



भारतीय विमानपत्तन प्राधिकरण

AIRPORTS AUTHORITY OF INDIA

No. AAM/ENGG/ELEC/AMED-I/902/3/2022-23/A-29

Date: 26.08.2022.

M/s Vardhman Airport Solutions Private Limited,
13/C and 13/3, First Floor and Second Floor,
Plot No. 13, Industrial Area, Najafgarh Road,
New Delhi - 110 015.

Name of Work : Construction of 2 Nos. Rapid Exit Taxiways (RET) for the Main Runway 07/25, U Taxi, Link Taxi's adjacent to C Taxi & F Taxi and straightening of B-Taxiway as parallel Taxi Track suitable for Code-E Aircraft at Chennai International Airport, Chennai. SH: Balance GLF works.

Ref : Tender ID: 2022_AAI_118880_1

Dear Sir(s),

1. Your e-tender for the above mentioned work has been accepted by the Competent Authority on behalf of the Chairman, Airports Authority of India, at the item rates quoted by you totaling to ₹ 1,11,40,350.00 (Rupees One Crore Eleven Lakhs Forty Thousand Two Hundred and Fifty Only) excluding GST which is 25.41% (Twenty-Five Decimal Four One) below the Estimated cost of ₹ 1,49,35,882.00 excluding GST put to tender.
2. Deputy General Manager (Engg-Elect.) - IV, AAI, Chennai Airport, Chennai - 600 016 shall be the Engineer-in-Charge of the work. You are requested to attend to the office of Deputy General Manager (Engg-Elect.) - IV, AAI, Chennai Airport by 05.09.2022 to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value ₹ 100.00 (Rupees One Hundred only) and the cost of the stamp paper shall be borne by you.
3. Please deposit an amount of ₹ 11,14,035.00 (Rupees Eleven Lakhs Fourteen Thousand and Thirty-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 Clause 1A on Page GCC 16 of Contract Document.
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 and Minimum Wages Act and Rules there of Central and State Governments.
5. Please note that the time allowed for carrying out the work shall be 18 (Eighteen Months) and the same shall be reckoned from the 10th day of issue of this award letter.

फैक्स: 044 - 2256 0008 ई पी ए बी एक्स: 2256 0551, चेन्नई हवाई अड्डे, चेन्नई - 600 016
Fax: 044 - 2256 0008 EPABX: 2256 0551, Chennai Airport, Chennai - 600 016



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6. You are also directed to contact Asst. Gen. Manager Engg. (Elect.), Airport Maintenance Electrical Division-I, Airports Authority of India, Operational Offices, Chennai Airport immediately for the execution of the above mentioned work
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.

Yours faithfully,

(A. Mariappan)

Deputy General Manager (Engg - Elect.) - IV,
For and on behalf of the Chairman,
Airports Authority of India.

Encl: Schedule of Work



AIRPORTS AUTHORITY OF INDIA
CHENNAI AIRPORT
CHENNAI

SCHEDULE OF WORK

Name of Work: Construction of 2 Nos. Rapid Exit Taxiways (RET) for the Main Runway 07/25, U taxi, link taxi's adjacent to C taxi & F taxi and Straightening of B-Taxiway as parallel Taxi Track suitable for Code-E aircraft at Chennai International Airport, Chennai. SH: Balance GLF works.

Sl.No.	Description of Items	Qty	Unit	Rate	Amount
	SH-I : Supply of AFL Cables				
1	Supply of 2 x 25 mm ² 5KV grade XLPE insulated and PVC sheathed Armoured Aluminium conductor cable conforming to IS 7098 (Part-II) - 2011 with upto date amendments and as specified in technical specifications etc. complete as required.	7000	Mtr	277.00	1,939,000.00
2	Supply of Single Core 6.0 mm ² 5KV grade stranded copper conductor XLPE insulated, PVC sheathed, unshielded, anti-termite and anti-rodent treated airport lighting cable generally conforming to IS 7098 (Part-II) - 2011 with upto date amendments and as specified in technical specifications etc. complete as required.	2000	Mtr	84.00	168,000.00
	SH II : Supply of Isolating Transformers, MS Housing Boxes etc.				
3	Supply of 10W, 6.6A/6.6A Isolating Transformers of 5KV 50Hz, ICAO/FAA certified PCP encapsulated isolating transformer suitable for individual series lamps airport lighting circuits and shall be designed for water proof and suitable for direct burial in the earth or installation in a MS housing box etc. complete as required and as per the technical specifications.	40	Each	2792.00	111,680.00
4	Supply of 6 mm ² 5KV grade plug & suitable receptacle of type-1, class B, Esna connector (Male & Female) suitable for field attachment with 5kV grade PVC insulated PVC sheathed single core 6 sq.mm copper conductor cable as required.	100	Set	347.00	34,700.00

