

Proposed Civil, Interior, Electrical, Data cabling, Security and Firefighting works at MTNL Building, SBI GITC Belapur, Navi Mumbai					
PART-A	CIVIL AND INTERIOR WORK				
S.No.	Description of Item	Qty	Unit	Rate	Amount
A	Part A : Interior Works :				
	Mode of Measurements : Area of exposed and finished surfaces will be measured.				
1	False Ceilings :				
	Note :				
	i) The contractor must co-ordinate his work with electrical, Data-cabling, firefighting works, security works & AC contractor for working out various levels for cabling, conduiting, fixing equipments, sensor etc for the false ceiling, wall panelling, through floors, through counters, partition etc & make the marking on the walls / columns before starting work.				
1.1	Gypsum Board False Ceiling :				
	Providing, making and fixing Gypsum Board False Ceiling straight or curve any profile of reputed make which includes G.I. Perimeter Channels of size 0.55mm thick (having One Flange of 20mm and another flange of 30mm and a web of 27mm) along with perimeter of ceiling, screw fixed to brick wall / partition with the help of Nylon sleeves and screws at 610mm centres. Then suspending G.I. intermediate channels of size 45mm (0.9mm thick with two flanges of 15mm each) from the soffit at 900mm centres with ceiling angle of width 25mm X 10mm X 0.55mm thick fixed to soffit with G.I. cleat and steel expansion fasteners. Ceiling section of 0.55mm thick having knurled web of 51.5mm and two flanges of 26mm each with lips of 10.5mm are then fixed to the intermediate channel with the help of connecting clips and in direction perpendicular to the intermediate channel at 457 mm centres. ... contd...	50	Sqm		
	... contd... 12.5mm tapered edge Gypboard (conforming to IS 2095-1982) is then screw fixed to ceiling section with 25mm dry wall screws at 230mm centres. Screw fixing is done mechanically with drilling machine with suitable attachment. Finally tapered edges of the Gypsum boards are to be jointed and finished so as to have a flush look which includes filling and finishing with jointing compound, joint paper/fibre tape and two coats of dry wall top coat suitable for Gypsum board etc. complete as per the recommended practices / specifications of the manufacturer. Including two coats of primer suitable for gypsum board two or more coats of plastic emulsion paint of approved shade and also including making necessary openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitable fixed all complete as per drawing and specification and direction. Rate to be inclusive of shadow profile at the junction of wall & ceiling, in between of ceiling, etc. complete.				

1.2	Cove in ceiling :	44	Rmt		
	Same as above but providing, making and fixing Gypsum cove (inside height 150 - 200 mm and border 75 mm) to hide strip/cove light in ceiling or to act as pelmet for roller blinds on windows or for projector screen, etc.				
1.3	Mineral Fibre Grid Tile Ceiling :				
	Mineral Fibre Acoustic Ceiling Tiles : Providing, making & Fixing at all heights & in spirit level, Acoustical Ceiling System @ Office areas with Armstrong, Gyproc or equivalent make mineral fibre acoustical suspended ceiling system as per Manufacturer's specification with pin-hole tiles, tegular edge with 24 mm exposed grid. The tiles should have Colour White, in module size of 600mm x 600mm x 15mm. with providing and fixing Hot dipped galvanised Steel suspension system Grid frame with butterfly clips, for laying of Acoustical Ceiling Tiles as per manufacturer's specifications. ... contd...	430	Sqm		
	...contd... The grid should be laid on Armstrong/Gyproc or equivalent stitched True lock 24 TL exposed grid systems with 24 mm wide T-section flanges color white, the tile will be laid on frame work made of Armstrong Prelude 32 with 24 mm wide T-section flanges or of equivalent make, colour white having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 32 mm and 27mm ,25 mm respectively. The cost shall include all fittings and materials complete including proper installation and provisioning etc. The work is to be completed as per manufacturer's specification .				
1.4	Repair to Existing Gypsum Board Ceiling :				
	...same as item no. 1.1 but as patch work repair to existing ceiling keeping the same design, etc. complete.	50	Sqm		
2	Partitions :				
	Rate to be included of all kinds of planes/levels, profiles and cut outs, etc. required for light fixtures, trap doors and ACs, boards, provision for light fittings and diffusers have to be made at no extra cost supported with metallic section etc. suitably fixed all complete as per drawing and direction.				
	ii) The contractor must co-ordinate with electrical & AC Works for cabling, AC pipe works, etc.				
2.1	Full Height Partly Glazed Partly Wooden Double Skin Plywood Partitions :	133	Sqm		
	Providing and fixing full height partly wooden, partly glazed double skin partition with following specifications (Measurement shall be taken up to finished partition level & not of frame work and sal wood member shall go up to slab/beam soffit).				

