



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

No. AAI/CA/AMED-VII/ NPH /2021-22/A- 21⁻¹⁻

Date: 09.12.2021.

To

M/s. Chennai Engineering Services.,

Plot 30, Door No.1-536, Krishna Nagar,

1st Street, Manapakkam,

Chennai - 600 125.

Sub: Trans-Installation and SITC of Sub-Station Equipments in proposed New Power House at Chennai Airport.

Ref: e- Tender ID: 2021_AAI_82113_1

e- Tender Ref. No.: AAI/CHE/AMED-VII/2021/03.

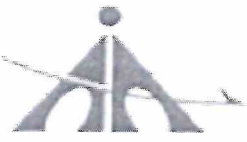
Dear Sir (s),

1. Your E-tender for the above mentioned work is hereby accepted on behalf of the Chairman, Airports Authority of India, at the item rates quoted by you totaling to **Rs. 2,59,27,167.00** (Rupees Two Crore Fifty Nine Lakhs Twenty Seven Thousand One Hundred and Sixty Seven Only) which is 31.06% below the estimated Cost of **Rs. 3,76,07,082.00** (Rupees Three Crore Seventy Six Lakhs Seven Thousand and Eighty Two Only). The amount is inclusive of all the taxes, duties, levies and octroi etc., Excluding GST which will be paid at actual.
2. Joint General Manager (Engg-Elect)-I, AMED, Operational Office, Airports Authority of India, Chennai Airport, Chennai - 600 016 shall be the Engineer-In-Charge of the work. You are requested to attend to the Office of Joint General Manager (Engg-Elect)-I, AMED AAI, Chennai Airport by **20.12.2021** 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. The earnest money deposit is not applicable in the above e- Tender. You are requested to submit Bank Guarantees for an Amount of **Rs. 25,92,717/-** (Rupees Twenty Five Lakhs Ninety Two Thousand Seven Hundred and Seventeen Only) is to be deposited by you 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 of General Conditions of Contract.
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 thereof Central and State Governments.
5. You are also directed to contact the Joint General Manager (Engg-Elect)-I, Airport Maintenance Electrical Division, Operational Office, Airports Authority of India, Chennai Airport or his Authorised representative immediately for who will arrange to hand over site to you.

Contd... 2

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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AIRPORTS AUTHORITY OF INDIA

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6. Please note that the time allowed for carrying out the work shall be **6 (Six) Months** which shall be reckoned from the 10th day of issue of this letter
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,

-Sd/-

(G.N.D. Kennedy)
Joint General Manager (Engg - Elect)-I,

Encl: Schedule of Quantity (Page no. 1 to 10).

Copy to:

EXTERNAL:

1. The Commercial Tax Officer, Chennai – 600 006.
2. The Income-Tax Officer, Chennai – 600 034.
3. The Regional Labour Commissioner, Chennai – 600 006.
4. Uploading online portal of mem.epfindia.gov.in

INTERNAL:

1. Airport Director, AAI, Chennai Airport, Chennai.
2. The General Manager (Engg. - Elect), Chennai Airport.
3. The General Manager (F&A), with ref. to FC/ EE /21-22/170, Dated: 01.12.2021.
4. The Joint General Manager (Vigilance), SR, Chennai Airport.
5. The Asst. General Manager (Engg. - Elect) - AMED-VII.
6. The Asst. General Manager (Engg. - Elect) - Planning,
7. Agreement.
8. Award Letter File.

(G.N.D. Kennedy)
Joint General Manager (Engg - Elect)-I,
For and on behalf of the Chairman,
Airports Authority of India.

SCHEDULE OF QUANTITY

Name of Work : Trans-Installation and SITC of Sub-Station Equipments in proposed New Power House at Chennai Airport.

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
1.00	SH-I : SUPPLY of Sub Station Equipments				
1.01	Supply of 1000 KVA, 11/0.433 KV, Z-5%, 3 Phase 50 HZ, Dyn11 vector Group, winding temperature indicator/Controllor, Indoor ONAN type with transformer impedance as per IS, copper wound transformer with OFF load tap changer arrangement on HV Side in steps of +/- 2.5%, +/-5% & +/-7.5%, having cable end boxes on HV Side Suitable for 3 Core X 185 Sq.mm XLPE Cable of 11 KV Grade and 2000 Amps bustruncking arrangement on LV Side complete with all accessories i/c first fill of filtered dehydrated oil and confirming to IS 1180 Level 2 with upto date amendment and confirming to transformers losses of level II etc complete as required and as per mentioned in technical specification.	1.00	Job	18,99,999.00	18,99,999.00
2.00	Fabrication and supply of cubical type LT Panel - tested design as per IEC 61439-1 & 2 suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply, made out of 1.6 mm thick CRCA sheet steel/GI Sheet for frame work and covers, 3 mm thick for gland plates, dust tight, vermin proof, totally enclosed, Form 4b compartmentalised design, floor mounting, free standing, extensible on both sides i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 2000 Amps capacity FP Aluminium bus bars of high conductivity, DMC/SMC bus bar supports with short circuit withstand capacity of 50 KA for 1Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 50 mm x 5 mm at the rear with 2 nos earth stud, solid connections from main bus bars to switch gears with required size of Aluminium bus bars and control wiring with 2.5 Sq.mm. FRLS PVC insulated copper conductor cable, cable alleys, cable gland plates in two half and suitable for indoor operation, complete with all accessories, interconnection, earthing, alignment with the bus ducts etc., as required and comprising of following switch gears: (Non Essential Panel)				
2.01	Incoming				
2.02	Two No. 1600 A, 50KA (Ics=Icu), Four Pole, EDO type Moulded case design ACB as INCOMER conforming to IEC 60947-2:2003 as amended up-to-date with LCD display, inbuilt Metering, Overcurrent, Short circuit & Earth fault Protection with variable current & time delay setting, Instantaneous protection, current demand & phase to neutral voltage on display, % loading of each phases on LED/LCD bar graphs, with Microprocessor Based Releases and provided with separate suitable rated Cast Resin CTs with Digital Multifunction Meter having RS 485 port, shunt trip coil 220 V AC, Auxiliary power unit, LED Phase Indication Lamps along with 2 Amps control MCBs as backup protection, Breaker ON/ OFF/ TRIP/ Spring Charge LED indicating lights along with control MCBs as per standard practice, Mechanical/ Electrical Interlocking arrangement between the incomers & bus coupler along with interlocking relays, mechanical lock & keys etc. i/c Control MCBs, control terminals & wirings as required.				
2.03	Outgoing:-				
2.04	Two No. 800 A, 50KA (Ics=Icu), Four Pole, EDO type moulded case design ACB as OUTGOING conforming to IEC 60947-2:2003 as amended up-to-date with LCD display, inbuilt Metering, Overcurrent, Short circuit & Earth fault Protection with variable current & time delay setting, Instantaneous protection, current demand & phase to neutral voltage on display, % loading of each phases on LED/LCD bar graphs, with Microprocessor Based Releases and provided with separate suitable rated Cast Resin CTs with Digital Multifunction Meter having RS 485 port, shunt trip coil 220 V AC, Auxiliary power unit, Breaker ON/ OFF/ TRIP/ Spring Charge LED indicating lights along with control MCBs as per standard practice etc. i/c Control MCBs, control terminals & wirings etc. as required.				
2.05	Four No. 630 A, 50KA (Ics=Icu), Four Pole, EDO type moulded case design ACB as OUTGOING conforming to IEC 60947-2:2003 as amended up-to-date with LCD display, inbuilt Metering, Overcurrent, Short circuit & Earth fault Protection with variable current & time delay setting, Instantaneous protection, current demand & phase to neutral voltage on display, % loading of each phases on LED/LCD bar graphs, with Microprocessor Based Releases and provided with separate suitable rated Cast Resin CTs with Digital Multifunction Meter having RS 485 port, shunt trip coil 220 V AC, Auxiliary power unit, Breaker ON/ OFF/ TRIP/ Spring Charge LED indicating lights along with control MCBs as per standard practice etc. i/c Control MCBs, control terminals & wirings etc. as required.				

