authority of India.

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संयुक्त महाप्रबन्धक (अभि-विद्युत)
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SCHEDULE OF QUANTITIES

Name of Work: SITC of Smart Visual Docking Guidance System at Chennai Airport. SH: Provision of power supply, laying of OFC cable and allied works for integration of AVDGS/SVDGS with AOCC at Chennai International Airport.

Item No.	Description of Items	Qty	Units	Rate	Amount
SH-I	Electical Related Works				
1	Supply of 3.5 core 25 sq. mm XLPE insulated, PVC inner sheathed, armoured Al. conductor cable, extruded PVC type ST2 outer sheathed, 650 /1100 Volt grade as per IS 7098 (Part 1) 1988 with upto date ammendments.	150	Mtr.	450.00	67500.00
2	Supply of 3 core 4 sq. mm XLPE insulated, PVC inner sheathed, Armoured Cu. conductor cable, extruded PVC type ST2 outer sheathed, 650 /1100 Volt grade as per IS 7098 (Part 1) 1988 with upto date ammendments.	1500	Mtr.	350.00	525000.00
3	Supply of nominal 50 mm outer dia, HDPE Pipe of PE 80, PN 6 grade HDPE pipe conforming to IS: 4984:2016 (along with latest amendments) and as directed by Engineer-in-Charge.	12730	Mtr.	150.00	1909500.00
4	Design, fabrication, supply, installation, testing and commissioning of outdoor distribution feeder pillar suitable for 415 V, 3 phase, 4 wire 50 Hz Ac supply system having size (Size not less than LXHXD: 600mmx600mx300mm) totally enclosed, dust and vermin proof, IP55 protection, fabricated from CRCA sheet steel of 2mm thick for frame work and double door, having front side hinged lockable door, 3mm thick for gland plates i/c cleaning & finishing complete with powder coating in approved shade, bottom base channed of MS section not less than 50mmx25mmx5mm thick, with 02nos. earth stud, and interconnections between incomer and outgoing with suitable sized PVC insulated copper conductor cable, i/c providing following switchgears with fixing arrangment and installed at height of 600 mm above the finished ground level with suitable sized MS angle iron including civil foundation work etc., as required. (cable entry on bottom side) Incomer: a) 63 A, Four pole isolator - 1No. b) 3 Nos. of LED type phase indicating lamps(RYB) with control 2 Amp MCB Outgoing a) 5-32 A, SP MCB, C-Curve - 15 Nos. b) Neutral & Earth Bars.	2	Nos.	25000.00	50000.00
5	Installation, testing and commissioning of AAI supplied feeder pillar (Including shifting) at height of 600 mm above the finished ground level with suitable sized MS angle iron including civil foundation work etc., as required and as per instruction of EIC.	1	No.	5000.00	5000.00
6	Supply & fixing of 240 V/415 V, 50 Hz, 10 Ka "C" Series 25 amps DP MCB (in accordance with IS/IEC 60898-1 & IS/IEC 60947-2) as required.	25	Nos.	250.00	6250.00
7	Kerf cutting with machine in apron of PQC / bituminous surface of suitable depth for laying of 50 mm HDPE Pipe with suitable depth and width including refilling the same by cement concrete of 1:2:4 and making the same to finished level etc. complete as required and as per instruction of EIC.	10184	Mtr.	350.00	3564400.00
8	Laying of HDPE Pipe of following size in the existing RCC/HUME/HDPE/METAL Pipe/concrete groove/masonry open duct etc as required.				
a)	50 mm dia	12000	Mtr.	40.00	480000.00

संयुक्त महाप्रबन्धक (अभि-विद्युत)
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Item No.	Description of Items	Qty	Units	Rate	Amount
9	Laying of HDPE Pipe of following size direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.				
a)	50 mm dia	1000	Mtr.	125.00	125000.00
10	Laying and fixing of HDPE pipe of following size on wall surface as required.				
	50 mm dia (clamped with 1mm thick saddle)	2000	Mtr.	100.00	200000.00
11	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, M-sand cushioning, protective covering and refilling the trench etc as required.				
a)	Upto 35 sq. mm.	150	Mtr.	450.00	67500.00
12	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/HUME/HDPE/METAL Pipe/concrete groove as required.				
a)	Upto 35 sq. mm.	1400	Mtr.	50.00	70000.00
13	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.				
a)	Upto 35 sq. mm.	150	Mtr.	50.00	7500.00
14	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
a)	Upto 35 sq. mm. (clamped with 1mm thick saddle)	100	Mtr.	100.00	10000.00
15	Supply and makig cable end termination of 3x4.0 sq.mm copper cable including copper lugs and other accessories as required.	30	Mtr.	800.00	24000.00
16	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. a) 3.5 x 25 sq. mm.	8	Nos.	500.00	4000.00
17	Supply of metal box of size 300mm X 300mm X 200mm deep made up of MS sheet of 2.0 mm thickness with top openable cover provided with suitable gasket to prevent entry of rain water as required.	10	Mtr.	5000.00	50000.00
18	Providing and erecting a MS barricade (of MS 'C' Channel size 150x75x5.7mmthick) around VDGS pole/electrical installtion with required riveting, welding, anchor fasting on the floor etc., including primer coat and approved synthetic enamel paint and complete as required. (Note: The Qty is in Running Meter).	600	Mtr.	5000.00	3000000.00
19	Supplying and laying of "B" Class G.I pipe of 50 mm dia including excavation of Soil depth upto 750 mm and refilling the trench with excavated Soil after laying Pipe, ramming, watering, consolidation and making good the surface to original finish and disposal of left out excavated soil away from Airport premises etc. complete as required.				
a)	a) 50 mm Class 'B'	250	Mtr.	500.00	125000.00

