

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

No. 2025/C&IS/Project/DR-DC-MaulaAli/13

New Delhi, Dated: 28.05.2025

**The General Managers,
Northern and South Central Railways.**

Sub: Sanction of the work "Indian Railway Disaster Recovery Data Centre at Maula Ali, Secunderabad".

Ref: FOIS's letter No. CAO/FOIS/Project/Rail Cloud dated 02.04.2025.

Approval of Board (M/O&BD, Member/Finance and Chairman & CEO) is hereby communicated for the work "Indian Railway Disaster Recovery Data Centre at Maula Ali, Secunderabad" of South Central Railway at a cost of Rs. 99.70 Crore (Rupees ninety nine crore and seventy lakh only) chargeable to allocation "Capital" under the 'Computerization and Information Technology related Projects on Indian Railways- Umbrella work 2024-25 (SBA Item No. 157 of 2025-26 issued by Northern Railway)'. Item-wise break-up of cost of the work is attached as 'Annexure'.

This issues with the concurrence of Finance Directorate of Ministry of Railways.

Digitally signed by
Bharat Bhushan Harit
Date: 28-05-2025
(Bharat Bhushan Harit)
Director ME (C&IS)

No. 2025/C&IS/Project/DR-DC-MaulaAli/13

New Delhi, Dated: 28.05.2025

Copy to:

1. The Principal Financial Adviser, Northern and South Central Railways.
2. Principal Director of Audit, Northern and South Central Railways.
3. The Dy. Comptroller and Auditor General of India (Railways), Room No. – 224, Rail Bhawan, New Delhi.

Digitally signed by
Jagdish Pandey
Date: 28-05-2025
18:20:48 For Member Finance

Copy to:

1. The CE(P&D), Northern and South Central Railways.
2. The Managing Director, CRIS, Chanakyapuri, New Delhi.
3. F(X)-II and Budget Branches of Railway Board.

Annexure**No. 2025/C&IS/Project/DR-DC-MaulaAli/13****New Delhi, Dated: 28.05.2025****Cost of the work of "Indian Railway Disaster Recovery Data Centre at Maula Ali, Secunderabad"**

S. N		Item	Unit	Qty	Rate	Amount
1		Civil Work Consolidated Cost(in Rs.)				
	A1	Civil DRDC Building Cost :				
	1	Building with RCC frame Structure upto six stories, floor height 3.60 m (with Cost Index of 100 on PAR 01.08.2023 base rate) [G+1]	Sq m	2600	30,820	8,01,32,000.00
	2	Extra for Every 0.30m or part thereof, higher plinth over normal plinth height of 0.60 metres (on ground floor area only) $(1.20-0.60/0.3= 2 \text{ times}) \times \text{Rs.}421/- \text{ per sqm}$ (with Cost Index of 100 on PAR 01.08.2023 base rate) [for G+1]	Sq m	1300	842	10,94,600.00
	3	Extra for Every 0.3 m or part thereof, additional/less height of floor above normal floor height of 3.60 m/3.0 m (on area having additional/less height). i.e. $(4.20-3.60/0.3= 2 \text{ times}) \times \text{Rs.}421/- \text{ per Sqm}$ (with Cost Index of 100 on PAR 01.04.2021 base rate) [for G+1]	Sq m	2600	842	21,89,200.00
	4	Extra for stronger Structure members to take heavy load above 500 Kg/Sqm upto 1000 Kg/Sqm. Required is 1500 kg/sqm. Therefore 2 times the rate is taken for estimation. (with Cost Index of 100 on PAR 01.08.2023 base rate) [for 2 floor of 1500 kg/Sqm]	Sq m	2600	4,100	1,06,60,000.00
	5	Fire Fighting with wet riser and sprinkler system. (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	3050	1,200	36,60,000.00
	6	Extra for every 0.30m or part thereof, deeper foundations over normal depth of 1.20 metres (on ground floor area only) $(1.80-1.20/0.3=2 \text{ times}) \times \text{Rs.}230/- \text{ per Sqm}$ (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	1300	460	5,98,000.00
	7	RCC raft Foundations (Ground Floor only) (with Cost Index of 100 on PAR 01.03.2023 base rate)	Sq m	1300	12,170	1,58,21,000.00
		TOTAL cost (1 to 7) ==> (A1)				11,41,54,800.00
	A2	Electricl Sub-station Building Cost				
	8	Building with RCC frame Structure upto six stories, floor height 3.60 m (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	450	30,820	1,38,69,000.00
	9	Extra for Every 0.30m or part thereof, higher plinth over normal plinth height of 0.60 metres (on ground floor area only) $(1.20-0.60/0.3= 2 \text{ times}) \times \text{Rs.} 421/- \text{ per Sqm}$ (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	450	842	3,78,900.00
	10	Extra for Every 0.3 m or part thereof, additional/less height of floor above normal floor height of 3.60 m/3.0 m (on area having additional/less height). i.e. $(4.2-3.60/0.3= 2 \text{ times}) \times \text{Rs.} 421/- \text{ per Sqm}$ (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	450	842	3,78,900.00
	11	Extra for stronger Structure members to take heavy load above 500 Kg/Sqm upto 1000 Kg/Sqm. Required is 1000 kg/sqm. Therefore 1.0	Sq m	450	2,050	9,22,500.00