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
2.06	Six Nos. 400 A, 50 KA, Four Pole MCCB (Ics=Icu) with inbuilt O/L and S/C fault Protection with microprocessor based release and provided with three nos. Cast resin of suitable rating CTs with digital Multifunction Meter having RS 485 port, ON/OFF/TRIP LED indication lamp along with control MCBs as per Standard practice etc. as required.				
2.07	Four Nos. 250 A, 36 KA, Four Pole MCCB (Ics=Icu) with inbuilt O/L and S/C fault Protection with microprocessor based release and provided with three nos. Cast resin of suitable rating CTs with digital Multifunction Meter having RS 485 port, ON/OFF/TRIP LED indication lamp along with control MCBs as per Standard practice etc. as required.				
2.08	Four Nos. 100 A, 36 KA, Four Pole MCCB (Ics=Icu) with inbuilt O/L and S/C fault Protection with microprocessor based release and provided with three nos. Cast resin of suitable rating CTs with digital Multifunction Meter having RS 485 port, ON/OFF/TRIP LED indication lamp along with control MCBs as per Standard practice etc. as required.				
2.09	Bus Couplers:-				
2.10	01 No. 1600 Amps each Four Pole horizontal draw out EDO type Modular Air circuit breaker of fault breaking capacity 50 KA (Ics=Icu) fitted with in built metering, interlocked door, automatic safety shutter, Mechanical ON/OFF and service/ test/ isolation position indicators and frame earthing contact, conforming to IEC 60947-2:2003 as amended up-to- date, Breaker ON/ OFF/ TRIP/ Spring Charge LED indicating lights along with control MCBs as per standard practice including suitable size Adopter Chamber in the first part to attach with the second part etc., as required.				
2.11	Busbar:				
2.12	One Set of FP Aluminium Bus Bars of minimum of 2000 A Capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bar cross section supports & their spacing etc. for meeting fault level of 50 KA for 1 Sec with adequate size aluminium busbar for interconnection of incomer and outgoing switchgears and 50x5mm copper earth strip etc, as required.				
2.13	Interlocking: Electrical Interlocking through advance contacts in ACB's (incomer & Bus coupler) and mechanical interlocking should also be to ensure that only one supply is available at a time on each section of bus and to eliminate any possibility of accidentally approaching two supply at one bus section.				
2.14	All as above 2.01 to 2.13	1.00	Job	32,79,999.00	32,79,999.00
3.00	Fabrication and supply of cubical type LT Panel - tested design as per IEC 61439-1 & 2 suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply, made out of 1.6 mm thick CRCA sheet steel/GI Sheet for frame work and covers, 3 mm thick for gland plates, dust tight, vermin proof, totally enclosed, Form 4b compartmentalised design, floor mounting, free standing, extensible on both sides i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 1000 Amps capacity FP Aluminium bus bars of high conductivity, DMC/SMC bus bar supports with short circuit withstand capacity of 50 KA for 1Sec., bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 50mm x 5 mm at the rear with 2 nos earth stud, solid connections from main bus bars to switch gears with required size of Aluminium bus bars and control wiring with 2.5 Sq.mm. FRLS PVC insulated copper conductor cable, cable alleys, cable gland plates in two half and suitable for indoor operation, complete with all accessories, interconnection, earthing, alignment with the bus ducts etc., as required and comprising of following switch gears: (Essential Panel)				
3.01	Incoming:				
3.02	Two No. 800 A, 50KA (Ics=Icu), Four Pole, EDO type Moulded case design ACB as INCOMER conforming to IEC 60947-2:2003 as amended up-to- date with LCD display, inbuilt Metering, Overcurrent, Short circuit & Earth fault Protection with variable current & time delay setting, Instantaneous protection, current demand & phase to neutral voltage on display, % loading of each phases on LED/LCD bar graphs, with Microprocessor Based Releases and provided with separate suitable rated Cast Resin CTs with Digital Multifunction Meter having RS 485 port, shunt trip coil 220 V AC, auxiliary power unit, LED Phase Indication Lamps, Circuit along with 2 Amps control MCBs as backup protection, breaker ON/OFF/TRIP/Spring Charge LED indicating lights along with control MCBs as per standard practice, Mechanical/ Electrical Interlocking arrangement between the incomers & bus coupler along with interlocking relays, mechanical lock & keys etc. i/c Control MCBs, control terminals & wirings as required.				
3.03	Outgoing:-				
3.04	Six Nos. 400 A, 50 KA, Four Pole MCCB (Ics=Icu) with inbuilt O/L and S/C fault Protection with microprocessor based release and provided with three nos. Cast resin of suitable rating CTs with digital Multifunction Meter having RS 485 port, ON/OFF/TRIP LED indication lamp along with control MCBs as per Standard practice etc. as required.				

