

बिहार राज्य भवन निर्माण निगम, लि० पटना
(बिहार सरकार का उपक्रम)
दर आमंत्रण हेतु कोटेशन आमंत्रण सूचना सं०-75/2018-19

भवन निर्माण विभाग के निबंधित संवेदकों/ख्याति प्राप्त फर्मों/कंपनियों से दिनांक: 24.09.2018 के अपराह्न 3:00 बजे तक पटना जिलान्तर्गत पटना में अंजुमन इस्लामियाँ हॉल का पुनर्निर्माण कार्य में विद्युत सामग्रियों की आपूर्ति एवं अधिष्ठापन के गैर अनुसूचित मदों के लिए मुहरबंद कोटेशन उप महाप्रबंधक, पी०आई०यू०, पटना/महाप्रबंधक (उत्तर/दक्षिण)/मुख्य महाप्रबंधक, बिहार राज्य भवन निर्माण निगम लि०, पटना के कार्यालय में प्राप्त किया जाएगा और उसी दिन 3:30 बजे अपराह्न में कोटेशनदाताओं या उनके द्वारा अधिकृत प्रतिनिधियों के समक्ष खोला जायेगा।

- उक्त कोटेशन से संबंधित विस्तृत विवरणी निगम के वेबसाईट www.bsbccl.bih.nic.in पर उपलब्ध है।
- यह कोटेशन दर निर्धारण के लिए आमंत्रित किया गया है।
- विशेष जानकारी हेतु अधोहस्ताक्षरी के कार्यालय में कार्यावधि में सम्पर्क करें।

विशेष शर्तें:-

1. कोटेशनदाताओं को अपना दर अंक एवं अक्षरों में उद्धृत करना है।
2. दर सभी प्रकार के करों को लेकर अंकित किया जायेगा।
3. दर कार्यस्थल पर समानों की दुलाई को लेकर किया जाएगा, उन्हें किसी प्रकार का अतिरिक्त दुलाई दर देय नहीं होगा।
4. कोटेशन के साथ अद्यतन आयकर एवं GST प्रमाण-पत्र देना होगा।
5. विशेष सूचना के लिए सूचनापट्टा या वेबसाईट www.brdbihar.gov.in एवं www.bsbccl.bih.nic.in देखें या अधोहस्ताक्षरी से सम्पर्क करें।

ह०/-

मुख्य महाप्रबंधक,

बिहार राज्य भवन निर्माण निगम लि०, पटना।

ज्ञापांक:- 2651

दिनांक: 04.09.18

प्रतिलिपि:- निदेशक, सूचना एवं जन-सम्पर्क विभाग, बिहार, पटना को e-advertisement के माध्यम से दैनिक समाचार पत्रों में प्रकाशनार्थ समर्पित।

मुख्य महाप्रबंधक,

बिहार राज्य भवन निर्माण निगम लि०, पटना।

bx

PROJECT - ANJUMAN ISLAMIA.

ELECTICAL NON-SCHEDUL ITEM

क्रम सं०	योजना का नाम	कार्य की विवरणी	ईकाई	उद्धृत दर
1	अजुमन इस्लामिया भवन, पटना के निर्माण कार्य	Design, supply, installation, testing and commissioning of cubicle main panel for indoor installation of wether proof design as per IP 54 class, made out of 2 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 2.0 mm thick sheet and with front & back opening system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd. (drawing shall be approved by engineer -in charge) (Main Panel)a) 63A, 3 pole MCCB, 36kA, with thermal release 50-63A - 1 no with rotary handle.b) 100A On load Change over Switch , Four pole- 2 nos. c) 32 A, DP MCB with Din bar arrangement - 6 no. c) 4 strip Al. Bus bar suitable for 200A (preferably 40mm x 5mm x 1 nos Al flat) with heat shrinkable tube as per the drawing). d) Digital VAF meter- 1 set. e) RYB Neon/ LED indicating lamp - 2 set.f) 200/5 A CT - 2 set. h) All other required accessories, wirings, as per SLD.	SET	
		FIXTURE FITTING :-		
2		Supply, Testing & commissioning of Surface/ Suspended type energy efficiency White LED fitting suitable for 20-22 watt confirming to LM-80 catagory with a special diffuser and suspension kit including 20-22 watt LED lamp of approved make etc as reqd.	Each	
3		Supply, Testing & commissioning of surface type energy efficiency LED tube light fitting suitable for 2 x 18 watt LED lamp (with lamp) of approved make etc as reqd.	Each	
		SUBSTATION & EXTRNL ELECTRICITY :-		
4		(I) - Transformer - Supply, installtion, testing, commissioning of the following capacity 11 /0.433 KV, 50 Hz, 3phase, Oil cooled transformer suitable for out door type installation on plinth, with first filling of oil and with LV cable end box, fitted with on load tap changer for better voltage regulation, standard accessories and as per detailed specification attached. a) 800 kVA, 11/0.433 KV, Copper Wound, (+5% to -15%) with OLTC , RTCC and AVR (Energy Efficiency Level-2, BEE star-1).	Each	
5		Incommer & Outgoing Standalone Panel. A. (a) VCB , 11 kV, 630Amp, 13.12 KA. (b) 1ph 11 KV / 110 Volts PT (out door type) Class 0.2 accuracy and 100 VA burden - 3 nos. (c) 11 kV outdoor dead type dual core dual ratio 3 CTs of ratio 100/50/5/5 A of 15 VA burden, PS 5 P10 and accuracy class 0.2. Control Panel - Cubicle type control panel suitable for floor mounting made out of 1.63 mm CR sheet duly powder coated and with following relays. a) Microprocessor based Numerical relay for O/L, E/F and SC protection suitable for above. b) Master trip relay - 1 no. c) PT fuse failure relay. d) Trip Circuit supervision relay. e) Indicating type Annunciator panel with Buzzer. f) Digital Tri-vector meter. g) Digital voltmeter -0-12 kV. f) Digital Ammeter - 0-100A. h) RYB /Trip/Close/Spring charged indicating lamp. i) Fault annoucaiation panel for O/L, WTI, OTI, Buchholz relay Alarm/Trip, , DG ON, Breaker ON/OFF/TRIP, LT Breaker Trip (12 window). j) Cable Termination chamber I/C and O/G for 150 sq.mm 3 core XLPE (without Cable).	SET	
6		<u>Substation</u> .Supplying & Erection of 150 x 150 x 6 mm of RS joist pole 11 mtr length with steel pole collar, 450 x 450 mm x 8 mm anchor plate on bottom with cement concrete (1 cement : 2 coarse sand : 4 stone aggregate 20mm) of specified size and shape including form work, plastering if required, curing etc as required. (Volume of pole/ pipe not to be deducted).	Each	
7		Supplying and erection of stay set complete (galvanised) with 19/20 mm dia X 1.8 metres long stay rod, anchor plate ,7/ 3.15 mm dia G.I. stay wire and strain insulator etc with foundation including excavation and refilling etc. as required.	SET	

