



Ref: AAI/TUT/E-E/TUT-61A/2022-23/SH-I/617

दि:/Date:04.08.2022

सेवा में /To

M/s. Fairway Marine Services,
3/118G-1, Shanmugapuram,
Ayyanadaipu, Korampallam (P.O),
Tuticorin-628 004.

**विषय /Sub: "Provision of Solar Powered Obstruction Light atop of
Vallanadu hill at Tuticorin Airport.
SH-I:- Electrical Works."**

Ref: Your e-tender (Financial bid-2022_AAI_117249_1) Opened on 27.06.2022.

महोदय /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 rates quoted by you totalling to **Rs.6,16,500.00 (Rupees Six Lakhs Sixteen Thousand Five Hundred Only)** plus applicable GST which is 18.03% above the estimated cost put to tender of Rs.5,22,346.00 (Excluding GST).
- 2) Jt. General Manager (Engg-Elect.), Airports Authority of India, Tuticorin Airport, Tuticorin – 628 103, shall be the Engineer-in-charge of the work. You are requested to attend the office of the Jt. General Manager (Engg-Elect.), AAI, Tuticorin Airport by **11.08.2022** to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value Rs. 100.00 (Rupees Hundred Only) and cost of the stamp paper shall be borne by you.
- 3) As per clause no. 1A on page no 16 of GCC 2017 of contract document. Please deposit Rs.61,650.00 (Rupees Sixty One Thousand Six Hundred and Fifty 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 16 of GCC 2017 contract document.



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विमानपत्तन निदेशक का कार्यालय भारतीय विमानपत्तन प्राधिकरण, तूतिकोरिन हवाई अड्डा,
तूतिकोरिन-628103

O/o The Airport Director, Airports Authority of India, Tuticorin Airport, Tuticorin – 628103
दूरभाष/TEL: 0461-2271863 फैक्स/FAX:0461-2271110 ई-मेल/E-mail: apd-tuticorin@aai.aero
वैबसाइट/Website: www.aai.aero



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- 4) You are requested to comply with the provisions of Contract Labour (Regulation and abolition) Act of 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971, Child Labour (Prohibition and Regulation) and 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-19 on Page No:-50 of GCC of tender and rules of Central and State Governments.
- 5) You are also directed to contact Jr. Executive/ Asst. Manager/ Manager/ Asst. General Manager (Engg-Elect), AAI, Tuticorin Airport, immediately who will arrange to hand over the site to you.
- 6) Please note that the time allowed for carrying out the work shall be **03 Months** and the same shall be reckoned from the 10th day after issue of this letter (i.e, 14.08.2022).
- 7) Any further correspondence in connection with the contract should normally be addressed to the Engineer-in-charge.
- 8) 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.
- 9) This work order is allotted the number **TUT-61A** which shall be quoted by you for all future correspondence in connection with this work order.

Encl: Schedule of Quantities

भवदिय /Yours faithfully,



H.K. 04/8/22
Jt. General Manager (Engg-Elect.),
For and on behalf of the Chairman,
Airports Authority of India.

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AIRPORTS AUTHORITY OF INDIA
TUTICORIN AIRPORT, TUTICORIN - 628 103

Schedule of Quantities

Name of Work: Provision of Solar Powered Obstruction Light atop of Vallanadu hill at Tuticorin Airport. SH-I:Electrical Works.