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
3.05	Four Nos. 250 A,36 KA, Four Pole MCCB (Ics=Icu) with inbuilt O/L and S/C fault Protection with microprocessor based release and provided with three nos. Cast resin of suitable rating CTs with digital Multifunction Meter having RS 485 port, ON/OFF/TRIP LED indication lamp along with control MCBs as per Standard practice etc. as required.				
3.06	Four Nos. 100 A,36 KA, Four Pole MCCB (Ics=Icu) with O/L and S/C fault Protection with Adjustable Thermal and Adjustable Magnetic Releases and provided with three nos. Cast resin of suitable rating CTs for digital Multifunction Meter having RS 485 port, ON/OFF/TRIP LED indication lamps along with control MCBs as per standard practice etc. as required				
3.07	Two Nos. of Three Phase Surge Protection Device (SPD) having 100KA 10/350 micro seconds neutral to earth, 50 KA 10/350 micro sec line to neutral, with limiting voltage less than 1.5 KV shall be connected on the mains power entry point at the incomers & shall be of modular type.				
3.08	Bus Couplers:				
3.09	One No 800 Amps each Four Pole horizontal draw out EDO type Modular Air circuit breaker of fault breaking capacity 50 KA (Ics=Icu) fitted with in built metering, interlocked door, automatic safety shutter, mechanical ON/OFF and service/ test/ isolation position indicators and frame earthing contact, conforming to IEC 60947-2:2003 as amended up-to- date, Breaker ON/ OFF/ TRIP/ Spring Charge LED indicating lights along with control MCBs as per standard practice including suitable size Adopter Chamber in the first part to attach with the second part etc., as required.				
3.10	Busbar:				
3.11	One Set of FP Aluminium Bus Bars of minimum of 1000 A Capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bar cross section supports & their spacing etc. for meeting fault level of 50 KA for 1 Sec with adequate size aluminium busbar for interconnection of incomer and outgoing switchgears and 50x5mm copper earth strip etc, as required.				
3.12	Interlocking : Electrical through advance contacts in ACB's (incomer & Bus coupler) and mechanical interlocking should be to ensure that only one supply is available at a time on each section of bus and to eliminate any possibility of accidentally approaching two supply at one bus section.				
3.13	All as above 3.01 to 3.12	1.00	Job	16,09,999.00	16,09,999.00
4.00	Fabrication and supply of cubical type LT Panel - tested design as per IEC 61439-1 & 2 suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply, made out of 1.6 mm thick CRCA sheet steel/GI Sheet for frame work and covers, 3 mm thick for gland plates, dust tight, vermin proof, totally enclosed, Form 4b compartmentalised design , floor mounting, free standing, extensible on both sides i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 1000 Amps capacity FP Aluminium bus bars of high conductivity, DMC/SMC bus bar supports with short circuit withstand capacity of 50 KA for 1Sec., bottom base channel of MS section not less than 100 mm x50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 50mm x 5 mm at the rear with 2 nos earth stud, solid connections from main bus bars to switch gears with required size of Aluminium bus bars and control wiring with 2.5 Sq.mm. FRLS PVC insulated copper conductor cable, cable alleys, cable gland plates in two half and suitable for indoor operation, complete with all accessories, interconnection, earthing, alignment with the bus ducts etc., as required and comprising of following switch gears: (Detuned APFC Panel)				
4.01	Design and Supply of 300 KVAR, 10 stage (2x12.5 KVAR+ 5x25 KVAR +3x50 KVAR) Contactor switched DAPFC capacitor panel with suitable 12 stage APFC relay including fabrication, with 440 volt 7% detuned reactor unit and 480 volts suitable rating capacitor to get desired filtered output with main incomer as MCCB of rating 630Amps 50 KA, 4P with inbuilt O/C,S/C and E/F Protection with Microprocessor Based Releases and provided with Resin Cast CTs with Digital Multifunction Meter, ON/OFF/TRIP Indication Lamps and Phase Indication Lamps with control MCBs and suitable rating MCCBS as outgoing with ON/OFF/TRIP Indication Lamps with control MCBs as per standard practice and suitable size Enclosure made out of 1.6 mm thick CRCA sheet steel for frame work and covers, 3 mm thick for gland plates, dust tight, vermin proof, totally enclosed with necessary mounting assembly and accessories as per Specification.	2.00	Job	6,99,999.00	13,99,998.00
5.00	Supply of 320 KVA Prime Duty DG Set comprising of following:				
5.01	01 No. Alternator of suitable for generating 320 KVA 415 V, 3 Phase, 50 Hz, 0.8 PF, 1500 RPM, Self Ventilated, Self Regulated and Self Excited with Brushless Type conforming to IS 4722 as specified and as required.				