8	S/F following MS channels /angle for DP/ transformer installation complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts, nuts and washers etc (as per drawing) and painting with primer and finish paint as required.		
	a) 100 x 50 x 50 x 6 mm	Per Mtr	
	b) 75 x 40 x 40 x 6 mm	Per Mtr	
	c) 50 x 50 x 6 mm MS angle	Per Mtr	
9	Supplying of 50 mm X 8 mm M.S. flat iron pole top bracket/ cross arm for single 11/22/33 KV over head line conductor complete with fixing clamps, bolts, nuts and washers drilling holes for insulator pins, bolts and nuts etc and painting with primer and finish paint as required .	SET	
10	Supplying and erection of three piece nonlinear resistor type lightning arrestor suitable for 3 wire, 9 KV overhead lines with rated voltage 20 KV (rms) with a nominal discharge current rating of 10 KA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.	SET	
11	S/F V Cross Arm for 11 kV tapping, size 75 x 40 with accessories etc as reqd.	SET	
12	S/F Double break horizontal AB switch 400 Amp, 11 kV with GI handle suitable for operation from ground i/c earthing the base etc as reqd.	SET	
13	S/F Double break horizontal AB switch 400 Amp, 11 kV with GI handle suitable for operation from ground i/c earthing the base etc as reqd.	SET	
14	Supplying and erection of 11 KV disc insulator for over head lines with galvanised insulator fittings, ball and socket type and complete with galvanised strain clamps, bolts, nuts, washers etc. as required.	Each	
15	Supplying and erection of 11 KV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.	Each	
16	S/F 100 sqmm Aluminium XLPE insulated overhead conductor for jumpering with sockets etc.	Per Mtr	
17	Supplying and spreading 50 mm gravells of even size in the sub-station yard to a height of 100 mm from the even floor level etc as reqd.	Cum	
18	Supplying and fixing 75 x 40 MS channel of 2.1 mtr long with fabrication and CC foundation of minimum 8" x 6" x 2 ft for ineral post ot hold the fencing with minimum 2 coat of silver oxide paint after primer paint etc as reqd. (The projection of MS channle shall be minium 1.8 mtr from ground level).	Each	
19	Supplying and Fixing fencing arrangement made out of 40 x 40 x 5 MS angle and 2" x 1" x 4 mm wire mesh of 1.2 meter width and 1.8 mtr height (as per drawin) with suitable MS flat cross bracing including painting with Primer paint and 2 coat of silver oxide paint of approved brand etc as reqd.	Each	
20	Supplying and Fixing Gate arrangement made out of 25 mm dia GI pipe and 2" x 1" x 4 mm wire mesh of 2.0 meter width and 1.8 mtr height (as per drawing) with suitable MS flat cross bracing including painting with Primer paint and 2 coat of silver oxide paint of approved brand, pad lock arrangement etc as reqd.	Each	
21	Making Liasioning with supply authority for permission, approval of drawing, inspection, & charging of the DP Structure, Substation, Main Panle etc including charging as reqd.	Job	
22	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/Trench as required.		
	A) above 70 sq.mm Upto 120 sq. mm	Per Mtr	
23	Supplying and making out door 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 :		
	A) 3 core 120 sq.mm	Each	
24	A) 3 core 95 sq.mm	Each	
25	Supply of following sizes PVC sheathed, unarmoured Copper conductor control cable of 1100 volt grade etc as required.		
	4 core x 2.5 sqmm	Per Mtr	
26	Supplying and laying 25 x 5 GI flat along with cables in exsting surface/ cable trench including making connection for loop earthing as reqd.	Per Mtr	

27	Lightning Arrestor/ DG Metering. Supply, delivery, installation, testing and commissioning of Early Streamer Emission (ESE) Lightning protection Airterminal complying with NFC - 17-102 standards (RP= 60 mtrs.) including air terminal, lightning strike counter, copper plate earthings, 25x5mm copper flats, complete as required and as per direction of Engineer-in-charge	Job	
28	Supplying and fixing 3 nos GI fire bucket of 9 ltr capacity with suitable pedestal arrangement for each transformer sub-station yard etc as reqd.	SET	
29	Supplying and Laying 12 mm thick rubber mat of ISI marked and of approved make etc as reqd.	Per Sq.Mtr	
30	Supplying and fixing shock treatment chart bonded with glass frame of bigger size on the existing surface with suitable clamp /hook arrangement etc as reqd.	SET	
31	Supplying and fixing First aid box with required first aid for the sub station as reqd.	SET	
32	Supplying 11 kV class hand gloves as reqd.	SET	
33	Supplying Backelite/ FRP Earth discharge rod of ISI marked with clamps, extension cable etc as reqd.	SET	
34	<p>Panels :- Design, supply, installation, testing and commissioning of cubicle main panel for indoor installation of weather proof design as per IP 54 class, made out of 2 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front & back opening system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd. (drawing shall be approved by engineer -in charge) (Main Panel).a) 1250 A ACB, Electrical drawout type with micro processor release, 4pole, 65kA breaking capacity, with release range of 625-1250A (min.)and mechanical and electrical interlock - 1 nos. (as per SLD). b) 800 A ACB, Electrical drawout type with micro processor release, 4pole, 65kA breaking capacity, with release range of 400-800A (min.)and mechanical and electrical interlock - 1 nos. (as per SLD). c) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock 1nos. (as per SLD). c) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock . c) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock. c) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock. c) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock) 800 A ACB, Electrical drawout type without release, 4pole, 65kA breaking capacity, with mechanical and electrical interlock</p>	SET	
35	<p>Design, supply, installation, testing and commissioning of cubicle main panel for indoor installation of weather proof design as per IP 54 class, made out of 1.63 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front & back opening system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd. (drawing shall be approved by engineer -in charge) (Stilt Panel) <i>Incommer :-</i> a) 63A, 4 pole MCCB, 36kA, with thermal release 50-63A --1 no .b) 32A, TPN MCB, 10KA, - 3 no.d) 4 strip Aluminium Bus bar suitable for 100A (preferably 25mm x 1mm x 1 nos Al flat) with heat shrinkable tube as per the drawing).c) 16A SP MCB, 10KA, - 8 nos.e) Digital VAF meter- 1 set. f) RYB Neon/ LED indicating lamp - 1 set. g) 50/5 A CT - 1 set. h) Inter connection of Bus bar and switch gears shall be made through suitable size Aluminium flats. Copper multi core cable shall be used for inter connection upto 63A capacity.i) All other required accessories, wirings, as per SLD.</p>	SET	