Sl.No.	Description of Items	Qty	Unit	Rate	Amount
5	Fabrication & Supply of MS Transformer Housing Box of size 330x330x300 mm, made out of 8mm thick MS sheet on four sides and bottom, 10mm thick MS sheet for top cover having clear hole of 216 mm dia with 6 Nos. M10 size threaded holes on the top for fixing of fixture base plate; 01 No. 25 mm dia drain hole in bottom and entry hole on two/three/four sides suitable to receive 40/50/63mm dia of GI/HDPE pipe entry for incoming and outgoing cables, Two Nos. cadmium plated earthing bolts with nuts and washers etc. including painting with one coat of red oxide paint and two coats of black enamel paint finish etc., as required.	60	Each	4752.00	285,120.00
6	Fabrication & Supply of MS Rectangular Transformer Housing Box of size 750x400x330 mm, made out of 8mm thick MS sheet on four sides and bottom, 10mm thick MS sheet for top cover with 8 Nos. M-10 size threaded hole, 1 No. 25mm dia drain hole at the bottom and suitable holes to enable entry of 40/50/63/90mm dia GI/HDPE pipe and secondary leads, (2 Nos. partition plates of 200mm high inside the box made of 8mm thick MS Sheet) with rubber gaskets for top cover, two nos. cadmium plated earthing bolts with nuts etc. including painting with one coat of red oxide paint and two coats of black enamel paint finish etc., as required.	30	Each	11737.00	352,110.00
	SH III : Supply & Laying of GI/HDPE pipes, ITC etc.				
7	Supply and laying of 50 mm dia (OD) PN 6, PE 80 of HDPE pipe (SDR 17) ISI marked conforming to IS:4984 along with all its necessary accessories like couplers etc. in shoulder/runway/taxiway/apron by groove cutting machine on bitumen / concrete surface to a suitable depth, chipping the slot with hammering machine i/c jointing of pipe & filling the gaps with bitumen /cement concrete and making good the surface matching with original finish etc., as required and as per the instruction of Engineer-in-charge.	2500	Mtr	352.00	880,000.00
8	Supply and laying of 90 mm dia (OD) PN 6, PE 80 of HDPE pipe (SDR 17) ISI marked conforming to IS:4984 along with all its necessary accessories like couplers etc. in shoulder/runway/taxiway/apron by groove cutting machine on bitumen / concrete surface to a suitable depth, chipping the slot with hammering machine i/c jointing of pipe & filling the gaps with bitumen /cement concrete and making good the surface matching with original finish etc., as required and as per the instruction of Engineer-in-charge.	1200	Mtr	569.00	682,800.00