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
5.02	01 No. Multi Cylinder, 4 Stroke, Turbo Charged Diesel Engine developing not less than 399 BHP at 1500 RPM suitable for above Alternator and Complete with all accessories such as Base Frame, AVM Pads, Battery [12 Volts, 25 Plates 180 AH], All Types of Filters, Coupling, Starter, Residential Silencer, Lightning arrestor spike, Automatic Electronic Speed Governing Mechanism, Control Panel, Compact Radiator etc. and conforming to relevant IS with up to date amendments as specified and as required.				
5.03	1 No. Fuel Tank of Capacity not less than 990 Ltrs., Complete with connecting Pipes, Valves, Fuel Level Indicators etc., as specified and as required.				
5.04	Customised Compact Modular Type Tested Acoustic Enclosure suitable for the above DG Set to limit the Noise Level to 75 dB (A) at a distance of 1 Mtr., from the Enclosure, made out of CRCA sheet of 1.6 mm thickness for the Outside Cover and Doors and for Inside Cover with 0.5 mm thick perforated GI Sheet, Louvers of thickness 1.6 mm CRCA Sheet for Fresh Air and Hot Air, Powder coated after Seven Tank Process, Neoprene Rubber Gasket and heavy duty SS locks with SS Hinges.				
5.05	Acoustic Lining made up of high quality rock wool/glass wool/ mineral wool of density 64Kg/M3 with Aluminium Cladding, Base Frame of suitable Size Channel, provision to accommodate Batteries, and Support for Silencers, provided with 2 Nos. LED Fittings and Switches and Enclosure High Temperature Safety Device etc., as required.				
5.06	Exhaust gas piping for above DG of suitable dia. welded black MS, B class pipe conforming to IS:3589 cut to required lengths and installed with necessary bends and clamps, bellows anti-vibration mountings, insulation of exhaust system with mineral wool/ Rockwool, 50 mm thick wire mesh & aluminium cladding and provision of suitable exhaust pipe supporting arrangement as per site requirement etc., as required as per specifications.				
5.07	MS class 'C' pipe of suitable dia. between fuel tank and diesel engine with Complete valves, level indications & accessories as required as per specifications.				
5.08	G.S.S square/rectangular ducting for dissipation of hot air to outside for above DG made out of 1.25 mm thick ,to be fabricated complete with gaskets, elbows, splitters, vanes, supports, etc as required as per specifications.				
5.09	ALL AS ABOVE 5.00 To 5.08	2.00	Job	19,99,999.00	39,99,998.00
6.00	Fabrication and supply of cubical type LT Panel - tested design as per IEC 61439-1 & 2 suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply, made out of 1.6 mm thick CRCA sheet steel/ GI Sheet for frame work and covers, 3 mm thick for gland plates, dust tight, vermin proof, totally enclosed, Form 4b compartmentalised design , floor mounting, free standing, extensible on both sides i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 1000 Amps capacity FP Aluminium bus bars of high conductivity, DMC/SMC bus bar supports with short circuit withstand capacity of 31 MVA for 1Sec., bottom base channel of MS section not less than 100 mm x50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5 mm at the rear with 2 nos earth stud, solid connections from main bus bars to switch gears with required size of Aluminium bus bars and control wiring with 2.5 Sq.mm. FRLS PVC insulated copper conductor cable, cable alleys, cable gland plates in two half and suitable for indoor operation, complete with all accessories, interconnection, earthing, alignment with the bus ducts etc., as required and comprising of following switch gears: (AMF LT Panel)				
6.01	One No. 800 A, 50KA (Ics=Icu), Four Pole, EDO type moulded case design ACB as EB supply, conforming to IEC 60947-2:2003 as amended up-to-date with LCD display, inbuilt Metering, Overcurrent, Short circuit & Earth fault Protection with variable current & time delay setting, Instantaneous protection, current demand & phase to neutral voltage on display, % loading of each phases on LED/LCD bar graphs, with Microprocessor Based Releases and provided with suitable rated Cast Resin CTs and Digital Multifunction Meter having RS 485 port, shunt trip coil 220 V AC, LED Phase Indication Lamps along with 2 Amps control MCBs as backup protection, Breaker ON/OFF/TRIP/Spring Charge LED indicating lamps along with control MCBs as per standard practice, Electrical Interlocking arrangement between the EB & DG Incomers along with interlocking relays etc. i/c Control MCBs, control terminals & wirings as required.				

