

MAHATMA GANDHI MISSION TRUST

MGM INSTITUTE OF HEALTH SCIENCES, CENTRAL PURCHASE DEPARTMENT (CPD)

Plot 1 &2, Sector -1 Kamothe, Navi Mumbai 410209

e-Tender for MEP of Bunker - (Mechanical, Electrical and Plumbing)

Tenders invited from reputed Manufactures or their authorised distributors / dealers of MEP of Bunker - (Mechanical, Electrical and Plumbing), for supply to MGM New Bombay Hospital, Vashi, Navi Mumbai in the format given bellow:

Name & Address of Vendor	
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Sr. No. ITEM DESCRIPTION SUPPLY,INSTALLATION,TESTING & COMMISSIONING OF ALL LT PANELS WITH SPECIFIC INCLUSIONS:	UNIT	QTY	SUPPLY			
				INSTALLATION	SUPPLY	INSTALLATION
THE LT PANELS SHALL BE AS PER FINALIZED DESIGN/DRAWING & DISCUSSIONS) The outgoing feeders as indicated in SLD shall have suitable range of followings. ALL Digital electronic MFM and KWH meter shall be provided with RS 485 port/RJ-45 communication port compatible for BMS & Three phase indicating lamps protected by 2 amps SP MCBs. All ACB's shall be EDO type or as specified, suitable for minimum 50 kA as specified in the items (Icu= Ics= Icw for 1 sec.) All MCCB's shall be suitable for (Icu= Ics= 100% at 415/433Volts,kA for 1 sec as specified in the item, Wiring with space heater, thermostat and control MCB's shall be provided for all vertical sections of main LT panel, All breakers shall be interlocked as per schematic diagram through PLC with auto load management control. All incoming as well as outgoing feeders shall have pad locking facility, Suitable danger board shall be provided, All MCCB's shall be provided with front rotary handle and operating mechanism for door interlock with Pad locking of MCCB's handles in "OFF" Position, The Panel fabricator shall provide Al. Bus-bars link from Breakers wherever more than two nos. of cables are terminated in the breakers. Additional set of C.T.s., potential free contacts, connectors, contactors with wiring etc. are to be provided for BMS including space required for various transducers in Main Switch Board sections. Only transducers shall be supplied by BMS contractor. All hinged door shall be earthed through 2.5 sq mm tinned braided copper wire, All the panels containing switchgear upto 630A rating shall be PTTA as per IS 8623/IEC 60439, and above 630A shall be type tested assembly as per IEC:61439. 63A MCCB to 200A MCCB shall be thermo magenetic release and above 200A to 630A MCCB shall be microprocessor releases, All the Panels shall be internal arc protection for minimum 0.3 sec. as per IEC and specifications. All motor feeders MCCBs shall be of motor duty icu=ics=433v=1 sec. Supporting/Base rigid steel framework, TPN ACB's / MCCB's shall be suitable for wi						