		times the rate is taken for estimation. (with Cost Index of 100 on PAR 01.08.2023 base rate)				
	12	Extra for every 0.30m or part thereof, deeper foundations over normal depth of 1.20 metres (on ground floor area only) (1.80-1.20/0.3=2 times) x Rs.230/- per Sqm (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	450	460	2,07,000.00
	13	RCC raft Foundations (Ground Floor only) (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	450	12,170	54,76,500.00
		TOTAL cost (8 to 13) ==> (A2)				2,12,32,800.00
		TOTAL cost (1 to 13) (A1+A2) ==> (A)				13,53,87,600.00
	B	<u>Civil Building Services/Utilities, False Flooring/RO UNITS</u>				
		%age Below refers to the %age of Building cost as per 1.0 above excluding sub head 1.3.4, 1.3.5, 1.3.6, 1.3.7, 1.3.8, 1.3.9, 1.5 & 1.6		9804260 0		
	14	Cost of Internal water supply & sanitary installation on building cost @ 4% (with Cost Index of 100 on PAR 01.08.2023 base rate)	%	9804260 0	4%	39,21,704.00
	External services connections and local body approval charges shall be as hereunder or as per estimates given by the local body whichever is higher.					
	15	Cost of Civil External service connections on building cost @ 1.25% (with Cost Index of 100 on PAR 01.08.2023 base rate)	%	9804260 0	1.25	12,25,532.50
	16	Cost of Local body approvals including tree cutting etc. on building cost @ 1.25% (with Cost Index of 100 on PAR 01.08.2023 base rate)	%	9804260 0	1.25	12,25,532.50
	17	Cost of Consultancy Services for designing and planning of project, if out sourced on building cost @ 1.0% (with Cost Index of 100 on PAR 01.08.2023 base rate)	%	9804260 0	1.00	9,80,426.00
	Extra For					
	18	Cost of Lightening conductors on building cost @ 0.25% (with Cost Index of 100 on PAR 01.08.2023 base rate)	%	9804260 0	0.25	2,45,106.50
	19	Cost of Telephone conduits on building cost @ 0.25% (with Cost Index of 100 on PAR 01.08.2023 base rate)	%	9804260 0	0.25	2,45,106.50
	20	Cost of Third Party Quality Assurance on building cost @ 1.0% (with Cost Index of 100 on PAR 01.08.2023 base rate)	%	9804260 0	1.00	9,80,426.00
		TOTAL cost (14 to 20) ==> (B)				88,23,834.00
	C	<u>RCC WATER TANK</u>				
	21	Overhead tank without independent staging @ Rs. 23/- per liter (with Cost Index of 100 on PAR 01.08.2023 base rate)	Lite rs	40000	23.00	9,20,000.00
	22	Underground sump @ Rs. 23/-per liter (with Cost Index of 100 on PAR 01.08.2023 base rate)	Lite rs	100000	23.00	23,00,000.00
		Total cost (21 & 22) ==> (C)				32,20,000.00
	D	<u>External DEVELOPMENT OF SITE</u>				
	23	Leveling (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	9000	340.00	30,60,000.00
	24	Internal Roads and Paths :				
	i	Cement Concrete pavement with vacuum dewatered concrete (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	5000	2,320.00	1,16,00,000.00
	ii	Footpath with PCC base, 60mm thick paver blocks and kerb stone edging (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	3000	2,960.00	88,80,000.00

	25	External Sewerage (with Cost Index of 100 on PAR 01.08.2023 base rate)	M	1000	3,810.00	38,10,000.00
	26	Filter Water Supply Distribution Lines (with Cost Index of 100 on PAR 01.08.2023 base rate)				
	i	Distribution lines upto 100mm dia and below (with Cost Index of 100 on PAR 01.08.2023 base rate)	M	2200	1,930.00	42,46,000.00
	ii	Peripheral grid 150mm to 300 mm dia pipes (with Cost Index of 100 on PAR 01.08.2023 base rate)	M	500	4,100.00	20,50,000.00
	iii	Unfiltered water supply distribution lines (with Cost Index of 100 on PAR 01.08.2023 base rate)	M	1500	1,510.00	22,65,000.00
	27	Storm water drains (with Cost Index of 100 on PAR 01.08.2023 base rate)	M	1500	10,150.00	1,52,25,000.00
	28	Rain Water Harvesting (RWH) (with Cost Index of 100 on PAR 01.08.2023 base rate)	M	1000	3,810.00	38,10,000.00
	29	Trenches for Services (with Cost Index of 100 on PAR 01.08.2023 base rate)	M	1500	7,280.00	1,09,20,000.00
	30	RCC Boundary wall with 2400mm high wall and 600mm high MS Grill including 2100 mm high steel gates (2Nos). [Per Meter rate is based on DSR 2023]	M	400	90,000.00	3,60,00,000.00
	31	Horticulture Works				
	i	Horticulture operations including 300mm earth filling, grassing, tree plantations/ shrubs and potted plants etc. (with Cost Index of 100 on PAR 01.08.2023 base rate)	Sq m	6000	312.00	18,72,000.00
		Total cost (23 to 31) ==> (D)				10,37,38,000.00
	E	<u>SPECIALISED E&M WORKS</u>				
	i	STP/EPT PLANT				
	32	Supply, installation, testing and commissioning of STP/ETP of appropriate technology including civil works (except plant room), tertiary treatment etc. for the building. Plant size upto 50KDL (with Cost Index of 100 on PAR 01.08.2023 base rate)	Per KL D	50	75,000.00	37,50,000.00
		Total cost (32) ==> (E)				37,50,000.00
	F	<u>NON CIVIL ITEM</u>				
	i	DRIVER FACE AND AUTOMATIC NUMBER PLATE RECORDING SYSTEM/RECOGNITION SYSTEM				
	33	Supply, installation, testing and commissioning of driver face and automatic number plate recording system/ recognition system including high resolution camera and software set for the driver face capture and automatic number plate recording. (with Cost Index of 100 on PAR 01.08.2023 base rate)	Per Set	2	7,70,890.00	15,41,780.00
	ii	BAGGAGE SCANNERS				
	34	Baggage scanner small: computer based multi energy X-Ray baggage inspection system capable of passing through bags/parcels of dimensions 540mm x 350mm, belt height 750mm to 850mm, 22"/24" LCD Monitor, Input/Output rollers with frames etc. as required. (with Cost Index of 100 on PAR 01.08.2023 base	Per Unit	2	22,59,510.00	45,19,020.00