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
6.02	One No. 800 A, 50KA (Ics=Icu), Four Pole, EDO type moulded case design ACB as DG supply, conforming to IEC 60947-2:2003 as amended up-to-date with LCD display, inbuilt Metering, Overcurrent, Short circuit & Earth fault Protection with variable current & time delay setting, Instantaneous protection, current demand & phase to neutral voltage on display, % loading of each phases on LED/LCD bar graphs, with Microprocessor Based Releases and provided with suitable rated Cast Resin CTs and Digital Multifunction Meter having RS 485 port, shunt trip coil 220 V AC, LED Phase Indication Lamps along with 2 Amps control MCBs as backup protection, breaker ON/OFF/TRIP/Spring Charge LED indicating lamps along with control MCBs as per standard practice, Electrical Interlocking arrangement between the EB & DG Incomers along with interlocking relays etc. i/c Control MCBs, control terminals & wirings as required.				
6.03	Two Nos. 800 A, 4P On Load Change Over Switch each one for above ACBs for Bye-pass arrangement with bus bar/ link arrangements and LEDs lamps indicating position of Change Over Switch [AMF/ BYEPASS/ OFF]				
6.04	24 V Battery Charger / Trickle/ OFF/ Boost for charging capacity of 24 Volts lead acid battery (2 Nos each of 12 volts, 25 plates 180 AH etc. complete as required.				
6.05	One No. Display Temperature Scanner for BTD and RTD				
6.06	One Set of Timers and contactors/AMF Relay for Start with condition to take the load with in 15 Sec. in 3 Attempts/ Stop/ Delay time of DG Set with Selector Switch for Time Delay, Contactors for Auto/ Manual/ Interlock/Time Delay and Engine protection PCB & accessories etc. as required.				
6.07	One Set of Selector Switches for Auto/ Manual/Test/Off Operation etc.				
6.08	One Set of LVM				
6.09	One Set of Push Button for Start/Stop/Reset etc.				
6.10	One Set of 3 LED Display for Performance of DG Set				
6.11	One Six Channel Annunciation with Hooter Alarm for the Abnormality of DG Set				
6.12	One Set of Contactors for Auto/ Manual/ Interlock/ Time Delay Operation				
6.13	One Set of AMF Module and Engine Protection PCB and Accessories.				
6.14	One Set of 800 Amps Al. Bus Bar for 3 Phases and Neutral				
6.15	All accessories such as fuses, auxiliary contactors, auxiliary switches, etc. as required.				
6.16	All as above 6.00 To 6.15	1.00	Job	9,69,999.00	9,69,999.00
7.00	Supply of 2000 Amps, 50 KA for 1 sec, Indoor IP 54 Sandwich Type Bus Trunking complying to IEC 61439-1 & 6 including fabrication, for use on 3 Phase 4 Wire, 415 Volts, 50 Hz AC supply with metal clad enclosure made of 1.6mm thick GI Sheet duly powder coated in convenient sections complete with 4 Nos. of Aluminium Bus Bars with Class F Insulation, necessary joints, elbow joints & expansion joints and bends, adopter box, with integral earth, suspenders, angle iron bracket, fasteners, connecting to earthing system etc., as required. Note : All accessories to be included in the straight length cost only. Extra/ additional cost towards accessories shall not be entertained. Accessories to be included is 90 Deg Bends, Flange end, Phase Transposition unit, Expansion unit and Adapter Box. The bus Trunking shall be measured along the length (centre) of enclosure. The Quantity given is tentative. However the actual quantity requirement will be as per Bustrunking manufacturer design.				
7.01	Transformer - 1 to Non Essential Panel I/C -1	20.00	Mtrs.	23,999.00	4,79,980.00
7.02	Transformer - 2 to Non Essential Panel I/C -2	25.00	Mtrs.	23,999.00	5,99,975.00
8.00	Supply of suitable Copper flexibles for 2000 Amps, 4 Wire Bus duct Termination etc.,	4.00	Set.	69,999.00	2,79,996.00
9.00	Supply of 630 Amps, 40 KA for 1 sec, Indoor IP 54 Sandwich Type Bus Trunking complying to IEC 61439-1 & 6 including fabrication, for use on 3 Phase 4 Wire, 415 Volts, 50 Hz AC supply with metal clad enclosure made of 1.6mm thick GI Sheet duly powder coated in convenient sections complete with 4 Nos. of Aluminium Bus Bars with Class F Insulation, necessary joints, elbow joints & expansion joints and bends, adopter box, with integral earth, suspenders, angle iron bracket, fasteners, connecting to earthing system etc., as required. Note : All accessories to be included in the straight length cost only. Extra/ additional cost towards accessories shall not be entertained. Accessories to be included is 90 Deg Bends, Flange end, Phase Transposition unit, Expansion unit and Adapter Box. The bus Trunking shall be measured along the length (centre) of enclosure. The Quantity given is tentative. However the actual quantity requirement will be as per Bustrunking manufacturer design. (CCR Hall Power House)				
9.01	Non Essential Panel I/C -1 to APFC Panel - 1	20.00	Mtrs.	10,999.00	2,19,980.00
9.02	Non Essential Panel I/C -2 to APFC Panel - 2	15.00	Mtrs.	10,999.00	1,64,985.00

Sl. No.	Description of Items	Qty	Unit	Basic Rate Excluding GST	Amount
10.00	Supply of suitable Copper flexibles for 630 Amps, 4 Wire Bus duct Termination etc.,	4.00	Set	15,999.00	63,996.00
11.00	Supply of nominal 2.5 mm thick (Width 1 Mtr) PVC synthetic, electric insulated mats conforming to IS 15652-2006 having Dielectric strength of 45 KV, no adverse effect of mineral oil, high insulation resistance (Minimum 1,00,000 M Ω on wet condition with 5 KV meggar) etc., as required.	300.00	Sq.Mtr.	629.00	1,88,700.00
12.00	Supply of nominal 2.0 mm thick (Width 1 Mtr) PVC synthetic, electric insulated mats conforming to IS 15652-2006 having Dielectric strength of 30 KV, no adverse effect of mineral oil, high insulation resistance (Minimum 1,00,000 M Ω on wet condition with 5 KV meggar) etc., as required.	700.00	Sq.Mtr.	499.00	3,49,300.00
13.00	Supply of compact circular stranded Al conductor provided with conductor screening of semi-conducting compound XLPE insulated provided with insulation screening over individual cores, consisting of extruded semi-conducting compound followed by lapped semi-conducting copper tapes, cores laid together with suitable filters, in the interspaces covered with inner sheath by extrusion, galvanized flat steel strip armoured and overall PVC sheathed cable, suitable for 11 KV (E) System conforming to IS 7098 (Part-II) 1985 as amended upto date and of following Size as required.				
13.01	3 X 185 Sq.mm	2,500.00	Mtr	999.00	24,97,500.00
14.00	Supply of XLPE insulated and PVC sheathed aluminium conductor armoured power cable of 1.1 KV grade conforming to IS 7098 (Part-I) 1988 as amended upto date and of following size as required:				
14.01	3.5 X 185 SQ MM	1,000.00	Mtr	759.00	7,59,000.00
14.02	3.5 X 240 SQ MM	1,000.00	Mtr	959.00	9,59,000.00
SH-I : SUPPLY of Sub Station Equipments Total					₹ 1,97,22,404.00
15.00	SH-II: Installation, Testing, commissioning of Sub-Station Equipments.				
15.01	Installation, Testing and Commissioning of 1 MVA transformer mentioned at SH-I/ SOQ 1 including provision of MS "C" channel of 100 x 50 x 6 mm supporting rail, stopper including supply and laying of 1.5 sqmm multi strand copper conductor PVC insulated and PVC sheathed armoured control cable for sensing purpose between relays at HT VCB panel and transformer etc. complete all as required.	1.00	Job	99,999.00	99,999.00
16.00	Installation, Testing and Commissioning of 415V, 2000 Amps Bus bar rating MV Non-Essential Panel mentioned at SH-I /2 including provision of supporting "C" channel size 100 x 50 x 6 mm thick etc. complete as required.	1.00	Job	1,99,999.00	1,99,999.00
17.00	Installation, Testing and Commissioning of 415V, 1000 Amps Bus bar rating, MV Essential Panel mentioned at SH-I /3 including provision of supporting "C" channel size 100 x 50 x 6 mm thick etc. complete as required.	1.00	Job	99,999.00	99,999.00
18.00	Installation, Testing and Commissioning of 300 KVAR detuned capacitor panel mentioned at SH-I /4 including provision of supporting "C" channel size 100 x 50 x 6 mm thick, laying of 1.5 sqmm multi strand copper conductor PVC insulated and PVC sheathed armoured control cable for sensing purpose between relays at Non Ess panel and DAPFC Panel and all connections and interconnections etc. complete as required.	2.00	Job	29,999.00	59,998.00
19.00	Installation, Testing and Commissioning of 320 KVA Prime Duty DG Set mentioned at SH-I/ SOQ 5, including laying of fuel pipe lines, fixing of exhaust piping with required supporting arrangement , performing load test for the DG sets at site arranged with suitable load & diesel for 13 hours load test etc. complete as required.	2.00	Job	99,999.00	1,99,998.00
20.00	Installation, Testing and Commissioning of 415V, 1000 Amps Bus bar rating, AMF Panel mentioned at SH-I /6 including provision of supporting "C" channel size 100 x 50 x 6 mm thick and supply and laying of 1.5 sqmm multi strand copper conductor PVC insulated and PVC sheathed armoured control cable for sensing purpose between relays at AMF panel and DG set Control panel and metal shield control cable for alternator winding and bearing temperature sensing etc. complete as required.	1.00	Job	49,999.00	49,999.00
21.00	Installation, Testing and Commissioning of 2000 Amps, 50KA S.C (RMS), Indoor sandwich types Bus trunking system (Straight run bus Duct, Bend, Adopter Box, Phase Cross Over and Copper flexibles for joints) mentioned at SH-I / SOQ Item no.7 and 8 including provision of 12mm dia threaded rod and 50x50x5mm MS angle for supporting arrangement and interconnection with LT panel and transformer end by required length busbar of suitable length etc. complete as required.	45.00	Mtr	999.00	44,955.00
22.00	Installation, Testing and Commissioning of 630 Amps, 40KA S.C (RMS), Indoor sandwich types Bus trunking system (Straight run bus Duct, Bend, Adopter Box, Phase Cross Over and Copper flexibles for joints) mentioned at SH-I / SOQ Item no.9 and 10 including provision of 12mm dia threaded rod and 50x50x5mm MS angle for supporting arrangement and interconnection with LT panel and transformer end by required length busbar of suitable length etc. complete as required.	35.00	Mtr	799.00	27,965.00