Item No.	Description of Items	Qty	Units	Rate	Amount
20	Supplying and laying of "B" Class G.I pipe of 50mm dia, i/c excavation of bituminous/ concrete road/ pavement, excavation of trench of required width for laying of hume pipe, depth upto 800 mm, providing and laying cement concrete of 1:4:8 ratio at bottom (100 mm) of pipe, refilling the trench with soil, ramming, watering, consolidation and making the surface to original finish with PCC of 1:2:4 ratio on top (200 mm) and disposal of left out soil away from Airport premises etc. complete as required. (Location : Road crossing / Interconnection to New Feeder Pillar)				
a)	50 mm Class 'B'	250	Mtr.	650.00	162500.00
21	Supply and fixing of following size HDPE couplers etc., as required as per EIC direction.				
a)	50 mm coupler	100	Nos.	100.00	10000.00
b)	63 mm coupler	20	Nos.	50.00	1000.00
c)	50 mm Elbow coupler	250	Nos.	50.00	12500.00
d)	63 mm Elbow coupler	50	Nos.	50.00	2500.00
SH: II Earthing Works					
1	Providing of earth pits using Copper bonded Earth electrode of 17.2 mm dia, 3 Metres installed vertically as per the site conditions complete and top cover dully backfilled with backfill earth enhancing compound of 25 kgs. along with required masonry chamber, CI Cover outer size of 450mm X 450mm X 10mm including excavation & refilling etc as required.	20	Nos.	20000.00	400000.00
2	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	20	Mtr	600.00	12000.00
3	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	20	Mtr.	300.00	6000.00
4	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with G.I. thimble excavation and re-filling as required.	200	Mtr.	350.00	70000.00
5	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	500	Mtr.	50.00	25000.00
SH-III (IT Related OFC Cable laying Work)					
1	Supply of nominal 63 mm outer dia, PE 100 grade, PN 12.5 rated, SDR - 11 HDPE pipe conforming to IS: 4984:2016 (along with latest amendments) and as directed by Engineer-in-Charge.	750	Mtr	150.00	112500.00
2	Laying of following size permanently lubricated HDPE (high density polyethylene) pipe along with its necessary accessories like coupler, end plugs etc. below the ground (i/c road crossing, cement concrete apron area) at a depth of 3 m to 5 m through horizontal directional derilling etc. complete as required after doing ground penetrating radar survey and submitting its report of the underground utilities as per technical specifications. a) 63 mm outer dia	750	Mtr	1000.00	750000.00
3	Laying of Fiber optic cable in existing / recessed surface / HDPE pipe / open surface / open duct/ cable tray as required.	14000	Mtr.	50.00	700000.00

Item No.	Description of Items	Qty	Units	Rate	Amount
4	Installation, testing & commissioning of steel frame powder coated Floor Standing Rack 9U with front door lockable double toughened glass door or perforated along with 19 inch mounting angles made of formed steel conforming to DIN 41494 or equivalent standard.	1	No.	5000.00	5000.00
SH: IV Miscellaneous Works					
1	Excavation for foundation in soft soil including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 metres.	30	cum	350.00	10500.00
2	Filling available excavated earth (excluding rock) in trenches, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 metres.	30	cum	350.00	10500.00
3	Demolishing cement concrete manually / by mechanical means including disposal of materials within 50 metres lead as per direction of Engineer-in-Charge.	30	cum	3000.00	90000.00
4	Demolishing R.C.C. work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	25	cum	3000.00	75000.00
5	Demolishing brick work manually/ by mechanical means in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	10	cum	2000.00	20000.00
6	Providing and laying in position cement concrete of 1:1.5:3 (1 Cement : 1.5 Coarse sand : 3 graded stone aggregate 20 mm nominal size) derived from natural resources excluding the cost of centering and shuttering - all work upto plinth level.	100	cum	8000.00	800000.00
7	Providing and laying in position cement concrete of 1:2:4 (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20 mm nominal size) derived from natural resources excluding the cost of centering and shuttering - all work upto	100	cum	7000.00	700000.00
8	Providing brick work (in width 225 mm or more) with F.P.S. bricks of class designation 7.5 in cement mortar 1:4 (1 cement : 4 coarse sand) at all levels.	100	cum	6500.00	650000.00
9	Providing 15 mm thick cement plaster with a floating coat of neat cement of mix 1:4 (1 cement : 4 fine sand) at all levels.	200	sq.Mtrs.	400.00	80000.00
10	Construction of brick masonry manhole with F.P.S. bricks of class design 7.5 & cement mortar 1:4, RCC topslab with 1:2:4 mix, foundation concrete 1:4:8 mix inside plastering 12mm thick with cement mortar 1:3 finished with floating coat of neat cement complete as required. (as per standard design) Inside size 1500X1500 mm and 900 mm deep including suitable size C.I. cover with frame.	15	Nos.	20000.00	300000.00
11	Supply and making cable route marker with cement concrete 1:2:4 (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) of size 60cm X 60cm at the bottom and 50cm x 50cm at the top with a thickness of 10cm including inscription duly engraved as required.	100	Nos.	650.00	65000.00
				Total (Excluding GST)	Rs. 1,53,60,650.00

(Rupees One Crore Fifty Three Lakhs Sixty Thousand Six Hundred and Fifty Only)

Note : GST as applicable shall be paid on submission of GST invoice.

एम. कृष्णमूर्ति / M. KRISHNAMOORTHY
 संयुक्त महाप्रबन्धक (अभि-विद्युत)
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 Jt. General Manager(Engg-E)-I
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