Sl.No.	Description of Items	Qty	Unit	Rate	Amount
9	Laying of 40mm 'B' Class GI Pipe in shoulder/runway/taxiway/apron i/c machine cutting for connecting Transformer housing boxes/between transformer housing box by groove cutting machine on bitumen /concrete surface of suitable size, chipping the slot with hammering machine, jointing of pipes by couplers (including supply also) and filling the gaps with bitumen / cement concrete and making good the surface matching with original finish etc., as required and as per the instruction of Engineer-in-charge.	2000	Mtr	330.00	660,000.00
10	Supply and laying of 63 mm dia (OD) PN 6, PE 80 of HDPE pipe (SDR 17) ISI marked conforming to IS:4984 along with all its necessary accessories like couplers etc., directly in ground at a depth of 0.9Mtr depth including excavation and refilling the trench but excluding sand cushioning and protective covering etc., as required.	3500	Mtr	209.00	731,500.00
11	Supplying and laying of one number additional 63 mm dia (OD) PN 6, PE 80 of HDPE pipe (SDR 17) ISI marked conforming to IS:4984 along with all its necessary accessories like couplers etc., directly in ground at a depth of 0.9Mtr depth in the same trench in one tier horizontal formation including excavation and refilling the trench but excluding sand cushioning and protective covering etc., as required.	3500	Mtr	154.00	539,000.00
12	Installation of MS Transformer housing box of size not less than 330mm X 330 mm X 300 mm in runway/taxiway shoulder by cutting of bitumen/concrete area including providing 75mm thick cement concrete 1:2:4 all around and bottom of the transformer housing box with required slope to level of runway/taxiway all around the housing box with the bitumen surface and plastering of exposed surface with cement mortar 1:4 of thickness 12 mm over the concrete surface including painting top of MS box and lettering & numbering in a base of suitable colour with one coat of zinc chromate primer and two coats of poly urethane paint etc. after installation complete as required.	60	Each	2200.00	132,000.00
13	Installation of Rectangular Transformer Housing box of size 750x400x330 mm in runway/taxiway shoulder by cutting of bitumen/concrete area including providing 75mm thick cement concrete of ratio 1:2:4 on all around the transformer housing box with required slope on the top and plastering of exposed surface with cement mortar 1:4 of thickness 12 mm over the concrete surface including painting top of MS box and lettering & numbering in a base of suitable colour with one coat of zinc chromate primer and two coats of poly urethane paint etc., after installation complete as required.	30	Each	4950.00	148,500.00

Sl.No.	Description of Items	Qty	Unit	Rate	Amount
14	Laying of one number XLPE/PVC insulated & PVC sheathed armoured / unarmoured aluminium / copper conductor AFL / power cable of voltage grade exceeding 1.1 KV but not exceeding 5 KV of size not exceeding 25 sq. mm. in the cable duct / masonry trench / runway/taxiway crossings/ RCC / HUME / METAL / GI / HDPE pipes etc., as required.	9000	Mtr	17.00	153,000.00
15	Laying of 2C x 4 sq. mm Secondary leads of 1.1KV grade in existing GI/HDPE pipe as required.	1000	Mtr	17.00	17,000.00
16	Installation, Testing and commissioning of elevated type runway Edge/ End/ Threshold/ Guard Lights/ Taxiway lights fittings (Halogen/LED) fitting on the existing transformer housing boxes including installation of transformer, crimping/ joining of connector kit, covering with HT insulation tape over which PVC tape is to be wound etc., i/c supply and fixing of gaskets, nuts bolts and other accessories i/c alignment, levelling, earth connection etc. complete as required.	150	Each	220.00	33,000.00
17	Supplying and laying of 25mm dia ISI marked 'B' class GI pipe and accessories for taking secondary lead from inset fittings to the transformer housing box installed outside the runway shoulder by groove cutting the concrete/bitumen runway at a required depth to match the cable entry hole of inset fitting shallow base and width to accommodate the pipe including smooth bending of pipe as per requirement, chipping the slot, alignment and fixing the pipe including connecting to inset light shallow box using coupling/connectors etc., as per requirement, closing the slot with cold bituminous mix road bond (Hincol make or equivalent) (i/c supply) to match the existing runway level etc., after applying rapid emulsion (RS 1) complete as required.	600	Mtr	469.00	281,400.00
18	Installation of Inset light fittings including fixing of inset light housing box in the concrete/bitumen surface by core cutting the concrete / bitumen surface with suitable core cutting machine tool for the required size for fixing the shallow box, alignment of the box to match the runway surface, fixing it using Dobefil compound with hardener, supply and fixing of factory made two pin secondary plug assembly on one side of the secondary lead for connecting to isolation transformer and receptacle assembly on other side for connecting to inset light fitting, making all electrical connections, fixing the top assembly to the shallow box, making good the surface to the original shape and strength, testing and commissioning of the whole inset fittings etc., complete as required.	4	Each	6050.00	24,200.00