		rate)				
	iii	DOOR FRAME METAL DETECTOR				
	35	20 Zone or above door frame metal detector nominal size: 760mm x 2050mm x 700mm loaded with necessary software. (with Cost Index of 110 on PAR 01.08.2023 base rate)	Per Set	2	3,72,160.00	7,44,320.00
	iv	BOOM BARRIER				
	36	Electromechanical boom barrier with all accessories upto 6 meter length (with Cost Index of 100 on PAR 01.08.2023 base rate)	Each	2	1,25,000.00	2,50,000.00
	v	EMERGENCY LIGHT & ILLUMINATION SIGNAGES				
	37	Illuminated signages (Rate application on total plinth area)(with Cost Index of 100 on PAR 01.08.2023 base rate)	Sqm	7000	22.00	1,54,000.00
		Total cost (33 to 37) ==> (F)				72,09,120.00
	G	Extra Items DC server area				
	38	Cost for False flooring in server area with air grills/ dampers etc.	Sqm	1000	7,500.00	75,00,000.00
	39	Cost for RO units of 200 LPH including MS stand & water cooler cost 250liters	Each	5	4,00,000.00	20,00,000.00
		Total cost (38 to 39) ==> (G)				95,00,000.00
	H	Total cost Inclusive of GST @ 18% (A+B+C+D+E+F+G)				27,16,28,554.00
	I	Dust protection cost during construction at site	LS		10,00,000.00	10,00,000.00
	J	Furniture etc. Cost				
		Furniture for Officers & workstations etc. inclusive of GST @ 18%	Each	100	80,000.00	80,00,000.00
	K	Total Cost Inclusive of GST @ 18% (A to J)				28,06,28,554.00
	L	Total Cost Excluding of GST @ 18% (of K)				23,78,20,808.47
2	Electrical Work Consolidated Cost (in Rs.)					
	1.0	UPS System				
	1.1	Supply, installation, testing and commissioning of 200 KVA set, 415V, unity output power factor, Microprocessor based PWM technology using IGBTs. Modular UPS with hot / safe swappable Power Module and connected works with all necessary accessories complete as required at site and as per standards.	No.	8	24,11,085.00	1,92,88,680.00
	1.2	Supply, Installation, Testing and Commissioning of Li-ion Battery banks to support 200 KVA UPS for Minimum 15 minutes of backup on full load considering Unity load power factor, DC # AC efficiency @ 95%. This includes Battery cabinet, suitable battery circuit breaker, Interconnects, Cable and Battery management system.	No.	8	39,79,235.00	3,18,33,880.00
		Sub Total for UPS System				5,11,22,560.00
	2.0	Racks and Intelligent PDU				
	2.1	Supply of Server Rack - 42U of size 600mm (W) x 1000mm (D) and height should be within 2200 mm including castor wheels, minimum load bearing capacity of 1350 Kg. Each rack will be consisting of caster wheels 4 Nos., adjustable levelers 4 Nos., removable side and top panels, vertical & horizontal cable manager, ground cable with necessary hardware for fixing the cable on the ends and 10 Nos. blanking panels as per the specifications.	No.	44	76,288.00	33,56,672.00
	2.2	Supply of Network Rack - 42U of size 800mm (W) x 1000mm (D) and height should be within	No.	8	91,655.00	7,33,240.00

		2200 mm including castor wheels, minimum load bearing capacity of 1350 Kg. Each rack will be consisting of caster wheels 4 Nos., adjustable levellers 4 Nos., removable side and top panels, vertical & horizontal cable manager, ground cable with necessary hardware for fixing the cable on the ends and 10 Nos. blanking panels as per the specifications.				
	2.3	Supply of 32 Amp. Three phase Intelligent Rack PDU having socket level monitoring. The Rack PDU should have minimum of 18 Nos. of C13 and 6 Nos. C19 socket with IEC 309 input power cord as per the specifications.	No.	104	1,55,250.00	1,61,46,000.00
		Sub Total for Racks and PDU				2,02,35,912.00
	3.0	Precision Air-Conditioning for Data Centre				
	3.1	Supply, installation, testing and commissioning of Precision Air-Conditioning system including piping, electrical cabling etc. required for the system	TR	230	1,10,000.00	2,53,00,000.00
	3.2	Design, manufacture, supply, installation, testing and commissioning of Main LT panel for input supply of Precision air conditioning unit. The panel will be 2 mm thick MS sheet steel fabricated cubicle type Panel, which should be divided in two sections, dust and vermin proof complete with hinged and lockable doors. Panels shall be floor mounted and dead front construction complete with interconnections by copper tapes/ wires and painting. Each outgoing feeder shall be provided with one set of ON / Off indication lamp. All MCBs shall be C curve type, except UMDB/ USDB in which MCB shall be D curve type. Multifunction, Ammeter, Voltmeter meters installed in MDB/UMDB shall be BMS Compatible, capable of delivering Bacnet, Modbus or LonWorks protocol etc. The panel shall be consisting of following:- 1). Incommer:- 2 Nos. 630 Amp 4 Pole MCCB; 2). Bus Bar:- 2 Nos. 630 Amp TPN Aluminium; 3). Bus coupler:- 1 Nos. 630 Amp 4 Pole MCCB; 4). Outgoing:- 24 Nos. 100 Amp 4 Pole MCCB	No.	1	8,77,481.04	8,77,481.04
		Sub Total for Precision Air-Conditioning				2,61,77,481.04
	4.0	Security System				
	4.1	CCTV Surveillance System				
	a.	Supply, installation, testing and commissioning of 4MP Entry IR Fixed-focal Dome Network Camera High-Definition IP Camera, POE enabled of reputed make, complete in all respect.	No.	33	8,625.00	2,84,625.00
	b.	Supply, installation, testing and commissioning of 4MP Entry IR Fixed-focal Bullet Network Camera High-Definition IP Camera, POE enabled of reputed make complete in all respect.	No.	15	8,625.00	1,29,375.00
	c.	Supply, installation, testing and commissioning of 2MP Entry IR Vari-focal Bullet Network Camera High-Definition IP Camera, POE enabled of reputed make, complete in all respect.	No.	4	14,375.00	57,500.00
	d.	Supply, installation, testing and commissioning of 64 Channel 1.5U 4K & H.265 Pro Network Video Recorder of reputed make, complete in all respect.	No.	1	1,13,528.00	1,13,528.00
	e.	Supply, installation, testing and commissioning of 6 TB Surveillance Special Hard Disc of reputed make for additional storage of CCTV	No.	11	14,375.00	1,58,125.00