a	Providing and fixing full height partly glazed double skin partitions made out of Frame work to be 50mm X 50mm X 1.60 mm thick aluminum section weight not less than 0.836 kg/rmt with maximum distance of 450mm c/c both ways(Horizontal/Vertical) or as directed, firmly fixed to floor or slab with 65 to 75 mm long screw or as directed by the Bank's Engineer as per site conditions with necessary grooves and cuts etc. including anti-termite treatment to all wooden members wherever used. The partition to be sandwiched with 8 mm MR plywood from both the sides and finished with 1.0mm thick approved shades of laminated finish & match the panelling pattern. Additional wooden members to be provided wherever door is to be provided. Wood shall be treated with antitermite chemicals.The cost shall include all labor, materials, strictly as per the given design & drawing etc. in complete.				
b	The partition will be provided with 5 mm thick float glass fixed at 900 -1200 mm above the floor level with teak wood beading fixed on both sides of the glass finished with polishing as directed. The float glass to be etched as per approved design (film etching to be paid separately). The beading for fixing glass to be fixed on both sides of the partition in such a way that it would be projected from the partition. (8 mm & 12 mm glass opening wherever applied shall neither be included in measurement nor costing and shall be considered as separate item).				
c	The top panel (above glass panel) and side panels shall be provided with MR plywood double skin partition as per specification of a) & b) upto ceiling/top support. Making provision for items like softboards, white boards, electrical points, switchboards, telephone/ electrical/ data cables, etc. as & where required (but excluding the cost for items).				
d	All finishes shall be done as per details and as per instructions of Bank's engineer. The rate to include all materials, labour, transport, etc. complete.				
e	Providing 75mm - 150 mm high skirting. MR ply fixed on both sides of the partition finished with 1mm thick lamination of approved make and shade. All wooden structures are to be painted with anti-termite/boarer paint as per manufacturer's specification.				
2.2	Low Height partitions Without Glass :	53	Sqm		
a	P/F 66 mm thick low ht. double skin glazed wooden partition approx. 1200 mm to 1450mm. High including glass, with following specifications:				

b	Providing and fixing low height partly glazed double skin partitions made out of Frame work to be 50mm X 50mm X 1.60 mm thick aluminum section weight not less than 0.836 kg/rmt with maximum distance of 450mm c/c both ways(Horizontal/Vertical) or as directed, firmly fixed to floor or slab with 65 to 75 mm long screw or as directed by the Bank's Engineer as per site conditions with necessary grooves and cuts etc. including anti-termite treatment to all wooden members wherever used.The partition to be sandwiched with 8.0mm MR plywood from both the sides and finished with 1.0mm thick approved shades of laminated finish & match the panelling pattern. The borders/edges to be laminated finish. The cost shall include all labor, materials, strictly as per the given design & drawing etc. in complete. One additional section 50 x 50 mm shall be placed at 700 mm level from floor to fix the table. Additional wooden members to be provided wherever door is to be provided. Wood shall be treated with antitermite chemicals.				
c	Making provision for items like softboards, white boards, electrical points, switchboards, telephone/ electrical/ data cables, etc. as & where required (but excluding the cost for items).				
	All finishes shall be done as per details and as per instructions of Bank's engineer. The rate to include all materials, labour, transport etc complete.				
2.3	Full Height Laminated Double Skin Plywood Partitions Wth Both Sides Laminations :	48	Sqm		
a	P/F Full ht. double skin wooden partition, with following specifications. (... Same as item no. 2.1 but...)				
b	The aluminium section frame structure with vertical & horizontal members to go upto slab/beam soffit for fixity at no extra cost.				

3	Doors :				
3.1	Main Door – Toughned Glass :	7	Sqm		
	Providing, making and fixing 12mm thk single/double shutter toughned glass doors, at entrance, etc. (each door shutter counted individually) of size 2.10 m x 0.75 m (approx. as per site requirement) as demarcated, swing type door openable both sides made out of 12 mm thk. clear toughened float glass, edge polished, fixed in wooden top and bottom rails of approved colour and finish, fixed on Everite/ozone/ Hardwyn/ Dorma or equivalent floor springs set, upper patch, lower patch, lock key plate, provision of locking system, etc. as per approval. One set of 25 mm dia S. S. brush finish pull handles (approx. 300mm length) "C" shaped, of approved make & design on both sides. Including providing "PUSH" * "PULL" sticker lables of approved design & make. The rate to include all materials, labour, transport, taxes, delivered and placed in position at site of work. Each door shall be treated individually with complete set of accessories to be provided on each door.				
3.2	Partly Glazed Door : (Partly Glazed Door on Floor Spring)	19	Sqm		
	Providing, making & Fixing of partly Glass door at site, door shall be of 32 mm thk flush door with 1 mm lamination on both sides and central portion to have 8 mm plain glass, to be fixed to existing partition with heavy duty 4" hinges and shall have cylindrical lock. To be provided with necessary lipping, beading, etc. ...contd...				
	... contd ... The cost shall also include providing and applying paint/polish on all surfaces including lippings etc. wherever instructed of approved shade and finish including thorough cleaning, rubbing and surface preparation, application of primer, sealers, etc. as required. The door shall be fixed, provisioning of locking system, with 2 Nos. of 450 mm S.S. brush finish handles (H type), providing "PUSH" * "PULL" sticker lables of approved design & make, outside Aldrop, its fittings and fixtures, etc. complete all of approved make. The rate to include all materials, labour, transport, taxes, delivered and placed in position at site of work.				
3.3	Flush Door :	10	Sqm		
	Providing and fixing single shutter flush doors of approx size 2.10 m x 0.75 - 0.9 m as instructed, hinged type door openable one side as instructed, made up of superior quality waterproof flush door partially glazed (cost of glass included). The door shall be flush door of approx. 32-38 mm thickness, both sides 1 mm thk laminate as per design. Cost shall be inclusive of beadings, all accessories like SS hinges, medium quality mortise handles/locks, baby latches, stopper, etc. Fittings shall be in SS finish as per approval, the cost shall include p/f of door closers of reputed brand as per approval with all doors. The cost shall also include providing and applying paint/polish on all surfaces including 6 mm lippings etc. wherever instructed of approved shade and finish including thorough cleaning, rubbing and surface preparation, application of primer, sealers, etc. as required.				