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
23.00	Fixing of nominal 2.5 mm or 2.0 mm (Width 1 Mtr) thick PVC synthetic, electric insulated mats conforming to IS 15652-2006 along with suitable adhesive/ chemibond, i/c providing water proofing of floor, (chipping of floor if required) sealing of all joints and edges etc., as required.	1,000.00	Sq.mtr	99.00	99,000.00
24.00	Supply, Replacement, Testing and Commissioning of Four Pole On Load Change Over Switch of 400 Amps rating with MS Enclosure, in the Existing Wall, including providing Handle, providing LED Display for Inputs and Output, suitable Bus Links for both at Input & Output Side, grouting, earthing etc., as required.	1.00	Job	34,999.00	34,999.00
25.00	SITC of 15 Nos. of 2 Volt, 100 AH Exide Batteries [Totalling to 30V] of Model "PLANTE" or Equivalent with Initial Charging including providing and fixing suitable size Stand as per OEM's recommendation or E-I-C direction for positioning of Batteries etc. complete as required.	1.00	Job	99,999.00	99,999.00
26.00	SITC of 30V, 20 Amps, DC Battery Charger with Thyristor Based Rectifier suitable to operate in 230V, 50Hz, single phase AC Power Supply with charging arrangement for Trickle/ Boost including with suitable range Digital Meter for both AC/DC for measuring Current and Voltage, Regulator, Selector Switches, Indication Lamps etc. for operating Batteries associated with 11 KV HT Panel, as required.	1.00	Job	59,999.00	59,999.00
SH-II : Installation, Testing, commissioning of Sub-Station Equipments Total					₹ 10,76,909.00
27.00	SH-III : TRANS-INSTALLATION OF EQUIPMENTS:				
27.01	Installation, Testing and Commissioning of 415V, 1600 Amps Bus bar rating, AMF Panel at New power house including dismantle shifting of AMF panel from Cargo Power House to new Power house and provision of supporting "C" channel size 100 x 50 x 6 mm thick and supply and laying of 1.5 sqmm multi strand copper conductor PVC insulated and PVC sheathed armoured control cable for sensing purpose between relays at AMF panel and DG set Control panel and metal shield control cable for alternator winding and bearing temperature sensing complete as required. (AMF Panel shall be supplied by AAI)	1.00	Job	49,999.00	49,999.00
28.00	Dismantling, Shifting and Transporting of 1000 KVA, 11KV/433 Volt Oil Type Transformer from Old Power House to New Power House including disconnection of control cabling, 11 KV Power cabling, LT Bus Ducts, earthing, transferring of oil into barrel etc. and Installation, Testing and Commissioning of same Transformer in Proposed Power House including providing supporting 'C' channel 100x50x6mm, painting two no of coating including cleaning etc. as per OEM's standard or E-I-C direction, re-filling of transformer oil after oil filtration, checking of BD value and pre-commissioning testing including supply and laying of 1.5 sqmm multi strand copper conductor PVC insulated and PVC sheathed armoured control cable for sensing purpose between relays at HT VCB panel and transformer etc. complete as required.	1.00	Job	79,999.00	79,999.00
29.00	Dismantling, Shifting and Transporting of 11 KV HT VCB Panel consisting of 08 panels from Old Power House to New Power House including disconnection of control cabling, 11 KV Power cabling, earthing etc. and Installation, Testing and Commissioning of same panels in New Power House including supporting "C" channel 100x50x6mm, earthing, connection and interconnection including testing, commissioning etc. complete as required.	1.00	Job	39,999.00	39,999.00
30.00	Dismantling, Shifting, Transporting, Installation, Testing and Commissioning of 600 Amps outdoor LT Panel from nearby Blue Dart Courier Terminal to nearby Air India Office including levelling of surface, provision of foundation blocks of height 450 mm, connections, earthing etc. complete as required.	1.00	Job	19,999.00	19,999.00
SH-III : Trans-Installation of equipments Total					₹ 1,89,996.00
31.00	SH-IV : LAYING OF CABLES, EARTHING AND ASSOCIATED WORKS				
31.01	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground including excavation, M-sand cushioning, protective covering and refilling the trench etc as required.				
31.02	Above 120 sq. mm and upto 400 sq. mm	200.00	Mtr	399.00	79,800.00
32.00	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
32.01	Above 120 sq. mm and upto 400 sq. mm	1,000.00	Mtr	99.00	99,000.00
33.00	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing masonry open duct as required.				
33.01	Above 120 sq. mm and upto 400 sq. mm	300.00	Mtr	89.00	26,700.00
34.00	Laying and fixing of one number PVC insulated and PVC sheathed/ XLPE power cable of 11 KV grade of following size on wall surface wall as required.				
34.01	Above 120 sq. mm and upto 400 sq. mm (clamped with 25x2mm MS flat clamp)	700.00	Mtrs.	99.00	69,300.00
35.00	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size on cable tray as required.				
35.01	Above 120 sq. mm and upto 400 sq. mm (clamped with 25x2mm MS flat clamp)	400.00	Mtrs.	99.00	39,600.00