	ITEM DESCRIPTION		l		NY INSTALLATION	GRAI	ND TOTAL
Sr. No.	ITEM DESCRIPTION	UNIT	QTY	SUPPLY	INSTALLATION	SUPPLY	INSTALLATION
1.1	NORMAL LIGHTING & POWER PANEL (NLPP)	Set	1				
	Incomers:						
	i) 1 No. 400 Amps. TPN MCCB, 25ka, Icu=lcs with microprocessor based release having O/L ,S/C earth fault protection and equipped with the following: a) 'ON & TRIP' indicating light with 2Amp back up MCB breaker b) Digital Multifunction Meter, accuracy class 1.0s, with LED screen as per specs. with 3 Nos. cast resin current transformers of dual core CT's of suitable Amp. ratio, 15 VA Class 1.0 metering. ,protection MCBs as required accessories to complete the system.						
	Bus Bar:						
	Electrolytic high conductivity Aluminium extensible three phase and half neutral busbars rated at 400 amps, & auxiliary Bus Bars of suitable capacity insulated with heat shrinkable coloured PVC sleeves & suitable to with						
	Outgoings:						
	a) All MCCB (lcs=lcu) with O/L, S/C,E/F followings shall be applicable to each. b) All outgoing with MCCB for O/C, S/C,E/F protection with 'ON' indicating light of following capacity and rating, 16 KA (lcs=lcu=100%) Spreader links and phase barrier, solid neutral link complete with wiring, connections etc.						
	i) 3 Nos. Thermal Magnetic 16 Amp. TPN MCB,10 kA						
	ii) 2 Nos. Thermal Magnetic 20 Amp. TPN MCB ,10 kA						
	iii) 1 No. Thermal Magnetic 25 Amp. TPN MCB, 10 kA						
	iv) 3 Nos. Thermal Magnetic 40 Amp. TPN MCB, 10 kA						
	v) 5 Nos. Thermal Magnetic 125 Amp. TPN MCCB, 16 kA						
	vi) 1 No. Thermal Magnetic 160 Amp. TPN MCCB, 16 kA						
	The wall/Floor mounted switchboard panel shall be complete with all interconnections, risers, internal wiring, labels, control/circuit fuses etc. complete as required.						
1.2	EMERGENCY LIGHTING & POWER PANEL (ELPP)	Set	1				
	Incomers:						
	i) 1 No. 40 Amps. TPN MCB, 10ka, Icu=lcs with thermal magnetic based release having O/L ,S/C earth fault protection and equipped with the following: a) Digital Multifunction Meter, accuracy class 1.0s, with LED screen as per specs. with 3 Nos. cast resin current transformers of dual core CT's of suitable Amp. ratio, 15 VA Class 1.0 metering. ,protection MCBs as required accessories to complete the system.						
	Bus Bar:						
	Electrolytic high conductivity Aluminium extensible three phase and half neutral busbars rated at 40 amps, & auxiliary Bus Bars of suitable capacity insulated with heat shrinkable coloured PVC sleeves & suitable to withstand symmetrical fault level of 10 kA at 433 volts, i/c DMC/SMC bus bars supports at required intervals complete for cross section, size supports & their spacing etc.						
	Outgoings:						
	i) 1 No. Thermal Magnetic 40 Amp. TPN MCB,10 kA						
	ii) 1 No. Thermal Magnetic 16 Amp. 2P MCB ,10 kA						
	The wall mounted panel shall be complete with all interconnections, risers, internal wiring, labels, control/circuit fuses etc. complete as required.						

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Sr. No.	ITEM DESCRIPTION	UNIT	QTY	SUPPLY	INSTALLATION	SUPPLY	INSTALLATION
1.3	Supply, installation, testing and commissioning of circuit breakers complete with i) Galvanised & painted steel enclosure to IP55 ii) SC rating 16KA iii) Suitable for connecting cables as shown in SLD at incoming & outgoing side as specified & shown on drgs.						
1.3.1	125A Thermal magnetic based MCCB	Each	4				
1.3.2	100A Thermal magnetic based MCCB	Each	4				
1.3.3	80A Thermal magnetic based MCCB	Each	RO				
1.3.4	40A Thermal magnetic based MCB	Each	2				
	Total for 1.0						
2.0	DISTRIBUTION BOARD Supply, installation, testing & commissioning of 500V Distribution Boards as specified & shown on drawing with i) Copper busbars together with tapped neutral bar for individual phases. ii) Copper earth strip with tapping for EEC iii) Interconnections and earthing. iv) Sheet steel enclosure suitable for recessed or surface mounting with hinged lockable doors interlocked with the incomer switch. v) Phase to phase isolation (PPI) in case of 3Ph boards. vi) Necessary support frame & painting, labeling, etc. complete. vi) Brass glands for sending and receiving ends suitable for cable sizes mentioned in SLD. vii) DBs to be double door with 1.6 mm thick CRCA Sheet ,Powder coated. viii) All mcb & mccb "C" curve type as specified. ix)Surge Protection Device Type-3 only for emergency DBs. (Crimping lugs forming part of the termination) Normal Lighting Distribution Board - (LDB) as specified consisting of Incomer: i)1#16A TPN MCB Outgoing: ii)3# 10A DP RCBO (30 mA)	Each	1				
2.2	iii)12# 6A SP MCB Emergency Lighting Distribution Board - (ELDB) as specified consisting of Incomer: i)1#16A DP RCBO (30 mA) Outgoing: ii)6# 6A SP MCB	Each	1				
2.3	Normal Power Distribution Board - (PDB) as specified consisting of Incomer: i)1#40A TPN MCB Outgoing: ii)3# 40A DP RCCB (100 mA) iii)21# 16A SP MCB iv)2# 20A SP MCB v)1# 32A SP MCB	Each	1				