Sl. No	Item Description	Qty	Unit	Rate	Amount
1	Design, Fabrication, Supply and Erection at site, a GI lighting tower of 6.00 Mtr height and 150 mm dia of following specifications: a) fabricated from GI sections of maximum 2 mtr B class pipe of 150 mm dia etc. with welded GI flanges for joining of sections and SS bolts suitable for the same of size of minimum M12 x 75 mm b) GI angle support of 40 mm x 5 mm angles for the battery housing for the solar powered aviation warning light to be fixed to the pole through bolted brackets. c) mounting arrangement for the aviation warning light using B class GI pipe of minimum dia. 25 mm or as suitable for the aviation light, flanges and SS bolts suitable for fixing the aviation warning light d) GI coated MS support for the PV panel for the solar powered aviation warning light e) Detachable Climbing brackets made of GI angles of 150 mm length and of 40 mm x 5 mm dimensions provided on the pole at a height of every 0.25 mtr in alternate sides for mounting the pole for maintenance activities f) GI welded bracket suitable for fixing the climbing angle brackets with 2 no. of SS bolts, g) Providing tie rods of GI angle in two sections on either sides using detachable flat and SS bolt arrangement with suitable welded bracket at the top for fixing the GI angle tie rods using SS bolts h) The gusset/base plate of 600 x 600 x 15 mm GI coated MS plate with provision of hole at the center suitable for 150 mm GI pole to facilitate the insertion of the bottom GI pole section, and the same welded at both sides of the plate, provision for fixing 8 nos. anchor bolts of M24 x 400 mm provided as per item no.2 for the foundation and welded GI bracket provision for fixing the tie rods using SS bolts. i) A GI coated MS plate of 200 x 200 x 5 mm shall be welded to the bottom section of the GI pole. All components for the pole shall be GI coated and coated with anti corrosive paint after fabrication and all welded joints shall be welded properly and spot welding shall not be used, and the same shall be as per the drawing attached or of superior design etc. complete as required.	1	Job	75000.00	75000.00
2	Providing foundation suitable for 150 mm dia GI pole of 6 meter height as per item no.1, on levelled surface with 8 nos. of anchor bolts and nuts of zinc coated carbon steel material of size of M24 x 400 mm length of approved make HILTI or equivalent by core cutting in hard rock strata upto a required size and depth and fixing bolt with approved quality grouting material make of HILTI HIT-RE 500V3 EPOXY ANCHOR or equivalent to withstand the site condition. The chemical grouted bolt surface should be finished with powder grouting of Fosroc Conbextra GP2 or equivalent to place the 600mm x 600mm gusset plate of 15mm thickness as per item no.1 (h) on a levelled surface. The total cost includes levelling of surface, procurement of materials for foundation including water, labor charges for foundation work, hiring charges for core cutting machine, power generator of required capacity etc. excluding transportation charges for carrying the materials from foot of the hill to top of hill which shall be considered in item no.3 etc, all complete as per the direction of EIC	1	Job	75000.00	75000.00
	Manpower for transportation of all materials including GI poles, earthing materials, foundation materials for chemical grouting including groutant, anchor bolts, grouting chemicals, tools and plants, including drilling machine, core cutting machine, portable DG sets, water, fire extinguishers, any other materials required at site for carrying out the work, from the bottom of the Vallanadu hill to the top of the hill located at a height of approx. 320 meter, by traversing a distance of not less than 3 km by foot on non-motorable rocky road.	1	Job	200000.00	200000.00



4	Supply and fixing of 1.0 mtr long 14 mm dia copper bonded air terminal with stainless steel base plate confirming to the standards as per the IEC 62305.	1	Job	2300.00	2300.00
5	Supplying & laying of 70.00 sq.mm single core multistranded unarmoured PVC insulated PVC sheathed copper down conductor cable from air terminal/ body earthing up to earth pit i/c all accessories like insulated saddles/clamps for securing the down conductor cable at every 1 mtr, providing terminations etc complete as per specifications and as required.	10	Meter	1500.00	15000.00
6	Supply and fixing of 8 mm Copper bonded steel conductor to connect the equipment body viz. PV Panel, aviation light, pole, battery housing with the earth bus bar, the conductor shall be conforming to the requirements as per IEC 62305 and tested as per IEC 62561-2 standard, the conductor shall be UL listed, including providing of insulated clamps for securing the bonding conductor every 1 meter.	24	Meter	1550.00	37200.00
7	Supply and fixing of 250 mm x 25 mm x 3 mm copper earth bus bar on the GI lighting pole including insulated clamps for connecting the bus bar and to terminate the bonding cable from the PV panel, aviation light, battery box, pole, etc complete as required at a height of 1 meter above the ground.	1	Job	2000.00	2000.00
8	Supply, installation, testing and commissioning of earth mat of 3 meter x 3 meter at a depth of 0.5 meter using 8 mm Copper bonded steel conductor in a 3 x 3 grid/mesh network of each cell of dimension 1 meter x 1 meter conforming to the requirements as per IEC 62305 and tested as per IEC 62561-2 standard, UL listed conductor, including providing of GEM (Ground Enhancement Materials) bags for Earth Mat conductor coating using minimum 6 nos of GEM bags of minimum 11 kg/ bag, tested as per IEC 62561-7 and shall have a resistivity value of less than 0.02 ohm-m and in compliance with IEEE 80 clause 14.5.d., providing CADWELD PLUS T and X joints or equivalent using the exothermic welding technique at every corner/ T joints / X joints of the earth mat as per the drawing attached in the NIT, including the termination of the down conductor from the air terminal and the bonded conductor from the Earth bus bar at 0.5 meter below, the connections shall be tested as per IEEE 837, 2014 and inline with the requirements as per IEEE 80, with provision for minimum 1 no. DCP fire extinguishers of 10 kg fire extinguisher material and 1 no. minimum 6.8 kg CO2 fire extinguisher for ensuring fire safety during execution of work etc. complete as per specifications.	2	Job	130000.00	260000.00
				Total	666500.00
				Less Discount(LS)	50000.00
				Grand Total Rs.	6,16,500.00

(Rupees Six Lakhs Sixteen Thousand Five Hundred Only [w/o GST])



Handwritten signature: N. J. 04/08/20
Jt. General Manager (Engg-Elect.)
AAI/ Tuticorin Airport.