Sl.No.	Description of Items	Qty	Unit	Rate	Amount
19	Supply of internally illuminated LED based Mandatory/ Information Guidance sign boards of various sizes made out of 4mm thick glare free polycarbonate sheet at front facia and 2mm thick anodised aluminium structure on other five sides with sufficient No. of 50mm dia 5.5mm thick aluminium legs with frangible couplings. Front facia shall be covered with 4mm thick non-specular glare free polycarbonate sheet having the required details (letters & symbols) screen printed on self adhesive film of 3M make and pasted on the inside of the polycarbonate sheet. The depth of the sign board shall not be less than 150mm. Sign board shall be uniformly internally illuminated with adequate number of LEDs assembled on aluminium PCB of minimum 2mm thickness and suitable length and width and LEDs shall be 0.5W and shall have not less than 50,000 burnig hours installed vertically with a spacing of LED strips (PCB) not more than 160mm with suitable rated power converter to achieve required illumination level stipulated in particular specification and suitable for operation on airfield series circuit input source of 2.8A-6.6A and shall have constant brightness for all current variation without flickering with all other accessories etc., complete as required conforming to ICAO/FAA requirements and as per the technical specifications.	20	Sqm	31460.00	629,200.00
20	Installation, Testing and commissioning of Airport operational Mandatory / Information guidance signboards having 2 legs of various sizes by providing suitable strength Cement Concrete with cube of minimum size 300x300x300mm with foundation bolts of minimum length 250mm & nuts with spring washer of SS 304 grade of suitable size as approved by Engineer-In-Charge complete as required.	15	Each	5500.00	82,500.00
21	Installation, Testing and commissioning of Airport operational Mandatory / Information guidance signboards having 3 legs of various sizes by providing suitable strength Cement Concrete with cube of minimum size 300x300x300mm with foundation bolts of minimum length 250mm & nuts with spring washer of SS 304 grade of suitable size as approved by Engineer-In-Charge complete as required.	20	Each	8250.00	165,000.00
22	Installation, Testing and commissioning of Airport operational Mandatory / Information guidance signboards having 4 legs of various sizes by providing suitable strength Cement Concrete with cube of minimum size 300x300x300mm with foundation bolts of minimum length 250mm & nuts with spring washer of SS 304 grade of suitable size as approved by Engineer-In-Charge complete as required.	15	Each	11000.00	165,000.00



Sl.No.	Description of Items	Qty	Unit	Rate	Amount
	SH IV : Earthing and other Misc works etc.				
23	Supply of Earth Electrodes, 17.2mm dia. exothermic welded copper bonded rod 17.2mm dia, 3 mtr. long with terminal size 32x10mm with 50 Kg. of backfill earth enhancing compound and one No. of heavy duty plastic cover inspection chamber. Base metal shall be IS marked branded MS Rod and with all other accessories. Excavation of pit, Installation of Earth Electrodes of 3m long, 17.2mm dia. copper bonded rod and backfilling the pit with 50 Kgs. Of backfil earth enhancing compound and finished with fixing heavy duty plastic inspection chamber complete etc., as required. Testing, measuring and commissioning the earth pit as required.	10	Each	8195.00	81,950.00
24	Providing and fixing 25 x 5 mm GI Strip in 40 mm. dia. G.I. Pipe from earth electrode including connection with GI nut, bolt, spring washer, excavation and refilling etc., as required.	300	Mtr	606.00	181,800.00
25	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc., as required.	200	Mtr	260.00	52,000.00
26	Providing and Fixing 6 SWG dia G.I. wire for loop earthing along with existing cable as required.	5000	Mtr	19.00	95,000.00
27	SITC of outdoor type sloped top feeder pillar box made of 14 SWG MS sheet of size 18"x18"x8" suitable for 5KV, with hinged door, locking arrangement with cable entry holes mounted on 1 No. 2" dia. GI pipe of 150 mm length with breakable coupling with 10mm thick MS base plate i/c providing 75mm thick cement concrete 1:2:4 all around feeder pillar box (upto 1 mtr from the feeder pillar box on four sides), plastering of exposed surface, termination etc., painting the box with 2 coats of poly urethane paint of suitable colour along with initial coat of zinc chromate primer etc., as required.	10	Each	14955.00	149,550.00
28	Removal of old isolation transformer housing boxes from different locations in runway/taxiway/edge area after dismantling of all round concrete foundation, refilling of excavated concrete runway portion with cement concrete and or suitable quick setting sealant upto existing level of runway and matching with runway surface, making good the runway/taxiway to the original shape and strength, removal of all the debris from site, transportation of fittings to AAI store, stacking etc., as per the direction of Engineer in Charge complete as required.	50	Job	1100.00	55,000.00
29	Dismantling of HIRL/MIRL fixtures on the existing runway/taxiway circuit etc., with all its accessories and transportation of fittings to AAI store, stacking etc., as per the direction of Engineer in Charge complete as required.	50	Each	220.00	11,000.00