36	<p>Design, supply, installation, testing and commissioning of feeder pillar suitable for out door installation of weather proof design as per IP65 class, made out of 1.63 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front opening double door system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd. (drawing shall be approved by engineer -in charge) (for AC ODU- 3rd floor). INCOMMER:-a) 250A, 4 pole MCCB, 36kA, with thermal release 160-200A - 1 no. OUTGOING:-a) 63A, TPN MCCB, 25-40A, thermal Release, 35kA, 4 pole, - 8 no. b) 32A, TPN MCCB, 20-25A, thermal Release, 35kA, 4 pole, - 1 no. c) 4 strip Aluminium Bus bar suitable for 200 A (preferably 40 mm x 5 mm x 1 nos Al flat x 300 mm) with heat shrinkable tube. d) Digital VAF meter with CT unite) RYB Neon/ LED indicating lamp. f) 100A 4 pole Stud type connector - 8 nos. h) Inter connection of Bus bar and switch gears shall be made through suitable size Aluminium flats above 63A capacity. Insulated Copper multi core cable shall be used for inter connection upto 63A capacity.</p>	SET	
37	<p>Design, supply, installation, testing and commissioning of feeder pillar suitable for out door installation of weather proof design as per IP 65 class, made out of 1.63 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front opening double door system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd. (drawing shall be approved by engineer -in charge) (for AC ODU-5th floor). INCOMMER:-a) 250A, 4 pole MCCB, 36kA, with thermal release 125-160A - 1 no. OUTGOING:-a) 63A, TPN MCCB, 25-40A, thermal Release, 35kA, - 5 no. b) 32A, TPN MCCB, 20-25A, thermal Release, 35kA, - 2 no. c) 4 strip Aluminium Bus bar suitable for 200 A (preferably 40 mm x 5 mm x 1 nos Al flat x 300 mm) with heat shrinkable tube. d) Digital VAF meter with CT unit. e) RYB Neon/ LED indicating lamp. f) 100A 4 pole Stud type connector - 6 nos. h) Inter connection of Bus bar and switch gears shall be made through suitable size Aluminium flats above 63A capacity. Insulated Copper multi core cable shall be used for inter connection upto 63A capacity. APFC Panels (400KVAR).</p>	SET	
38	<p>Design, supply, installation, testing and commissioning of CAPACITOR BANK suitable for in door installation of weather proof design as per IP 54 class, made out of 2.0 mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front opening double door system suitable for mounting following Capacitor, switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd. (drawing shall be approved by engineer -in charge) a) 630A 50KA, Capacitor duty MCCB, FP - 1 no. b) APFC Relay 14 stage - 1 no. c) 50 kVAr Capacitor, 480V, MPP Heavy duty LTXL (Square) with 100A MCCB, 3 pole, 35kA = 06 no. d) 25 kVAr capacitor, 480 V MPP Heavy duty LTXL (Square) with 63A MCCB, 3 pole 35kA = 02 nos. e) 10 kVAr capacitor, 480 V MPP Heavy duty LTXL (Square) with 32A MCCB, TP, 35kA, = 04 nos. f) 05 kVAr capacitor, 480V MPP Heavy duty LTXL (Square) with 32A MCCB, TP, 35kA, = 02 nos. g) Bus Bar 200A (Preferably 40 x 5 mm AL.). h) Capacitor ON-OFF indicator with Push button. i) RYB indicator with Toggle switch. j) Capacitor Duty Contactor suitable for above capacitor. j) Bakelite fuse base with HRC fuse suitable for above capacitor. k) Voltmeter 0-500V with Selector Switch = 1 no. l) Ammeter 0-150A with Selector Switch = 1 no. m) Auto Manual Switch. n) All other required accessories for the above panel with Interconnection through copper conductor cable and lugs. o) CT for mounting on the main panel for reference. p) All capacitors are of LTXL of L&T or Similar Superior make strictly.</p>	SET	