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
36.00	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, sand cushioning, protective covering and refilling the trench etc as required.				
36.01	Above 95 sq. mm and upto 185 sq. mm	100.00	Mtr.	399.00	39,900.00
36.02	Above 185 sq. mm and upto 400 sq. mm	200.00	Mtr.	449.00	89,800.00
37.00	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.				
37.01	Above 95 sq. mm and upto 185 sq. mm	100.00	Mtr.	49.00	4,900.00
37.02	Above 185 sq. mm and upto 400 sq. mm	100.00	Mtr.	99.00	9,900.00
38.00	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/ METAL pipe as required.				
38.01	Above 95 sq. mm and upto 185 sq. mm	300.00	Mtr.	49.00	14,700.00
38.02	Above 185 sq. mm and upto 400 sq. mm	700.00	Mtr.	99.00	69,300.00
39.00	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.				
39.01	Above 95 sq. mm and upto 185 sq. mm (clamped with 25x3mm MS flat clamp)	50.00	Mtr.	99.00	4,950.00
39.02	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	50.00	Mtr.	149.00	7,450.00
40.00	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
40.01	Above 95 sq. mm and upto 185 sq. mm (clamped with 25x2mm MS flat clamp)	50.00	Mtr	79.00	3,950.00
40.02	Above 185 sq. mm and upto 400 sq. mm (clamped with 25x2mm MS flat clamp)	50.00	Mtr	149.00	7,450.00
41.00	Retrieval of one number PVC/XLPE insulated and PVC sheathed power cable of 11KV grade of size upto 300 Sqmm from ground including excavation and refilling the trench etc., as required.	100.00	Mtr	299.00	29,900.00
42.00	Retrieval of one number PVC/XLPE insulated and PVC sheathed power cable of 11KV grade of size upto 300 Sqmm from the existing RCC/ HUME/ GI Pipe/ STONEWARE/ METAL/ Duct etc., as required.	100.00	Mtr	149.00	14,900.00
43.00	Retrieval of one number PVC/XLPE insulated and PVC sheathed power cable of 1.1KV grade of size upto 400 Sqmm from the existing RCC/ HUME/ STONEWARE/ METAL/ GI PIPES/ Duct/ TRAY/ TERRACE etc., as required.	100.00	Mtr	99.00	9,900.00
44.00	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.				
44.01	150 mm (W) X 40 mm (D) X 2.0 mm Thickness	100.00	Mtr	449.00	44,900.00
45.00	Supplying and installing following size of Galvanised Iron Ladder hot dipped galvanised iron cable trays (Galvanisation not less than 50 microns) type cable tray with radii bends supports, reducers, tees, cross members and other accessories as required and including suitable MS Angles 75 x 75 x 6mm, Cantilever support, anchor fasteners, supporting plates, and all accessories etc with 1 mtr interval as required.				
45.01	600 mm (W) X 62.2 mm (D) X 2.0 mm Thickness	100.00	Mtr	799.00	79,900.00
45.02	300 mm (W) X 62.2 mm (D) X 2.0 mm Thickness	50.00	Mtr	499.00	24,950.00
46.00	Supplying and laying of 250 mm dia non-pressure NP2 class (light duty) RCC hume pipe with collars jointed with stiff cement mortar i/c demolishing cement concrete/bituminous road, 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 CC of 1:2:4 ratio on top (200 mm) and disposal of left out soil away from Airport premises etc. as required.				
46.01	250 mm	200.00	Mtr.	1,499.00	2,99,800.00
47.00	Supplying and laying of "B" Class G.I pipe of 200 mm 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.				
47.01	200 mm	50.00	Mtr.	1,499.00	74,950.00