	ITEM DESCRIPTION	T				GRAND TOTAL	
Sr. No.	ITEM DESCRIPTION	UNIT	QTY	SUPPLY	INSTALLATION	SUPPLY	INSTALLATION
2.4	Emergency Power Distribution Board - (EPDB) as specified consisting of Incomer: i)1#32A TPN MCB Outgoing: ii)3# 25A DP RCCB (100 mA) iii)24# 16A SP MCB	Each	1				
	Total for 2.0						
	CABLING						
3.1	Power Cabling Power Cabling						
3.1.1	Supply and laying heavy duty 1100V grade PVC / XLPE insulated sheathed & armoured (unless otherwise specified as flexible) Fire Retarded Low Smoke (FRLS) cables indoor or outdoor with AL / Cu conductors as specified and shown on drgs. complete with: a) Cable clamps on walls,trays, columns, beams, cable laying in Existing trunch, cable markers etc. for indoor cables. b) Earthing the glands armouring etc.						
3.1.1.1	3.5 C 300 sqmm A2XFY	m	RO				
	3.5 C 240 sqmm A2XFY	m	80				
3.1.1.3	3.5 C 70 sqmm A2XFY	m	42				
3.1.1.4	4 C 10 sqmm YWY	m	65				
3.1.1.5	4 C 6 sqmm YWY	m	RO				
3.1.1.6	4 C 4 sqmm YWY	m	40				
3.1.1.7	4 C 2.5 sqmm YWY	m	68				
3.1.1.8	3 C 4 sqmm YWY	m	18				
3.1.1.9	1C 50 sqmm XLPE - Cu Flexible cable	m	180				
3.1.1.10	1C 35 sqmm XLPE - Cu Flexible cable	m	310				
3.1.1.11	1C 25 sqmm XLPE - Cu Flexible cable	m	400				
3.1.1.12	1C 16 sqmm XLPE - Cu Flexible cable	m	RO				
3.1.1.13	1C 10 sqmm XLPE - Cu Flexible cable	m	160				
3.1.1.14	1C 1 sqmm XLPE - Cu Flexible cable	m	220				
	Total for 3.1						
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Sr. No.	ITEM DESCRIPTION	UNIT	Q I I			SUPPLY	INSTALLATION	
3.2	Cable Termination							
3.2.1	Making cable end terminations including brass double compression crimping type copper lugs for cable sizes mentioned below of (Glands form part of Panels / DB's)							
	3.5C, 300	Each	RO					
	3C, 3.5C, 4C 240	Each	2					
	3C, 3.5C, 4C 185	Each	RO					
	3C, 3.5C, 4C 70	Each	2					
	3C, 3.5C, 4C 10	Each	10					
	3C, 3.5C, 4C 6	Each	RO					
	3C, 3.5C, 4C 4	Each	8					
	3C, 3.5C, 4C 2.5	Each	6					
3.2.1.9	3C, 3.5C, 4C 1.5	Each	RO					
3.2.1.10	1C 50	Each	20					
3.2.1.11	1C 35	Each	32					
3.2.1.12		Each	20					
3.2.1.13	1C 16	Each	RO					
3.2.1.14		Each	16					
3.2.1.15	1C 1	Each	24					
	Total for 3.2							
3.3	Cable Trays							
3.3.1	Supply and fixing of Perforated Cable tray with horizontal & vertical bends, reducers, Tee's, cross over, suitable supports and brackets and other accessories as required confirming to IEC-61537. The Tray shall be galvanized for corrosion protection confirming to DIN EN 10346 / ISO 1461. The trays should be tested for a safe working load of 150 Kgs with a span distance of 1.5 meters and the deflection should be within the limits as per standard. The safety factor shall be 1.7 times of the safe working load. The perforated tray shall be supplied with the standard length of 3 Mtr.							
3.3.1.1	150 mm width x 60mm Height	m	40					
	200 mm width x 60mm Height	m	35					
	300 mm width x 60mm Height	m	25					
	500 mm width x 60mm Height	m	80					
3.3.1.5	600 mm width x 60mm Height	m	RO					
	Total for 3.3							
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3.4	Supply and installation of single or multi compartment GI raceway of cross section given below laid above false ceiling complete as specified. a) Raceway b) All bends, joints, supports, end plates couplers earth conductivity.							
3.4.1	50 x 50 Single compartment (with Removable cover)	Rmt	80					
	100 x 75 Single compartment (with Removable cover)	Rmt	115					
3.4.3	150 x 75 Single compartment (with Removable cover)	Rmt	RO					
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	Total for 3.4							
	Total for 3.0							