		footage of Network Video Recorder, complete in all respect.				
	f.	Supply, installation, testing and commissioning of 55" LED Screen, Full HD, 24x7 Application of reputed make, complete in all respect.	No.	1	51,750.00	51,750.00
	g.	Supply, installation, testing and commissioning of 8 Port, PoE enable, Gigabyte Network Switch of reputed make, complete in all respect.	No.	6	13,800.00	82,800.00
	h.	Supply, installation, testing and commissioning of 16 Port, PoE enable, Gigabyte Network Switch of reputed make, complete in all respect.	No.	4	34,500.00	1,38,000.00
	i.	Supply, installation, testing and commissioning of 24 Port, PoE enable, Gigabyte Network Switch of reputed make, complete in all respect.	No.	2	55,890.00	1,11,780.00
	j.	Supply, installation, testing and commissioning of 4 U RACK of reputed make with cable manager, Fan, extension cord, Glass front with lock and key, complete in all respect.	No.	6	6,171.00	37,026.00
	k.	Supply, installation, testing and commissioning of 6 U RACK of reputed make with cable manager, Fan, extension cord, Glass front with lock and key, complete in all respect.	No.	6	10,580.00	63,480.00
	l.	Supply, installation, testing and commissioning of Fiber Wire Single Mode 24 Core Armoured cable of reputed make, complete in all respect.	Mtr.	3000	230.00	6,90,000.00
	m.	Supply of UTP 4 pair CAT 6 LAN Cable and laying in PVC conduit on the surface / recessed as per site requirement.	Mtr.	2500	64.90	1,62,250.00
	4.2	Supply, installation, testing and commissioning of Access Control system for building security comprising of controller, E&M locks, reader, smart cards, cabling, recording, display system, hardware and software support as required.	Sq m	1300	220.00	2,86,000.00
	4.3	Rodent Repellent System				
	a.	Supply, installation, testing and commissioning of Main Controller of Rodent Repellent System.	No.	1	16,675.00	16,675.00
	b.	Supply, installation, testing and commissioning of Transducers.	No.	18	1,139.00	20,502.00
	c.	Supply, installation, testing and commissioning of Bracket for mounting	No.	1	531.00	531.00
	d.	Supply, installation, testing and commissioning of 2 core x 1.5 sq.mm PVC insulated sheathed FRLS copper conductor wire for Rodent repellent system.	Mtr.	175	115.00	20,125.00
	4.4	Water Leakage Detection (WLD)				
	a.	Supply, installation, testing and commissioning of 4 zone Conventional Water Leakage Detection (WLD) panel.	No.	1	20,470.00	20,470.00
	b.	Supply, installation, testing and commissioning of Sensing cable.	Mtr.	250	633.00	1,58,250.00
	c.	Supply, installation, testing and commissioning of Hooter.	No.	2	1,898.00	3,796.00
	4.5	Fire Suppression System (DC + UPS Room)				
	a.	Supply, installation, testing & commissioning of Microprocessor based 1 loop capacity, Network Addressable type Fire Alarm Control panel. Each loop shall have a minimum loading of 99 detectors and 99 devices in one loop with 25% spare capacity. This includes AC power supply, 240 volts with battery backup i.e. 2 x 12V SMF lead acid batteries capable of running for a minimum of 2 hours with integral battery charger complete with all respects as per site	No.	2	88,500.00	1,77,000.00

		requirements.				
	b.	Supply, installation, testing and commissioning of gas release panel, Approved by reputed lab for Indian conditions, complete in all respect. This includes AC power supply, 240 volts with battery backup i.e. 2 x 12V SMF lead acid batteries with integral battery charger complete with all respects as per site requirements.	No.	2	23,230.00	46,460.00
	c.	Supply, installation, testing and commissioning of Addressable Multi-Criteria Detector with remote LED output and standard base etc. complete with all respects as per site requirements.	No.	28	2,933.00	82,124.00
	d.	Supply, installation, testing and commissioning of Addressable Heat Detector with remote LED output and standard base etc. complete with all respects as per site requirements.	No.	4	3,163.00	12,652.00
	e.	Supply, installation, testing and commissioning of addressable manual call point with in-built monitor module for addressing. The MCP shall be of break glass type with push button etc. complete with all respects as per site requirements.	No.	4	4,830.00	19,320.00
	f.	Supply, installation, testing and installation of microprocessor based addressable Horn / Strobe complete with all respects as per site requirements.	No.	4	2,596.00	10,384.00
	g.	Supply, installation, testing and installation of Addressable Control Module complete with all respects as per site requirements.	No.	4	4,934.00	19,736.00
	h.	Supply, installation, testing and installation of Addressable Monitor Module complete with all respects as per site requirements.	No.	4	3,669.00	14,676.00
	i.	Supply and laying of 2 core x 1.5 sq.mm Fire Survival armoured cable (300/500V), (having Cross Linkable Silicon insulation along with ATC drain wire, aluminium tape screening and special Low Smoke Zero Halog. This also includes provision of one MS Clip at the distance of 3 meters or as per requirement for laying of cable complete with all respects.	Mtr.	1200	121.00	1,45,200.00
	j.	Supply, installation, testing and commissioning of 140 Liters Capacity Seamless Cylinder without gas (Approved by reputed lab for Indian conditions).	No.	9	1,35,700.00	12,21,300.00
	k.	Supply and filling of Clean Agent fire extinguishant gas.	Kg.	1080	2,530.00	27,32,400.00
	l.	Supply, installation, testing and commissioning of master cylinder comprising of:- a). Flexible Discharge hose; b). Flexible Actuation Hose; c). Contact Pressure Gauge; d). Low Pressure Supervisory Switch; e). Electromagnetic Actuator; f). Manual Actuator, g). Pneumatic Actuator; h). Tee; i). Reset device for Magnet Release; j). Electric Release device; k). Manual Release device	Lot	2	1,81,700.00	3,63,400.00
	m.	Supply, installation, testing and commissioning of discharge nozzles of nickel plated brass material with holes drilled across 180° or 360°.	No.	25	3,450.00	86,250.00
	n.	Heavy class MS pipes-seamless. Pipe specials such as bends, tees, reducers etc. shall confirm to ASTM A 234 Gr WPB forged. The pipe shall be with flanged joints / weld joints. Rate quoted	Lot	3	1,18,833.00	3,56,499.00