Sl. No.	Description of Items	Qty Unit		Basic Rate Excluding GST	Amount
48.00	Supplying and laying of "B" Class G.I pipe of 200 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.				
48.01	200 mm	50.00	Mtr.	1,999.00	99,950.00
49.00	Supply of the following size OD, PE 80, PN 10 rating HDPE pipe.				
49.01	300 mm	200.00	Mtr.	1,999.00	3,99,800.00
50.00	Drilling, reaming and laying of 300 mm dia HDPE pipe supplied at item No.49 above across the roads by Horizontal Directional Drilling using Trenchless Technology Method including deploying of HDD machines, Mud mixing system, Earth movers and jointing/welding of HDPE pipes etc. complete as required.				
50.01	300 mm	200.00	Mtr.	1,999.00	3,99,800.00
51.00	Supplying and making straight through cable jointing with heat shrinkable jointing kit complete with all accessories including ferrules suitable for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required				
51.01	185 Sq. mm	10.00	No.	14,999.00	1,49,990.00
52.00	Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 Core, XLPE Aluminium Conductor cable of 11 KV grade as required				
52.01	185 Sq. mm	5.00	No.	7,999.00	39,995.00
53.00	Supplying and making straight through joint with heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
53.01	3½ x 120 Sq.mm	5.00	No.	2,499.00	12,495.00
53.02	3½ x 185 Sq.mm	5.00	No.	3,499.00	17,495.00
53.03	3½ x 240 Sq.mm	5.00	No.	2,999.00	14,995.00
53.04	3½ x 300 Sq.mm	5.00	No.	2,499.00	12,495.00
53.05	3½ x 400 Sq.mm	5.00	No.	4,999.00	24,995.00
54.00	Supplying and making indoor 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.				
54.01	3½ x 120 Sq.mm	4.00	No.	449.00	1,796.00
54.02	3½ x 185 Sq.mm	10.00	No.	699.00	6,990.00
54.03	3½ x 240 Sq.mm	14.00	No.	899.00	12,586.00
54.04	3½ x 300 Sq.mm	4.00	No.	999.00	3,996.00
54.05	3½ x 400 Sq.mm	4.00	No.	1,099.00	4,396.00
55.00	Supply and Fixing of 10 mm thick SMC chequered plates including provision of 50 x 50 x 5mm thick MS angle in all side and diagonal of SMC plate for strengthening by Aluminium revtting and provision of MS lifting hook etc. complete as required.	100.00	Sq.Mtrs	4,999.00	4,99,900.00
56.00	Supply, fabrication, Transportation and installation of ladder type cable tray on the terrace of Cargo Complex made of 50x50x5mm MS angle iron and 2 nos. of 25x5mm MS flat in 350 mm interval for laying of HT/LT cable with support made by 50x50x5mm MS angle iron at 1meter interval and MS clamp made of 25x2mm thick including cutting, welding, drilling, fixing, grinding, applying redoxide primer of two coats and two coat of enamel paint of Black colour etc. complete as required. and as per the instructions of Engineer-In-Charge.	7,500.00	Kgs	89.00	6,67,500.00
57.00	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 masonary chamber, CI Cover outer size of 700mm X 700mm X 40mm including excavation & refilling etc as required.	30.00	Nos.	7,999.00	2,39,970.00
58.00	Providing and fixing 50 mm X 5 mm copper strip in 80 mm dia 'B' Class G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer and brassing i/c excavation of bituminous/ concrete / pavement & excavation of Soil to the depth of 0.30 Mtrs from ground, refilling the Soil and with 1:2:4 concrete on top for 0.15 Mtrs after laying Pipe and making good the same to original surface etc. complete as required.	100.00	Mtr.	2,499.00	2,49,900.00
59.00	Providing and fixing 50 mm X 5 mm copper strip in recess including cutting of concrete floor and finishing to original floor and connection with brass nut, bolt, spring, washer and brassing etc. as required.	150.00	Mtr.	1,999.00	2,99,850.00
60.00	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface including connection with brass nut, bolt, spring, washer and brassing for connections etc. as required.	250.00	Mtr.	1,799.00	4,49,750.00

Sl. No.	Description of Items	Qty	Unit	Basic Rate Excluding GST	Amount
61.00	Providing Civil Works as required as detailed below:				
61.01	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor, etc., up to floor five level, excluding the cost of centering, shuttering and finishing.				
61.02	Cement concrete in 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	2.00	Cum	9,999.00	19,998.00
61.03	Cement mortar in 1:6 (1 cement: 6 coarse sand)	2.00	Cum	2,999.00	5,998.00
61.04	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in with Cement mortar 1:6 (1 cement : 6 coarse sand).	2.00	Cum	5,999.00	11,998.00
61.05	Cement plaster of 15 mm on the rough side of single or half brick wall of mix with 1:6 (1 cement: 6 coarse sand).	10.00	Sq Mtr	299.00	2,990.00
61.06	Steel rod for RCC Slabs	50.00	Kgs	49.00	2,450.00
62.00	Demolishing of hard concrete truck parking floor manually/ by mechanical means using compressor drilling machine for depth upto 250mm & 150mm width (approx.) on both the side of RCC slab cover of Chilled Water pipe trench for easy removal of RCC slab cover, and making the surface to original finish with PCC of 1:2:4 mix to match with the adjacent hard concrete floor including disposal of concrete debris away from Airport premises etc. complete as required.	10.00	Cum	7,999.00	79,990.00
63.00	Lifting of RCC slab size 1M (L) x 0.3M (W) x 0.25M (Thick) of Chilled water pipe trench to facilitate HT cable laying in Cargo Truck Parking Area and re-positioning of the removed RCC slab after completion of HT cable laying on trench wall surface by using crowbars, safety shoes & gloves and removal of accumulated debris, malba from the trench including disposal of waste materials and debris away from Airport premises and providing necessary barricading for working area to avoid untoward incidents and for safety purpose etc. as required and as per the instructions of Engineer-In-Charge.	100.00	Mtr	199.00	19,900.00
64.00	Construction of brick masonry manhole with F.P.S. bricks of class design 75 & 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.	10.00	Nos.	3,999.00	39,990.00
SH-IV : LAYING OF CABLES, EARTHING AND ASSOCIATED WORKS Total					Rs. 49,37,858.00
Total amount (SH-I + SH-II+ SH-III + SH-IV)					Rs. 2,59,27,167.00
Total					Rs. 2,59,27,167.00

(Rupees Two Crore Fifty Nine Lakhs Twenty Seven Thousand One Hundred and Sixty Seven Only)

Note: Applicable GST shall be paid on submission of taxable invoice.


 09/12/2021.
Jt. General Manager (E-E)-I