	ITEM DESCRIPTION	l	l	SUPPLY	INSTALLATION	GRAND TOTAL		
Sr. No.		UNIT	QTY		INSTALLATION	SUPPLY	INSTALLATION	
4.0	CONDUIT WIRING							
4.0								
4.1	Conduit wiring for lights, fans, switches, socket outlets as shown on drgs. & consisting of: a) Wiring in (MMS) UPVC fire retardant Low Smoke conduit in exposed places and above false ceiling as specified b) 1100V grade FRLS copper wires as specified. c) Insulated Protective Earthing (PE) as specified and earthing of switch boxes etc. d) Wall chasing with finishing e) Including terminating the wires in switch box/Distribution board.							
444	As shown on drgs.	Fach	40					
4.1.1	Primary conduit Wiring using 2x1.5Cu + 1x 1.5Cu PE from DB to first LIGHT point on the circuit as specified	Each	18					
4.1.2	Secondary conduit wiring extending from 7.1.1 to the various light, switch outlet using 2 x 1.5Cu + 1x 1.5Cu PE as specified	Each	120					
4.1.3	Primary conduit Wiring using 2x2.5Cu + 1x 1.5Cu PE for power from DB to first power point on the circuit as specified	Each	48					
4.1.4	Secondary conduit wiring extending from 7.1.3 to the various power socket outlet using 2 x 2.5Cu + 1x 1.5Cu PEas specified	Each	150					
4.1.5	Primary conduit Wiring using 2x4.0Cu + 1x 2.5Cu PEfor power from DB to first power point on the circuit as specified	Each	4					
4.1.6	Secondary conduit wiring extending from 7.1.5 to the various power socket outlet using 2 x 4.0Cu + 1x 2.5Cu PEas specified	Each	4					
4.2	Circuit Wiring							
	Supplying, laying, testing and commissioning of pvc insulated stranded FRLS copper wires 1100V grade in rigid pvc							
4.2.1	concealed/ surface conduit from main board to final distribution board/ circuit/ submains etc or as required							
4.2.1.1	2x2.5 sqmm copper plus 1 no of 1.5sq mm stranded copper conductor FRLS wires in rigid pvc concealed/ surface conduit.	Rmt	150					
4.2.1.2	25mm dia PVC conduite	Rmt	120					
4.2.1.3	32mm dia PVC conduite	Rmt	100					
4.3.1	POINT WIRING (Halcyon) for dimmable Conduit wiring for lights, fans, switches, socket outlets as shown on drgs. & consisting of: a) Wiring in (HMS) UPVC fire retardant conduit in exposed places and above false ceiling as specified b) 1100V grade halogen free copper wires as specified. c) Insulated Protective Earthing (PE) as specified and earthing of switch boxes etc. d) Wall chasing with finishing As shown on drgs.							
4.3.1.1	Primary conduit Wiring using 2x1.5Cu + 1x 1.5Cu PE + 2 x 1.5 Cu from DB/Dimmer to first LIGHT point on the circuit as specified	Each	1					
4.3.1.2	Secondary conduit wiring extending from Primary Conduit wiring ie from 1st light to the various light, using 2 x 1.5Cu + 1x 1.5Cu PE+ 2X1.5 CU as specified	Each	3					
4.4	SIT&C of DALI (Digital Addressable Lighting Intraface) System for the Ballroom/Prefunction/ All day dinning /Entrance lobby and Terrace restaurant with required quantites of Dali module complying to EN55015, EN 61547, EN 61347-2-11, Complies with WEEE(waste Electrical& Electronics Equipment) and RoHS(Restriction of Hazardous Substances) directives for Environment. including all necessary control wiring in PVC suitable size conduit.							
4.4.1	Dali Module Unit with 1 independent DALI links with up to 10 DALI Ballasts per links Lutron make or equivalent	Each	1					
	SeeTouch keypads 1 scenes -Lutron make or equivalent	Each	1					
4.4.3	Automation distribution board for DALI Modules	Each	1					