39	<p>Design, supply, installation, testing and commissioning of cubicle panel suitable for in door installation of weather proof design as per IP 54 class, made out of 1.63mm thick CRCA sheet as per the drawing with cubicle type internal arrangement of 1.6 mm thick sheet and with front opening double door system suitable for mounting following switch gears, busbars, metering unit, including painting with powder coated paint of approved colour and shed with earthing the body etc as reqd. (drawing shall be approved by engineer -in charge) (for Pump Room).</p> <p><u>Incommer:-</u>a) 63A, FP MCCB , 35KA, with thermal release, 50-63A - 1 no. <u>Out going:-</u>b) 32 A, TPN SDF unit, open execution type with 32 A HRC fuse- 3 no. c) DOL starter, 11-18 A relay range open execution type - 2 nos. d) DOL starter, 9-14 A relay range open execution type - 1 nos. e) Motor protection relay - 3 nos. f) 4 strip Alluminium Bus bar suitable for 100 A (preferably 30mm x 4 mm x 1 nos Al flat x 600 mm) with heat shrinkable tube. g) 0-500V , 96 x 96 mm Voltmeter, 100A -Ammeter with selector switch.g) 0-500V , 96 x 96 mm Voltmeter, 100A -Ammeter with selector switch.h) RYB Neon/ LED indicating lamp. i) 100A 4 pole Stud type connector - 4 nos.j) Inter connection of Bus bar and switch gears shall be made through suitable size Alluminium flats above 63A capacity. Insulated Copper multi core cable shall be used for ineter connection upto 63A capacity.k) 25 x 5 mm Alluminium Earth bus with insulation.</p>	SET	
40	<p>Supplying and fixing 5 mm thickness MS checker plate on existing trnch for covering with suitable MS handle and making fabrication,painting with primer and aluminium paint to give an even shed including making good the damages etc as required.</p>	Per	
41	<p><u>DG ESTIMATE(EXTRNL ELECTRICAL):-</u> S/I/T/C of factory assembled, factory tested silent diesel engine alternator set capable of delivering not less than 500 KVA at NTP with weather proof acoustic enclosure complying CPCB-II norms having suitable ventilation spillage on common base frame i/c installation on foundation, cabling, earthing etc. and comprising of following and conforming to the specifications attached:(A) ENGINE:-Water cooled diesel engine capable of delivering suitable B.H.P. at 1500 r.p.m. (at NTP) comprising flywheel to suit direct/flexible coupling , 24 V starting Motor, Battery charging Alternator, integrated wiring, starting gear wheel on flywheel, battery cables radiator, fan, oil bath air cleaner ,lube oil pump, lube oil gauge, fuel and lube oil filters, precision governor for class A1 governing, fuel tank of minimum 500 liter capacity with fuel level indicator, filling inlet, strainer/fuel filter, air vent leak proof cap, Drain Plug, Engine protection(mechanical), Safety controls to shut down the engine in the event of low lube oil pressure or high water temperature, Audio visual alarm for 'Low lubricating oil pressure', 'High water temperature' and DG over load', residential silencer and standard set of tools and spares comprising of double ended spanner, screw driver, filler gauge, joint cylinder head to cover and to exhaust o' ring push rod etc as per specifications attached. (B) ALTERNATOR:-The engine will be coupled through a suitable coupling to an indigenous alternator. The alternator will give an electric output of 500 KVA Three phase 50 Hz, 415 V, 4 wire A.C. supply with self started, self regulated screen protected drip proof in IP:21 enclosure with class F/H insulation suitable for 1500 rpm direct coupled diesel engine.</p>	Sq.Mtr	SET

42	<p>© CONTROL PANEL (In Built)-:Supply, Installation, Testing and Commissioning of standard AMF panel suitable for 1 X 500KVA DG set's with CB ON & Off indication and charging on indication etc. totally enclosed compartmentalized cubicle indoor type panel board fabricated with 2 mm thick CRCA MS sheet on bottom for taking load of cable gland and necessary individual gland plates for cable with base frame, powder coated after 7 Tank treatment processed and provided with suitable size of Heat Shrinkable Sleeved Cu bus bars, ON, OFF, TRIP Indications, RYB-Phase Indications, Multifunction Meter & digital Voltmeter with following switchgear ratings: The Control Panel shall have the following instruments:Incomer- A) MCCB 800A, 50KA, 50Hz, 4Pole with thermal Release - 1 Nos. b) AMF unit suitable for above E/A set. Microprocessor based relay with composite meter for digital display of :-i) Generator voltage/AC Mains voltage. ii) Load Current.iii) Power Factor.iv) Frequency. v) Energy. C) Push button-switch for ON and OFF operation. D) LED type pilot lamps, five numbers (one for each phase, one for load on set and one for charging on). E) Battery charger complete with voltage regulator, voltmeter and ammeter for charging the battery from mains. This will be in addition to the battery charging alternator fitted on the engine.F) Audio visual alarm with reset and on/Off switch to indicate the main supply .</p>	SET	
	LIFT WORK:-		
43	<p>Supply installation testing and commissioning of 8 passenger (544 kg) lift having contract speed of 1.5 mps serving at different floor in the lif shaft with machine room less design as per enclosed specification as under.i) Location of Lift : Anjuman Islamia Building, Patna.ii) Speed 1.5 m/sec. iii)Travel - B + 7 floor. iv) Stop and opening - 8 nos (at Same side). v) Macine - Gear less Machine. vi) Hoist Media - CSB Taction media.vii) Control -VVVF (AC variable voltage and frequency).viii) ARD with Dry maintenance free battery of minimum 12 AH capacity each with required nos. ix) Operation - Micro processor based single automatic push button With duplex collective selective/ without attendant.x) Power :- 415V, 3ph 50 Hz -4 wire system. xi) Type of Doors :a) Car- 800 mm clear opening with Power operated fully automatic center opening/Telescopic horizontal sliding stain less steel scratch proof (Hairline). , Fire rating -60 min.xii) (b) Landing Doors : Automatic & multi beam full height infra red detector system MS door finished with powder coated paint of approved shed/ Stainless steel. Fire rating- 60 min.xiii) Hand rail of not less than 600 mm long and 900 mm above floor level to be fixed adjacent ot control panel in car (in 1no lift). Annual Comprehensive maintenance of lifts which include preventive, routine, breakdown maintenance for a period of five years including repairing/replacement of worn out spares/items with minimum down time , waranty granantee of repaired/replaced spares after the expiry of One year guarantee period as reqd.</p>	Each	
44	<p>a) Passenger lift, 8 Passenger as above, 2 nos(5Years Each lifts). b) Goods cum passenger lift , 500 kg as above, 1 no.</p>	Job	
	CCTV WORK		
45	<p>3MP IPCAMERA BULLET WITH (H.265)COMPRESS,RES2304/1296,ICR AUTO, DIGITAL WDR , CVBS OUTPUT,IP-66 INGRESS PROTECTION,DUAL AUDIO,STORAGE CARD -SUPPORT,AUD-G711A/U,LENS MOUNT-CS,ALARAM IN1/OUT-1,PTZ (RS485 ×1)</p>	Each	
46	<p>3MP IPCAMERA DOME WITH (H.265)COMPRESS,RES2304/1296,ICR AUTO,DIGITAL WDR,CVBS OUTPUT,IP-66 & IK10 INGRESS PROTECTION,,STORAGE CARD SUPPORT,AUD-G711A/U,LENS MOUNT-M12,ROI SUPPORT,DAY&NIGHT-ICR,</p>	Each	
47	<p>5MP/H.265 NVR,SUPPORT 32CH 5MP@30FPS IP INPUT,PENTAPLEX SUPPORT,DUAL STREAM TECHNOLOGY,PTZ 128 PRESET,GIGA/ETHERNET,SDK SOFTWARE FOR THIRDPARY INTIGRATION,ALARAM INPUT32CH /OUT4CH,AUD-TWO WAY,VIDEO-HDMI-2 ,4K&2K,CPU-CORTEX-A17,OS -LINUX, USER-20,DISK RESERVE SUPPORT 64TB,ENCOD-CBR</p>	Each	
48	<p>S/F 42" LED TV with HDMI,WITH 4K RESOLUTION SUPPORT,ANDROID COMPATABLE, including connection, testing etc as reqd.</p>	Each	
49	<p>S/F SMPS for power supply for the above camera as reqd.</p>	Each	
50	<p>ENTERPRISE SERIES HARD DISK 4TB for the above NVR.</p>	Each	
51	<p>4J-45 MODULAR IO ,BOX WITH CONNECTOR.</p>	Each	
52	<p>CAT 6 PATCH CORD 2MTR.</p>	Each	
53	<p>16 PORT GIGABIT ETHERNET PATC PANEL-02.</p>	Each	