		shall include for necessary pair of flanges gaskets, nuts, bolts & painting etc, for pipes being suspended from ceilings beam bottom, clamped on				
	o.	Supply, installation, testing and commissioning of cylinder rack supports, Rack with Straps and Manifold.	No.	4	1,982.00	7,928.00
	p.	Supply, installation, testing and commissioning of Manual Release Switch.	No.	4	1,121.00	4,484.00
	q.	Supply, installation, testing and commissioning of Abort Switch.	No.	4	1,121.00	4,484.00
	4.6	Aspirating Smoke Detector System (Only DC Area)				
	a.	Supply, installation, testing and commissioning of single channel Aspirating Detector, coverage 500 SQM (2*25 M Pipe length maximum). This also includes power supply with battery backup unit.	No.	1	2,87,500.00	2,87,500.00
	b.	Supply, installation, testing and commissioning of Aspiration 25mm OD CPVC Sampling Pipes with accessories.	Mtr.	150	139.00	20,850.00
	c.	Supply, installation, testing and commissioning of Electronic Hooter with mounting arrangement.	No.	2	2,933.00	5,866.00
	d.	Supply, installation, testing and commissioning of 2 core x 1.5 sq.mm PVC insulated sheathed FRLS copper conductor wire.	Mtr.	150	115.00	17,250.00
	4.7	Supply, installation, testing and commissioning of Automatic fire alarm system.	Sq m	912	600.00	5,47,200.00
	4.8	9 kg. ABC type fire extinguishers	No.	25	6,490.00	1,62,250.00
		Sub Total for Security System				89,51,801.00
	5.0	Electrical Power Supply Arrangement				
	5.1	Design, manufacture, supply, installation, testing and commissioning of Main LT panel for input supply of UPS systems. The panel will be 2 mm thick MS sheet steel fabricated cubicle type Panel, which should be divided in two sections, dust and vermin proof complete with hinged and lockable doors. Panels shall be floor mounted and dead front construction complete with interconnections by copper tapes/ wires and painting. Each outgoing feeder shall be provided with one set of ON / Off indication lamp. All MCBs shall be C curve type, except UMDB/ USDB in which MCB shall be D curve type. Multifunction, Ammeter, Voltmeter meters installed in MDB/UMDB shall be BMS Compatible, capable of delivering Bacnet, Modbus or LonWorks protocol etc. The panel shall be consisting of following: - 1). Incomer: - 2 Nos. 1250 Amp 4 Pole MDO; 2). Bus Bar: - 2 Nos. 1600 Amp TPN Aluminium; 3). Bus coupler: - 1 Nos. 1250 Amp 4 Pole MDO; 4). Outgoing:- 8 Nos. 400 Amp 4 Pole MCCB; 5). Outgoing:- 4 Nos. 63 Amp 4 Pole MCCB; 6). Outgoing:- 4 Nos. 63 A TPN MCB; 7). Outgoing:- 4 Nos. 32 A TPN MCB	No.	1	11,61,816.00	11,61,816.00
	5.2	Design, manufacture, supply, installation, testing and commissioning of Output Panel for UPS Systems. The panel will be 2 mm thick MS sheet steel fabricated cubicle type Panel, which should be divided in two sections, dust and vermin proof complete with hinged and lockable doors. Panels shall be floor mounted and dead front	No.	4	17,88,888.40	71,55,553.60

		construction complete with interconnections by copper tapes/ wires and painting. Each outgoing feeder shall be provided with one set of ON / OFF indication lamp. All MCBs shall be C curve type, except UMDB/ USDB in which MCB shall be D curve type. Multifunction, Ammeter, Voltmeter meters installed in MDB/UMDB shall be BMS Compatible, capable of delivering Bacnet, Modbus or LonWorks protocol etc. The panel shall be consisting of following:- 1). Incomer:- 2 Nos. 400 Amp 4 Pole MCCB; 2). Bus Bar:- 2 Nos. 400 Amp TPN Aluminium; 3). Isolation Transformer:- 2 Nos. 225 KVA; 4). Outgoing:- 8 Nos. 250 Amp 4 Pole MCCB; 5). Outgoing:- 2 Nos. 100 Amp 4 Pole MCCB				
	5.3	Design, manufacture, supply, installation, testing and commissioning of Feeder Panel for distribution of UPS supply. The panel will be 2 mm thick MS sheet steel fabricated cubicle type Panel, which should be divided in two sections, dust and vermin proof complete with hinged and lockable doors. Panels shall be floor mounted and dead front construction complete with interconnections by copper tapes/ wires and painting. Each outgoing feeder shall be provided with one set of ON / OFF indication lamp. All MCBs shall be C curve type, except UMDB/ USDB in which MCB shall be D curve type. Multifunction, Ammeter, Voltmeter meters installed in MDB/UMDB shall be BMS Compatible, capable of delivering Bacnet, Modbus or LonWorks protocol etc. The panel shall be consisting of following:- 1). Incomer:- 2 Nos. 400 Amp 4 Pole MCCB; 2). Bus Bar:- 2 Nos. 400 Amp TPN Aluminium; 3). Outgoing:- 10 Nos. 63 A TPN MCB; 5). Outgoing:- 10 Nos. 63 A DP MCB; 6). Outgoing:- 50 Nos. 32 A TPN MCB; 7). Outgoing:- 20 Nos. 32 A DP MCB	No.	4	2,30,000.00	9,20,000.00
	5.4	Supply, laying, testing and commissioning of 400 Sq. mm 4 core, 1100 Volt grade, Aluminium conductor PVC insulated FRLS armoured cable, ISI marked from LT Panel room to Main DC UPS Room and PAC Panel of Area 'E'. This also includes provision of identification tags for cable laid in shaft / cable tray etc. complete in all respect as per the specifications.	Mtr.	1800	2,358.00	42,44,400.00
	5.5	Supply, laying, testing and commissioning of 240 Sq. mm single core, 1100 Volt grade, Copper conductor PVC insulated XLPE cable, ISI marked. This also includes provision of identification tags for cable laid in shaft / cable tray etc. complete in all respect as per the specifications.	Mtr.	3000	3,508.00	1,05,24,000.00
	5.6	Supply of lugs / thimble & glands for making connection / terminal joints of 400 Sq. mm 4 core Aluminium conductor PVC insulated FRLS armoured cable laid from Main LT Panel to Main DC UPS Room. This also includes heavy duty tinned copper lugs crimping type, insulation tape, Heavy duty Double compression type brass glands connecting and terminating the cables in Panel complete in all respect as per the specifications. (Note: One number is comprising	No.	30	2,818.00	84,540.00