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Sr. No.	ITEM DESCRIPTION	UNIT	QTY	SUPPLY	INSTALLATION	SUPPLY	INSTALLATION
4.4.4	Dali Module Unit with 2 independent DALI links with up to 64 DALI Ballasts per links Lutron make or equivalent (Emergency module)	Each	RO				
5.0	LIGHT FIXTURES						
5.1	ITC of light fixtures complete with: a) All fixing accessories mounting bracket b) Earthing of fittings						
5.1.1	WIPRO ELATE RECESS LED LUMINAIRE, FULL DIFFUSER PROVIDES UNIFORM LIGHT. CAT NO: CRCO10R038HP57GL, LUMEN OP-3600, 36W. or equivalent	Each	23				
	WIPRO IRIS SLIM NEO RECESS LED LIGHT FITTING. CAT.NO: LD95-221-XXX-60-XX***,LUMEN OP-1800,18W. or equivalent	Each	61				
E 4 2	WIPRO IRIS SLIM NEO RECESS LED LIGHT FITTING. CAT.NO: LD95-101-XXX-60-XX*,LUMEN OP-900,9W. or equivalent WIPRO TRIM NEO WALL MOUNTED LED BATTEN	Each	6				
	CAT. NO: LL20-281-XXX-65AL1**,LUMEN OP-2000,20W. or equivalent	Each	10				
5.1.5	WIPRO TRIM NEO CEILING MOUNTED LED BATTEN CAT. NO: LL20-281-XXX-65AL1**,LUMEN OP-2000,20W. or equivalent	Each	2				
5.1.6	1X9W BULK HEAD LIGHT or equivallent	Each	2				
5.1.7	MIRROR LIGHT (9W) or equivallent	Each	RO				
5.1.8	LED DOWN LIGHT with dimmable driver light fixtures (16W) as per interior	Each	4				
5.1.9	LED STRIP LIGHT (9W) as per interior	Each	RO				
	Total for 5.1						
5.2	SITC of switches, sockets including mild steel electro galvanised switch box,face plate etc. complete with earthing (excluding Guest room)						
5.2.1	6A Switch	Each	60				
_	6 / 16A socket & 16A switch	Each	330				
5.2.3	6 / 16A socket	Each	2				
5.2.4	1# 32A socket outlet (IP 66) with Enclosure similar to CLIPSAL 56SO316RP-LE-GY-EX + 56E1-GY+Plug Top 56PA316RPGY	Each	1				
5.2.5	Cable outlet single phase /Junction box (IP66)	Each	10				
5.2.6	PER CT room door switch	Each	1				
5.2.7	Last man out switch	Each	1				
5.2.8	Last man out push button	Each	1				
5.2.9	Last man out switch buzzer	Each	1				
	Total for 5.2						
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	Total for 5.0						