54	16PORT GIGABIT /ETHERNET PANEL SWITCH .	Each	
55	12U VALE RACK WITH WALL MOUNTING	Each	
56	S/F 3+1 CCTV 100% copper cable FOR DC SUPPLY .	Per Mtr	
57	Supply/fixing of 25 mm PVC conduit of ISI make along with accessories in surface/ recess including Painting in case of surface conduit, cutting the wall & making good the same in case of recess.	Per Mtr	
58	Supplying and laying CAT- 6 UTP cable on the existing conduit as reqd.	Per Mtr	
59	Installation, testing & commissioning of the total system, integration of network with all required software and all required minor accessories etc as reqd.	Job	
	LAN cabling for Data and TV signalling, Telephone as reqd.		
60	Passive Components (SUPPLY) - CAT6 Supplying and laying CAT- 6 UTP cable on the existing conduit as reqd. (D link/Tyco amps/Molex)	Per Mtr	
61	S/F Category 6 Patch Panel /Data switch suitable for 10/100 Mbps Layer-2 Workgroup Switch with one 1000 BaseTx and with Ethernet port etc as reqd .		
	24 + 4 port L2 managed switch .	Each	
	24 Post patch panel	Each	
	S/F CISCO make Access Points Wireless Type- 802.11B, 802.11G, 802.11n as reqd	Each	
	S/F CAT- 6 I/O Modular box with face place and back box with RJ 45 socket as reqd.	Each	
	S/F Category 6 Patch Cords (2 Meter) as reqd.	Each	
62	Other Passive Components:-		
	S/F Wall Mount 19" 12U Media Rack with all accessories, etc as reqd (for Networking/Data/TV)	Each	
	Making testing, commissioning of the above sytem with all required minor spares and accessories as per the direction of competent authority/ engineer -in charge etc as read.	Job	
	TELEPHONE WORK		
63	Supplying and fixing Digital EPABX system suitable for 32 extensions, for 240V,50Hz supply operation including SMPS, etc as reqd.	Each	
64	Supplying desktop telephone sets with colour ID facility as reqd.	Each	
	HVAC WORK		
	AIR CONDITIONING SYSTEM-AC UNITS		
65	Supply installation, testing and commissioning Digital VRF system of DC Inverter Scroll Compressor/Digital scroll compressor and One Constant Speed Scroll Compressor with Variable Refrigerant Flow system (with R-410 A) connectable to multiple indoor units. Outdoor unit shall be factory assembled weather proof casing constructed from heavy gauge mild steel panels with epoxy coated painting suitable for operating on 415V, 3 PH 50 Hz supply . The unit shall be completely factory wired and tested with necessary controls. The compressor shall be highly efficient inverter scroll type controller. The aluminium fins shall be covered with anti-corrosion resin. Unit shall be equipped with oil recovery system to ensure stable operation with long refrigerant piping. The unit shall be compatible for BMS operation.		
	a) 20 HP	Each	
	b)18 HP	Each	
	c)14 HP	Each	
66	Supply and installation, testing and commissioning of indoor Units shall be either ceiling mounted ductable type or Hi wall split type as specified. The indoor unit shall have independent electronic control valve to control the refrigerant flow rate respond to variations of the airconditioning load of the room. The fan shall be aerodynamically designed turbo multiblade type. Statically and dynamically balanced to ensure lowest noise. The cooling coil shall be made of seamless copper tube. The tube shall be Hydraulically or mechanically expanded and tested for 21Kg/cm2. Indoor units shall have a wireless remote control.		
	(i) Supply of ductable Units:		
	a) 1.0 TR Hi-wall Split unit	Each	
	b) 1.5 TR Hi-wall Split unit	Each	
	c) 2.0 TR High wall Split AC unit	Each	