		of four legs for all the core / wire of cable and one gland for cable end).				
	5.7	Supply of lugs / thimble & glands for making connection / terminal joints of 240 Sq. mm single core, Copper conductor PVC insulated XLPE cable laid Main Panel for UPS-to-UPS unit and UPS unit to UPS output panel. This also includes heavy duty tinned copper lugs crimping type, insulation tape, Heavy duty Double compression type brass glands connecting and terminating the cables in Panel / UPS complete in all respect as per the specifications. (Note: One number is comprising of one legs for the core / wire of cable and one gland for cable end).	No.	192	483.00	92,736.00
	5.8	Supply, laying, testing and commissioning of 10 Sq. mm 5 core, 1100 Volt grade, Copper conductor PVC insulated XLPE cable, ISI marked from UPS Feeder Panel of Area 'E' to 32A three phase Industrial Socket. This also includes provision of identification tags for cable laid in shaft / cable tray etc. complete in all respect as per the specifications.	Mtr.	10500	713.00	74,86,500.00
	5.9	Supply of lugs / thimble & glands for making connection / terminal joints of 10 Sq. mm 5 core copper XLPE cable laid from UPS Feeder Panel to 32A three phase Industrial Socket. This also includes heavy duty tinned copper lugs crimping type, insulation tape, Heavy duty Double compression type brass glands connecting and terminating the cables in Panel complete in all respect as per the specifications. (Note: One number is comprising of five legs for all the core / wire of cable and one gland for cable end).	No.	450	633.00	2,84,850.00
	5.10	Supply Fixing Connecting and commissioning of three phase 63A surface mounted industrial socket with TPN MCB and plug in metal enclosure box for Server Racks.	No.	250	8,694.00	21,73,500.00
	5.11	Supply, installation, testing and commissioning of lighting automation including occupancy sensors.	Sq m	1750	220.00	3,85,000.00
	5.12	Design, supply, fixing of Ladder type GI cable tray made out of 2mm thick GI sheet, bent in 'C' shape, size of 450mm (W) x 50mm (H), duly powder coated with adequate load bearing capacity. Complete with necessary supports, tees, elbows, bends, bolts and nuts, and any other associated accessories to complete the job on wall with angle iron bracket / hanging provision on roof with fastener etc.	Mtr.	450	1,242.00	5,58,900.00
	5.13	Design, supply, fixing of Ladder type GI cable tray made out of 2mm thick GI sheet, bent in 'C' shape, size of 300mm (W) x 50mm (H), duly powder coated with adequate load bearing capacity. Complete with necessary supports, tees, elbows, bends, bolts and nuts, and any other associated accessories to complete the job on wall with angle iron bracket / hanging provision on roof with fastener etc.	Mtr.	250	932.00	2,33,000.00
	5.14	Design, supply, fixing of Ladder type GI cable tray made out of 2mm thick GI sheet, bent in 'C' shape, size of 200mm (W) x 50mm (H), duly powder coated with adequate load bearing capacity. Complete with necessary supports, tees, elbows, bends, bolts and nuts, and any other	Mtr.	225	633.00	1,42,425.00

		associated accessories to complete the job on wall with angle iron bracket / hanging provision on roof with fastener etc.				
5.15		Design, supply, fixing of Perforated type GI cable tray made out of 2mm thick GI sheet, bent in 'C' shape, size of 300mm (W) x 50mm (H), duly powder coated with adequate load bearing capacity. Complete with necessary supports, tees, elbows, bends, bolts and nuts, and any other associated accessories to complete the job on wall with angle iron bracket / hanging provision on roof with necessary anchor fasteners and fixing accessories for supporting the cable tray.	Mtr.	350	920.00	3,22,000.00
5.16		Design, supply, fixing of Perforated type GI cable tray made out of 2mm thick GI sheet, bent in 'C' shape, size of 200mm (W) x 50mm (H), duly powder coated with adequate load bearing capacity. Complete with necessary supports, tees, elbows, bends, bolts and nuts, and any other associated accessories to complete the job on wall with angle iron bracket / hanging provision on roof with necessary anchor fasteners and fixing accessories for supporting the cable tray.	Mtr.	300	575.00	1,72,500.00
5.17		Supply of Electrical Rubber Mat 33kv Class C 3mm thickness of size 1Mtr. Width x 2Mtr. Length.	No.	22	2,300.00	50,600.00
		Sub Total fot Electrical Power Supply Arrangement				3,59,92,320.60
6.0		Supply, installation, testing and commissioning of 33 kV /0.433 kV or 11 kV/0.433 kV substation equipment comprising HT panel, transformers, HT cable, bus trunking from transformer to LT panels, automatic power factor correction panel, active harmonic filters, TVSS (Transit Voltage Suppression System), SPD (Surge Protection System), essential panel, earthing, required inter-connections, substation safety equipments including LT cabling from substation to the buildings fed by the substation. Note:- Plinth area rates is @ Rs.9,000/- per kVA, cost of one 3 MVA substation is Rs. 2.70 Crore	No.	2	2,70,00,000.00	5,40,00,000.00
7.0		Supply, installation, testing and commissioning of silent DG sets, AMF panel, bus ducting / cables from DG sets to essential panel, synchronizing panel where required, DG set enclosure room sound insulation / ventilation / smoke exhaust as require, earthing of DG set system, control cabling, fuel tank/piping, DG set exhaust piping / exhaust chimney as per CPCB norms, civil works connected with DG set including foundation as required. Note:- Plinth area rates per kVA cost is @ Rs.11,560/- plus Rs.1,070/- for synchronizing panel, accordingly cost of one 2000 kVA DG set is Rs. 2,52,60,000/-	No.	2	2,52,60,000.00	5,05,20,000.00
8.0		Supply, installation, testing and commissioning of VRV/VRF system including indoor / outdoor units, piping, electrical power distribution / wiring, electrical panel, treated fresh air system etc.	HP	120	58,480.00	70,17,600.00
9.0		Supply, installation, testing and commissioning of grid interactive roof top solar photo voltaic power generation system including space frame.	kW	100	58,480.00	58,48,000.00
10.0		Facility UPS for IT load other than Data				