Sl.No.	Description of Items	Qty	Unit	Rate	Amount
30	Dismantling of existing AFL cables from field/site and transportation of dismantled AFL to AAI store, stacking etc., as per the direction of Engineer in Charge complete as required.	2000	Mtr	17.00	34,000.00
31	Supply and making straight through cable joint with 11KV grade heat shrinkable cable jointing kit including ferrules and other jointing materials for PVC / XLPE insulated PVC sheathed armoured Aluminium conductor AFL cable of 5 KV grade and of size 2C 25 Sq.mm etc., as required.	4	Each	4785.00	19,140.00
32	Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) to make platform and plastering around the installed sign board and in foundation of PAPI, Checking stick points, chambers, trenching for cable/pipe laying, junction boxes etc., including formwork etc., as per the direction of Engineer-in-charge as required.	220	Cum	5500.00	1,210,000.00
SH-V: SITC of PAPI etc.					
33	Supply of PAPI (Precision Approach Path Indicator) 3 light channelled (containing four identical units, 01 Set of 4 units) ready for installation, current powered system suitable for 6.6A series current system including checking stick, checking stick base, clinometer, tool kit and along with all accessories such as 6.6A bi-pin halogen lamp assembly, red filters, lenses, lamps, adjustable legs with breakable couplings, spreader assembly, reflectors and holders, secondary leads of length 5 mtrs with plugs, dust proof housing with air filters, installation template frame, etc., confirming to the specifications of ICAO Annex-14 and Aerodrome design Manual Part-IV with up to date amendments complete as required. (Make: AMA Model: Mk-III)	1	Set	564300.00	564,300.00
34	Installation, Testing & Commissioning of 01 set of PAPI unit (04 Nos.) (Make: AMA) including provision of concrete foundation of ratio 1:2:4, SS foundation bolts and nuts of grade SS 304, provision of checking stick base points with foundation etc. including levelling, secondary lead connection from isolating transformer etc., ground calibration and submission of test report involving the OEM authorised Engineer to complete the job as per specification, compliance with annexure 14 of ICAO and satisfaction of Engineer-In-charge etc. complete as required.	5	Job	22000.00	110,000.00
35	Dismantling of existing PAPI fittings (1 set of 4 units) from the foundation bolts including legs, filters, isolation transformers etc., shifting to AAI store as directed by the Engineer-In-Charge.	4	Job	1100.00	4,400.00

Sl.No.	Description of Items	Qty	Unit	Rate	Amount
	SH-VI: DSR ELECTRICAL - 2018				
36	Execution of works as per CPWD DSR-2018 (Electrical) schedule of rates and specification for amount of Rs. 5,00,000/- as and when required during contract period. Rates for the items under DSR shall be taken as under: Item rate as per DSR-2018 = X Basic rate (on which percentage above or below to be quoted)= $Y = X / 1.1405$ (ex. GST) Example: if rate of an item as per DSR-2018 = Rs. 114.05 Basic rate (on which percentage above or below to be quoted) = $114.05 / 1.1405 = \text{Rs. } 100/-$ If contractor is quoting Rs. 4,50,000/- against Rs. 5,00,000/- i.e., 10% below it means Rs. 90/- (ex GST) shall be paid for that item against Rs. 114.05 (as per DSR-2018)	1	Job	357500.00	357,500.00

Total ₹ ₹ 11,140,350.00

Rupees One Crore Eleven Lakhs Forty Thousand Three Hundred and Fifty Only

Note: GST extra as applicable



(A. Mariappan)

Deputy General Manager(Engg.-Elect.)-IV

Signature Not Verified

Digitally signed by RAGHURAMA REDDY
DODDA
Date: 2022.12.15 16:55:47 IST
Location: eProcurement System for
Central PSUs