	d) 4.0TR Duct type unit - High static duct	Each	
	e) 5.0TR Duct type unit - High static duct	Each	
	f) 6.0TR Duct type unit - High static duct	Each	
	g) 8.0TR Duct type unit - High static duct	Each	
	Guarantee: Minimum 5 years guarantee required for compressors.		
67	SITC of Central Remote Controller 1 No. Central controller unit, including necessary software, connected to a PC at front desk for operating, monitoring, setting and controlling of all indoor and outdoor units of the VRF / VRV system. The controller shall be capable of the following minimum functions: (under IBMS). i) Run status of each IDUs (Total: upto 60 nos IDUs).ii) Temperature setting of the individual IDU's. iii) Indication of actual temp. in the room at particular. iv) Switching the indoors units on/off from front desk. v) Communication with ODU microprocessor to share the complete data of the ODUs.	Each	
68	Supply and fixing of MS pedestal arrangement with metallic stand for outdoor unit with suitable CC arrangeent to bear the load including making painting etc as reqd.	Per KG	
69	S/F all refrigerant joints/branch distributor for indoor and outdoor units with nitrile rubber sleeve insulation covered with alluminium foil & pvc tapes. (This is the quantity requirement at site as per manufactured standard as pr the drawing details)	Each	
70	Supply of remote controller for below mentioned units :		
	a) Cordless remotes for ductable units with necessary accessories	Each	
	b) Corded remoted for ductable units	Each	
71	Supply and fixing of suction Line of 18G or 19G Copper tube with 19mm thick insulation by nitril rubber tubular covered by polyshield for inter connecting the indoor units and outdoor units.		
	a) 12.70mm (OD)	Per Mtr	
	b) 15.88mm (OD)	Per Mtr	
	c) 19.05mm (OD)	Per Mtr	
	d) 22.23mm (OD)	Per Mtr	
	e) 28.58mm (OD)	Per Mtr	
	f) 34.93mm (OD)	Per Mtr	
72	Supply and installation of liquid Line of 19G or 20G Copper tube with 13mm thick insulation by nitril rubber tubular covered by polyshield for inter connecting the indoor units and outdoor units.		
	a) 6.35mm (OD)	Per Mtr	
	b) 9.53mm (OD)	Per Mtr	
	c) 12.70mm (OD)	Per Mtr	
	d) 15.88mm (OD)	Per Mtr	
	e) 19.05mm (OD)	Per Mtr	
73	Supply and fixing of 2 Core x 0.75 sq.mm copper shielded cable for inter connecting between indoor units and outdoor units.	Per Mtr	
74	Supply and fixing of medium gauge PVC conduit for the inter connecting above cable between indoor units and outdoor units as reqd. (20 mm dia)	Per Mtr	
75	Supply and fixing drain piping arrangement of medium PVC piping with 12 mm rubber nitrile insulation on surface with required support arrangement etc as reqd		
	a) 25 mm dia	Per Mtr	
76	Supply of under deck insulation for exposed roofs 50mm thick fire proof 16 kG density FPS insulationwith aluminium foil faced and all accessories etc as reqd.	Per Sq.Mtr	
77	Supply of R-410 A Gas Charging for VRF systems with nitrogen flushing , gas charging & commisinging testing of the air conditioning system as reqd.	Job	
	AIR CONDITIONING SYSTEM-DUCTING		
78	Supply of GSS Ducting as per ISI Standards and specification and providing openings wherever required in the existing civil structure and fixing of clamps,8 mm GI threaded rod and angle supports, hangs, etc as reqd		
	a) 0.8 mm thick	Per	

	b) 0.63 mm thick	Per	
79	Supplying and fixing of powder coated, extruded aluminium grille without volume control dampers and fix up in positions with necessary frames, beedings and finished complete in coordination with civil works for use. Opening wherever required in the existing civil structure and fixing of clamps,supports, hangers, etc., required for running the pipelines, cables, duct etc as reqd.		
	a) 100mm linear grills	Per Mtr	
80	Supply and fixing of thermal insulation of complete supply air ducting inside sheet metal duct with 9 mm thick nitrile rubber insulation after applying two coat of setting adhesive and finished with 0.6 mm perforated alluminium sheet and reinforced with GI fasteners as reqd.	Per	
		Sq.Mtr	
81	Supply and fixing of accoustic insulation of supply/ return air with c Insulation using Arma sound or equivalent material with 13 mm thick as reqd.	Per	
		Sq.Mtr	
82	Supplying and fixing of volume Control Dampers made out of 1.6 mm thick galvanised sheet steel frame and blades of 1.6 mm galvanised sheet steel with linkages, operating handle & depth of 150mm with 40mm flanges all around suitable for manual control locations as reqd.	Per	
		Sq.Mtr	
83	Supplying and fixing Alluminium powder coated diffuser with all required accessories as reqd. (preferably 600 x 600)	Per	
		Sq.Mtr	
84	Supplying and fixing of fresh air arrangement with blower and with bird screen , damper, corase filter where ever required as per drawing.(Required cfm at grill shall not be more than 100 cfm)	Each	
85	Supply and laying of control Wiring of 4 core 1.5 sq.mm armoured copper cable for central monitor controllers for control cum transmission wiring of VRV / VRF system including testing etc as reqd.	Per Mtr	
86	Supply and fixing of trap door with two leaves using 63.5mmX38.5mm Size Teak Wood for the Outer frames it has to be positioned and fixed rigidly, sides grounded to the walls/ suspended from the Ceiling using G.I. Stop angles. The frame work will be fixed with 18mm thick MR Grade plywood (water proof) shutters and the edges of the plywood to be sealed with 25 x 10mm size teak wood lipping. The shutteres to be provided with stainless steel bearing type concealed hinges, S.S. latch, with two doors etc., The exposed plywood surface to be painted with one coat of primer, two coats of putty and two coats of premium emulsion paint of approved colour etc., complete retardant properties as per the directions by the Engineer in Charge .	Per	
		Sq.Mtr	
87	S/F following size round flexible copper conductor pvc insulated wather proof cable in existing pvc conduit /tray for power supply to the ODU including making connection etc as reqd.(preferabl on surface/Tray)		
	a) 4 core 6.0 sq.mm	Per Mtr	
	b) 4 core 10.0 sq.mm	Per Mtr	
	c) 4 core 16.0 sq.mm	Per Mtr	
88	S/F 2 x 6 sq.mm copper conductor FRLS cable in 20 mm dia medium PVC conduit for loop earthing including connection etc as reqd.	Per Mtr	
89	S/F following ladder type tray made out of angle iron with powder coating paint for fixing the refrigerant pipe line and control cables with suitable GI suspenders as reqd.		
	a) 300 mm width x 25 mm x 5 mm (angle)	Per Mtr	
	b) 200 mm width x 25 mm x 5 mm (angle)	Per Mtr	
	FIRE FIGHTING		
90	Supply, Installation, Testing and Commissioning of Intelligent Addressable Fire Detection and Alarm System.		
	CONTROL EQUIPMENTS:		
	32 bit microprocessor based Intelligent Addressable Fire Alarm Control panel with 4 loops with battery back up. The panel would be modular, decentralized, with The panel shall be consisting with minimum 240 character LCD display and for networking. The Panel would be able to record atleast 60,000 events history. Each loop would be capable to have atleast 99 addressable detectors and 99 addressable devices with up to 3.5km loop length.	Each	
91	1 KVA LINE INTERACTIVE UPS WITH 30 MIN BATTERY BACK UP	Each	