		Centre				
	10.1	Supply of true Online double conversion modular UPS System minimum capacity 64 KVA / KW and maximum capacity 90 KVA / KW, 3 phase, 415V, unity output power factor, Microprocessor based PWM technology using IGBTs with hot swappable Power Module, hot swappable intelligence module and static switch. The UPS shall utilize a (N+1) redundant and shall operate in parallel along with SNMP card with BMS compatibility. This also includes all necessary accessories complete as required at site and as per the standards. Note:- a). Modules addition / removal to be done in online mode without putting UPS to Bypass or Maintenance bypass. b). No reduction in UPS capacity with redundancy, even if any controller is down.	No.	1	20,78,210.00	20,78,210.00
	10.2	Supply of maintenance free lead acid (VRLA) type Hot Swappable Modular Batteries in draw out fashion within the same rack for back up time for approx 10-15 minutes at N load as per the offered OEM module configuration considering 0.8 load power factor for battery calculation. It should possible to add or replace battery modules without switching the load to bypass source. The bank of batteries shall comprise of required Nos of batteries connected in series and there should be multiple banks connected in parallel to provide redundancy. The battery module connections should be on to Bus bar and no interconnecting cables to be used for power connections for offered UPS in Item Sr.-1.	No.	1	11,71,270.00	11,71,270.00
		Sub Total for Facility UPS				32,49,480.00
	11.0	DCIM				
	11.1	Supply, installation, testing & commissioning of Data Center Infrastructure Management (DCIM) software with all other accessories required for central monitoring of the following sub systems, integration using SNMP / MODbus / BACnet protocols along with necessary hardware and software complete for all the offered equipment's in the Schedule as per specifications and as required. Detail of major equipment is as follows:- a). Precision air conditioning Units - 16 Nos.; b). UPS System - 6 Nos.; c). IP PDU - 75 Nos.; d). Energy Meters of electrical panels - 12 Nos.; e). Water Leak Detection - 1 No.; f). Temperature & Humidity Sensors - 4 Nos. g). Fire Alarm System including Gas Release Panel - 1 No.; h). DG Set - 2 Nos.; i). Temperature & humidity Sensors - 4 Nos.	Job	1	23,00,000.00	23,00,000.00
	11.2	Supply, installation, testing & commissioning of server for DCIM with required configuration as per OEM recommendation.	No.	1	3,45,000.00	3,45,000.00
	11.3	Supply, installation, testing & commissioning of following type Transducers & sensors for environmental monitoring through DCIM complete etc. as required. a). Outside Air Temperature and RH sensor - 1 No.; b). Room Temperature Cum Humidity sensors with less than 3% accuracy - 1 No.; c). Standalone Hydrogen gas detection system with alarm capability for Battery room - 1 No.	Job	1	57,500.00	57,500.00
	11.4	Supply, installation, testing & commissioning of	Job	1	1,20,750.00	1,20,750.00

		Desktop grade machine of latest configuration 11th Gen Intel® Core™ i5-11400 processor, Windows 11 Home, Intel UHD Graphics 730 with shared graphics memory, 8GB, 8Gx1, DDR4, 2933MHz, 1TB 7200RPM 3.5" SATA HDD for dash boards monitoring & A4 size coloured ink-tank printer for report generation.				
	11.5	Supply and installation 50mm x 25mm in single compartment Raceway made of Galvanized sheet of minimum thickness 1.6mm for body / cover and 1 mm for divider if any, with coupler, Junction box, fixing bracket, riser on wall / floor complete as per the site requirement.	Mtr.	50	345.00	17,250.00
	11.6	Supply and laying Flexible ABC conductor, PVC type D insulated, core laid up, overall shielded by Al-mylar along with ATC drain wire and overall PVC type ST-3 sheathed cable of 2 x 1.5 sq.mm. 1.1 KV grade in conduit / Raceway / DLP / Channel etc. as per the site requirement.	Mtr.	250	173.00	43,250.00
	11.7	Supply of Fire-Retardant PVC insulated 2 core 1.5 sqmm copper conductor cable for speaker and laying on the surface / recessed in conduit as per site requirement.	Mtr.	275	138.00	37,950.00
	11.8	Supply of UTP 4 pair CAT 6 LAN Cable and laying in PVC conduit on the surface / recessed as per site requirement.	Mtr.	1000	64.90	64,900.00
		Sub Total for DCIM				29,86,600.00
	12.0	Internal Electrical Installation, Wiring & Street Lighting				
	12.1	Internal electric installations (Note: As per the civil estimate Building cost is Rs.9,80,42,600/-. 12.5% of building cost has been taken as per item S. No. 2.3 of at Page-4 in Plinth Area Rates 2023, w.e.f. 01/08/2023 of CPWD)	%	98042600	12.50	1,22,55,325.00
	12.2	Power wiring and plugs (Note: As per the civil estimate, Building cost is Rs.9,80,42,600/-. 4% of building cost has been taken as per item S. No. 2.4.1 of at Page-4 in Plinth Area Rates 2023, w.e.f. 01/08/2023 of CPWD.)	%	98042600	4.00	39,21,704.00
	12.3	Street Lighting with LED: Supply, installation, testing and commissioning of LED street/ compound/ high mast/ pathway/ landscape lighting for the entire campus.	Sq m	9000	160.00	14,40,000.00
		Sub Total Internal Electrical Installation, Wiring & Street Lighting				1,76,17,029.00
	13.0	Goods Lift - 3 Ton	No.	1	44,17,000.00	44,17,000.00
	14.0	Electrical Charges (Lump Sum) for Augmentation of power supply etc.				3,00,00,000.00
		Sub Total for Electrical Works Cost Inclusive GST @ 18%				31,81,35,783.64
		Total for Electrical Works Cost Excluding GST @ 18%				269606596.31
3	Network Estimate					
	S.N o.	Item Description		Qty	Unit price (in Rs.) without GST	Amount (Rs.)
	A	Gateway Infrastructure for Internet Gateway, FOISnet & UTN				