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Sr. No.	ITEM DESCRIPTION	UNIT	QTY	SUPPLY	INSTALLATION	SUPPLY	INSTALLATION
6.0	Supply, Installation, Testing and Commissioning of following rated high performance IGBT based fully microprocessor controlled (three phase Input & three phase Output) online UPS system suitable for input and output parameters as per specifications. The UPS shall have Separate Galvanic Isolation Transformer Inbuilt/External K13 Copper Wound (After Static Switch) transformer. The UPS shall be provided in powder coated fan cooled enclosure painted in colour as per specifications. The UPS shall be suitable for normal, emergency, recharge, by-pass and maintenance mode including bypass arrangement. The UPS shall have a microprocessor based display and control panel. UPS shall have own batteries with 15 minute battery back-up with SMF batteries. Complete system must be provided as per specifications approved drawing and as per site requirement including inter connecting cables from battery to UPS, UPS to panel with single core copper cabling etc. UPS shall work on parallel/ hot redundancy mode, cost of supporting kit shall be included. supports for complete system as approved by the Engineer in charge complete in all respect. (N+1 mode)						
6.1	7.5 KVA	Each	1				
	Total for C O						
	Total for 6.0						
7.0	PASSIVE SYSTEM FOR TELEPHONE & DATA& TV						
7.1	S/I/T/C of RJ 11 telephone socket outlet complete as required.	Nos	30				
7.2	S/I/T/C of RJ 45 DATA socket outlet complete as required	Nos	50				
7.3	S/I/T/C of telephone Krone connectors 50 pairs IN 50 PAIR BOX AS REQUIRED BY TELEPHONE DIP.(ms powder coated with locking facility)	Nos	1				
7.4	S/I/T/C of telephone Krone connectors 20 pairs IN 20 PAIR BOX AS REQUIRED BY TELEPHONE DIP.(ms powder coated with locking facility)	Nos	RO				
7.5	S/I/T/C OF 0.5 mm dia armoured jelly filled telphone cable						
7.5.1	a)10 pair cable -	mts	25				
7.5.2	b)20 pair cable -	mts	35				
7.5.3	a)50 pair cable -	mts	35				
7.5.4	b)100 pair cable - Supplying and laying, testing and commissioning of UTP cable Cat 6 , 4 pair UTP cable in HMS, FRLS, PVC conduit- For	mts	50				
7.6	telephone/ Data/WIFI (considerd 2cable laying in single 20mm dia conduite)	mts	2500				
7.7	SITC mild steel electrogalvanised switch box,face plate interconnecting wires inside the box only,screws,etc.complete with earthing						
	Modular Faceplates Data/Telephone						
7.7.1	1Module Faceplate similar to OPALE - X0701 + 2Module switch BOX	Nos	20				
7.7.2	2Module Faceplate similar to OPALE - X0702+ 2Module switch BOX	Nos	15				
7.7.3	3Module Faceplate similar to OPALE - X0703+ 3Module switch BOX	Nos	4				
7.7.4 7.8	4Module Faceplate similar to OPALE - X0704+ 4Module switch BOX	Nos	10				
7.8.1	Modular Patch Cords Cat 6 patch cord for data points similar to "Schneider" ACTPC6UBCM10BU-3ft	Nos	30				
7.8.2	Cat 6 patch cord for data points similar to Schneider ACTPC60BCM 1050-31t	Nos	30				
7.8.3	Cat 6 patch cord for data points similar to "Schneider" ACTPC6UBCM10BU-7ft	Nos	20				
7.9	S/I/T/C of 12 core armored Multi mode Fibre Optic Cable for Data up link from server room	Mtrs	250				
7.10	Certificate of Installation						
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Sr. No.	ITEM DESCRIPTION	UNIT	QTY	SUPPLY	INSTALLATION	SUPPLY	INSTALLATION
8.0	EARTHING						
8.1	EARTHING STATION						
8.1.1	Providing, laying, testing and commissioning of $600 \times 600 \times 3.15$ mm Tinned Copper electrode with 2 No. 50 x 6 mm thick copper strip, from earth electrode to inspection chamber,50 mm dia medium class G I pipe , CI Funnel with 20 gauge G I wire mesh, masonry chamber 450 x 450 mm with concrete base, CI / heavy chequered plate manhole cover with frame and bitumastic paint and packing of mixture of charcoal and common salt around plate electrode complete with digging of pit upto permanent moisture level but not less than 3 meters and back filling as required. The Rates to be inclusive of Earthing Inspection PolyCarbonate/Weather Proof enclosue with earthing test Link of suitable size/rating.	each	RO				
8.1.2	Supply of CAPE make UL Listed Maintenance Free Copper coated Earth rod of 3048mm length having the dia of 14.2 mm with copper coating thickness of 254 microns. The rod has been tested for Dimension, Marking, Tensile Strength, Salt mist, coating thickness, Electrical resistivity test before and after corrosion test as per IEC 62561-2 & UL 467. CAPE Type No. CBR 1410 (Article No - 300 010) Supply of CAPE make earth enchancing mineral compound tested for leaching and TCLP with NABL accredited Lab as per IEC 62561-7 -25 kg CAPE Type: PROSAN 12.5 (Article: 300 830) Supply of CAPE make Earth rod clamp made for terminating cable / flat conductor. CAPE Type: MSERC1417 (300 462) + CAPE Type: CPES 8 (Article: 401 504) Supply of CAPE make Earth Chamber Inspection Pit made up of poly propylene material. CAPE Type: EC 300 (Article: 300850)	each	10				
	Total for 8.1						
8.2	EARTH WIRES/STRIPS						
8.2.1	Supply and laying, Testing and commissioning of following items for interconnecting the earthing stations ,panels, DBs etc. of the following sizes in built up trenches /surface/wall complete with holes & fixing, jointing / terminating accessories as per specifications & drawing complete as required.						
8.2.1.1	50 x 6 mm GI or equivalent	m	150				
8.2.1.2		m	50				
8.2.1.3		m	RO				
8.2.1.4		m	RO				
8.2.1.5	No. 8 SWG Cu bare wire	m	160				

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Sr. No.	ITEM DESCRIPTION	UNIT	QTY	SUPPLY	INSTALLATION	SUPPLY	INSTALLATION		
8.2.2	EARTH BARS								
8.2.2.1	300mm long earth bars at various Panels and DB rooms	each	1						
8.2.2.2	15 x 3 copper with 6 dia perforations	each	1						
	Total for 8.2								
	Total for 8.0								
Kindly e	mail your lowest quotation for above with your terms and conditions including warranty, delivery per	iod, pavr	nent as v	well as client	list and brochures	to etenders@	mamuhs.com		
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	Date:		Signatur	e of Tenderer					
			Name:						
			Designa	tion:					
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