92	DETECTORS & OTHER MODULES		
	Supplying and fixing Intelligent Addressable type multicriteria detector with base for use as heat or smoke or combined both with automatic electronic addressing, microprocessor type with builtin integrated short circuit isolator including testing, commissioning etc as reqd.	Each	
93	Supplying and fixing Intelligent Addressable type Heat detector with base with automatic electronic addressing, microprocessor type with builtin integrated short circuit isolator including testing, commissioning etc as reqd.	Each	
94	Supplying and fixing Intelligent Addressable Manual Call Point having inbuilt short circuit isolator i/c testing and commissioning etc as reqd.	Each	
95	Addressable sounder with interface module, power supply for sounder and programmable by software having integrated short circuit isolator & having operating temperature -10°C to + 55°C	Each	
96	Analogue Addressable Control module with IP66 casing containing four relay outputs, each containing a potential-free DPDT contact with a fail-safe and in-built short circuit isolator The ambient temperature range shall be -20C to +60C.	Each	
97	Analogue Addressable Monitor module with IP66 casing containing four relay inputs, each containing a potential-free DPDT contact with a fail-safe and in-built short circuit isolator The ambient temperature range shall be -20C to +60C.	Each	
98	Dual LED Response Indicator (LOCAL)	Each	
	CABLE & WIRING ACCESSORIES		
99	4"/4" JB for mounting of detectors & other accessories with necessary fittings	Each	
100	Supplying and fixing Outdoor Electronic Sounder with 4 distinct tone including 40W Speaker with required accessories as reqd.	Each	
101	Supplying and laying of 2x1.5 sq.mm. ISI marked copper armoured conductor cable with gland socket and other wiring accessories on the existing surface/tray/shaft etc as reqd.	Per Mtr	
102	PUMPS & ACCESSORIES:- Supply, installing, testing, & commissioning of ELECTRIC DRIVEN HYDRANT PUMPS suitable for automatic operation consisting of the following. (as per specification).-Horizontal split casing centrifugal suction type pump complete for delivery of 2280 ltrs./minute against a total head of 70 mtr approximately to ensure a minimum pressure of 3.5 kg/sq cm at the farthest of topmost hydrant. The installation shall be complete with necessary pressure gauge with shut off cock on delivery side. (the pump should be tested for bench mark at factory and shall be gotten approved by the local fire Authority). complete with bronze impeller (hard finished and dynamically balanced), shaft and Mechanical seal.Squirrel cage induction motor suitable for 415 V, + 6%, 3 phase, 50 Hz, AC supply of 45 KW (60 HP) (approximately or as per pump efficiency) rating for the above pump with synchronous speed of 2900 RPM type such as as per IP: 55, insulation and flexible coupling and coupling guard with the pump. Common bed plate of fabricated mild steel channel or cast iron type with cushy foot mounting.	SET	
130	Supply, installing, testing, & commissioning of Diesel Engine DRIVEN HYDRANT PUMPS suitable for automatic operation consisting of the following. (as per specification).	SET	
131	Diesel Engine Driven Fire Pump of Capacity 137 m3/hr, 70 mtr head, with 85 BHP, 1800 rpm Radiator Cooled Diesel Engine, Cast Iron Body, bronze impeller, Stainless steel shaft, base frame, coupling, coupling guard (for delivery of 2280 ltrs./minute against a total head of 70 mtr approximately to ensure a minimum pressure of 3.5 kg/sq cm at topmost hydrant) etc complete set without battery, as per technical data sheet enclosed. Supply, installation, testing & commissioning of ELECTRIC AUTOMATIC PRESSURISATION JOCKEY PUMPS set consisting of the following.Horizontally mounted single stage centrifugal end suction type Jockey Pump complete for delivery of 180 ltrs. / min against a total head of 70 meters approx complete with bronze impeller, shaft .Squirrel cage induction motor suitable for 415 V, 50 Hz, AC supply of 7.5 HP, suitable rating for the above pump with synchronous speed of 2900 RPM TEEC type such as as per IP : 55 and flexible coupling and coupling guard with the pump. Motor shall accept +/- 6% variation and +/- 3% variation in frequency.Common bed plate of fabricated mild steel channel or cast iron type with cushy foot mounting.All required civil work shall be included. No extra payment shall be made.	SET	