	1	Gateway Routers for Internet Gateway & 3rd Party Integration		2	40,45,547.00	80,91,094.00
	2	Gateway Routers for FOISnet & UTN		4	40,45,547.00	1,61,82,188.00
	3	L-3 Gateway Switches		6	5,08,144.00	30,48,864.00
	4	Network Intrusion Prevention System (NIPS) for Internet Gateway, UTN & FOISnet		6	62,96,738.00	3,77,80,428.00
	5	Front End Firewalls for Internet Gateway, UTN & FOISnet Gateway		6	45,08,844.00	2,70,53,064.00
		Total (A)				9,21,55,638.00
	B	Back End Infrastructure				
	B.1	Datacentre LAN (Core Switches, L-3/L-2 Switches & Cabling)				
	1	Core L-3 Switches for DMZ of Internet Gateway, FOISnet & UTN for Integration & Campus LAN		6	5,08,144.00	30,48,864.00
	2	Spine Switches for DC		6	8,42,846.00	50,57,076.00
	3	Leaf Switches for providing connectivity to servers		12	9,22,834.00	1,10,74,008.00
	4	Border Leaf Switches		4	9,22,834.00	36,91,336.00
	5	Management switches for DC servers		5	3,67,889.00	18,39,445.00
	6	Structured LAN Cabling (Fibre & UTP) for 20 Server racks including passive services		1	18263916	1,82,63,916.00
		Total (B.1)				4,29,74,645.00
	B.2	Network Security				
	1	Back End firewalls (Internet Gateway, FOISnet & UTN)		4	70,03,322.00	2,80,13,288.00
		Total (B.2)				2,80,13,288.00
	B.3	ADCs, SLB & WAF solution				
	1	Application Delivery Controller (ADC) for Internet Gateway with GSLB		2	45,64,477.00	91,28,954.00
	2	Application Delivery Controller (ADC) for FOISnet & UTN		4	22,82,238.50	91,28,954.00
	4	Web Application Firewall (WAF) for Internet Gateway		2	75,64,166.00	1,51,28,332.00
	5	Server Load Balancer (SLB) for Internet Gateway		2	67,99,435.59	1,35,98,871.19
		Total (B.3)				4,69,85,111.19
	C	Replication Network Infrastructure				
	1	Replication Router / L-3 Switches/SD-WAN Solution at Primary DC		6	11,00,000.00	66,00,000.00
		Total (C)				66,00,000.00
	D	Internet Bandwidth, Replication Links & DR WAN network				
	1	Provisioning of Internet Lease Line services for RIDC total of 500 Mbps (250 E1) for one year		1	9,16,750.00	9,16,750.00
	2	500 Mbps communication links between existing DR DC at Secunderabad and new DR DC at Moula Ali Secunderbad for one year		1	8,00,000.00	8,00,000.00
	3	DR-DC replication (CRIS HQ to DRDC) bandwidth total of 500 Mbps for one year		1	30,10,000.00	30,10,000.00
	4	NDC replication (NDC at DRM office new Delhi to DR-DC) bandwidth (total 02x155 Mbps for one year)		2	480000	9,60,000.00
	5	Replication Links between 04 PRS/UTS DCs & New DR-DC (02 E3 from each PRS/UTS DC) for one year		8	2,27,496.00	18,19,968.00
	6	Communication link from 249 Tier 1 UTN locations to New DR DC (02 Mbps each) for one year		1	1,43,39,151.00	1,43,39,151.00

	7	Communication link from 81 Tier 1 FOISnet locations to New DR DC (02 Mbps each) for one year		1	50,62,426.27	50,62,426.27
		Total (D)				2,69,08,295.27
	E	Campus LAN and Network Operations				
	1	Network connectivity for about 50 users in the building including Structured cabling, racks, L-2 Switches, accessories etc.		1	4600000	4600000.00
	2	Intercom facility for about 50 users in the building including Telephone exchange, Wiring, telephone sets etc.		1	2575000	2575000.00
		Total (E)				7175000.00
		Total Cost (in Rs.) without GST (A to E)				250811977.46
4		Departmental Charges				
		Departmental charges for Network Items (10%)				25081197.75
		Departmental charges for Electrical Work (10.37%)				27958204.04
		Departmental charges for Civil Work (10.63%) (Items 8)				2,52,80,351.94
		Total Cost of Departmental Charges				78319753.72
		Total cost of (Civil + Electrical + Network) works				836559135.96
		Total Contingency cost @1%				8365591.36
		Total project cost				844924727.32
		GST 18% on Total Project Cost for Non-ICT				152086450.92
		Grand Total project cost for Non-ICT with 18% GST				997011178.24
		Rounded Off				Rs. 99.70 Crore