132	<p>TOTAL OF PUMPS & ACCESSORIES:- ELECTRICAL- Fabricating, Supplying, erection, testing and commissioning of totally enclosed cubicle type free standing, floor mounted, compartmentalized, sectionalized, dust, damp and vermin proof, with suitable natural ventilation arrangement, front and rear accessible, lockable power cum CONTROL PANEL, fabricated from 1.6/ 2mm thick MS sheet (to give IP 54 protection) spray painted with approved colour shade, have 4 strip sleeved aluminium / aluminium alloy bus bar, bus bar supports, interconnecting from bus bars to outing swatches / MCCBs including earthing the board suitable to accomodate the following including numbering etc. as required : All pumps to be provided with over load relay. all starter to be provided with single phase preventer. necessary cable alloys space for spare switches, internal wiring and copper earthing of all equipment shall also be included. all switch gears / control gears shall be motor duly rating. provision shall be made for providing potential free contacts to all pumps starters for connections to building automation system.Incoming section :250 Amps, 3 pole MCCB with neutral link 35 KA, 415 V + 1 No, Digital voltmeter with phase selection push button = 1 No, 3 phase LED indication lamps, instrumnt fuses and switches,400 Amp Al. Bus bar.Outgoing Section: Hydrant Pumps. 200 A TP MCCB with neutral link 35 KA 415 V, Suitable for motor duty = 1 no, 63 A TP MCCB with neutral link 35 KA 415 V, Suitable for motor duty = 3 no, On / Off indicating Lamp = 1 sets each. Suitable fully automatic star delta starter for motor complete with single phase preventer relay = 2 nos. for (60 HP and 7.5 HP).CT Ratio 250:5 = 3 nos, Ratio- 50:5 = 3 nos, Ratio- 50:5 = 3 nos, Other accessories like , Earth bus 25 x 5 AL.</p>	SET	
133	<p>Providing & Fixing PVC insulated PVC ARMoured ALUMINIUM CONDUCTOR CABLES 1100 V grad including necessary suport clamps and connection plugs complete in all respect</p>		
	Power Cable Copper 3 core x 50 mm ²	Per Mtr	
	Power Cable 3 core x 10 mm ²	Per Mtr	
	Control Cable Cu armoured, 2 core x 2.5 mm ²	Per Mtr	
	Providing & fixing GI earthing strip 25mm x 5 mm from all motors and MCC panel to be connected in all aproved manner to general earthing system	Per Mtr	
	Providing level controllers, PRESURE SWITCHES, wiring, cabling from level controller / pressure switch to panel etc. complete as required to operated the system automatic/manual. Pump shall be protected against running dry.	Each	
	Providing & fixing Dial Type PRESURE GAUGE complete with pipe stem & cock	Each	
	<p>PIPING AND ACCESSORIES (HYDRANT, WET RISER & SPRINKLER SYSTEM)</p>		
134	<p>Supplying, laying, jointing and testing of following sizes medium grade, MS pipe, flanges and fittings such as Bends, Tees, reducers, rubber insertions and galvanised nut & bolts, as per IS: 3589 with up to date amendment i/c fixing the pipe on well / ceiling with suitable M.S. strip/ clamps / bracket & painting with one coat of anticorrosive paint / primer and two coats of synthetic enamel paint etc. complete as required. pipe shall have welded connections complete with bevel cut by angle grinder and use of three phase rectifier welding set. Rate shall also include cost of hanger & clamps as required & including all civil breakage and making good the same pipes brought to site shall have bevel edge at ends shall be varnish coated externally.</p>		
	150 MM	Per Mtr	
	100 MM	Per Mtr	
	80 MM	Per Mtr	
	65 MM	Per Mtr	
	50 MM	Per Mtr	
	40 MM	Per Mtr	
	32 MM	Per Mtr	
	25 MM	Per Mtr	
	200 mm	Per Mtr	
135	Supplying and fixing of SINGLE HEADED HYDRANT VALVE inlet complete with 63mm dia female instantaneous outlet of S.S. as per type "A" of IS: 5290 - 1977 with plastic blanked cap, steel chain,	Each	



136	Providing & fixing collecting head with 63 mm dia instantaneous type inlet 150 dia flanged, outlet with built in check valve for FIRE BRIGADE CONNECTION fire riser.Three way	Each	
137	Providing 63 mm dia 15M LONG reinforced rubber lined HOSE PIPE as per IS: 636-1962 part - A, with S.S. male & female coupling wire would with copper wire to the hose pipe.	Each	
138	SITC of Standard Short size SS branch pipe with 5 nozzle 16mm dia outlet with standard male instantaneous spring lock type 63mm dia coupling Branch pipe and nozzle shall confirm to IS 903-1985.	Each	
139	providing and fixing first aid HOSE REEL full swinging type with 30 M length X 20 mm dia double braided rubber pipe IS: 12585 with ABS plastic shut off nozzle of 6 mm dia.Hose shall be connected to the Riser through GI (H) 25 mm dia pipe connection from riser to hose reel including all sockets, nipples, elbows and 25 mm ball valve. fixed on wall with dash fasteners. as reqd	Each	
140	Providing and fixing of weather proof standard HOSE CABINATE (0.6 M x 0.45 M x 0.3 M) having central opening glazed door with 6 mm thick clear glass including necessary locking arrangement with Allan key, power coating with PO red paint and for housing 2 nos. RRL hose pipe, 1 NO branch pipe. as reqd.	Each	
141	Providing & making drainage provision for the riser with 25 mm dia BALL VALVE completed as required	Each	
142	Providing & fixing three way fire brigade inlet to riser with GATE VALVE and dual plate spring operated wafer type non return valve complete with bolts, nuts, washers and neoprene rubber gaskets as required. Body shall be of C.I. instantaneous inlet to IS: 903 complete with 25 mm dia drain, rubber blank caps. as reqd		
	150 MM	Each	
	80 MM	Each	
	Providing & fixing SUCTION STRAINER / FOOT VALVE complete including matching flanges, nuts & bolts.		
	200 MM	Each	
	Providing & fixing quartzoid bulb SPRINKLER 68c along with necessary attachment	Each	
	Flow Switch	Each	
	Sprinkler Annunciation Panel	Each	
	P/F Flexi drop 1 mtr lengthe for the spronklers where ever reqd.	Each	
	143	<u>ELECTRICAL WORKS</u> Providing & fixing MCC with the following accessories, Incoming MCCB's with Ammeter with switch, CT's, Voltmeter with switch, Indicating Lamps & Outgoing starters shall be with Fuse Switch units, DOL Starter, including bi-metal Relay Controls, OFF Push buttons, indicating lamps etc., complete with local control push buttons consisting of ON/OFF with power & control cable including cable termination, earthing as per IE rules etc complete. Quoted rate shall include for pump house internal lighting. The panel shall have necessary spare terminals for fixing of treated water pumping station.	Job

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