3.4	Providing and fixing of 3M, Garware or equivalent frosted Film to existing Glass surface of approved pattern as directed by engineer in-charge.	70	Sqm		
3.5	Removing old lamination and Providing and fixing 1 mm thick laminate of approved make and shade to existing door/ partitions/ wall panells etc.	145	Sqm		
3.6	Providing and sealing the gaps between the glass with transparent silicon of approved make.The rate is inclusive of supply of labour,material ,cleaning the surface, all lead and lifts etc.	56	Rmt		
3.7	Provision of same arrangement as first floor (fixed pane glass with powder coated Aluminium framing) in opening area of Balcony at 4th floor. Note: Contractor must visit site before quoting for this item.	87	Sqm		
B	Part B : Furnishing Works :				
4	Furnitures :				
4.1	Note : All tables and side storage units to be made out of a combination of 18mm, 12mm, 8mm and 6mm thick MR plywood of approved make as mentioned in respective items. The dimension of the workstation will be (1000-1200mm *600mm). The top and exposed sides of the tables as well as storage units to be finished with 1 mm thick plain or textured laminate of approved make and shades and 0.7 mm thick lamination on internal surfaces of approved make and shade.For all exposed edges of the plywood, teak, etc to be finished with lamination. ..contd..	276	Nos		
	.. contd.. No vertical edge of the table & storage units should be left sharp. . Providing and fixing of soft board of approved make on side partition ply All drawers in tables shall be provided with single multidrawer lock of Ebco or Godrej made and storage units to be provided with individual "Godrej" make multipurpose lock. Hardware will be SS brush finish / approved make/ design viz. Stainless Steel hinges, Magnetic ball Catches, Stainless Steel Locks, approved design Stainless Steel Handles, PVC wire manager, (all SS brush finish) etc.. All the edges of the MR plywood in contact with floor also to be provided with teak wood lipping of size 20 x 6 mm. Nylon Buffers of suitable size to be provided under the tables and storage units fixed with screws, wherever required.				
5	Hardwares :				
	The following hardwares may be provided as per make specified as directed : (this to be provided if not mentioned in item & required at site)				
5.1	Providing and fixing Doorset / Sterling / Ozone or as approved heavy duty floor spring , upper patch, bottom patch, etc. complete.	10	Nos.		
5.2	Providing and fixing Door closers on doors of make Everite/Ozone/ Hardwyn/ Dorma or equivalent upon approval including all packing, levelling, etc. as required.	10	Nos.		
5.3	Providing and fixing SS AL-drop 300 mm long along with through nut & bolt fittings, etc. complete.	4	Nos.		

6	Whiteboard :	3.00	Sqm		
	Providing and fixing whiteboard as per approval on partitions/walls/ other substrates in various areas of the office including training room, cabins etc. complete including all ribs, adhesives etc as required.				
7	Pin-up boards :	3.00	Sqm		
	Providing and fixing Pin-up boards of 12mm thk. pin board covered with plain matt/cotton fabric as per approval, the fabric stuck with rubber based adhesive to the board as instructed. Cost shall include all tw lippings, base preparation required and joints on fabric shall not be approved.				
8	Roller Blinds :	170	Sqm		
	Providing & installing Roller Blinds of Trac / Vista or equivalent, width as per site windoows/openings, in single/two colours, of medium range fabric (synthetic material), of approved shade and colour with all accessories.				
	All metal parts shall be corrosion resistant and rotating parts shall be self lubricating. The fixing of the top rail shall be with special GI brackets at approx 1meter c/c. complete as directed by the Bank.				
9	Dismantling Works :				
9.1	Carrying out dismantling ,carefully removal ,disposal ,cleaning etc of existing brick partition wall/flooring/dado tiles / water pipes and stored the same in a suitable places as per the instruction of the offered premises by MTNL . Disposal of dismantled/ chiseled tiles and all related debris shall be borne by the contractor outside compound as per Municipal norms. The cost shall also include safely chiselling out remains of tiles from the wall surface without damaging existing pipelines, conduits, cables, wires, switchboards or any such item concealed inside the wall below the tiles., safe handling and removal of debris to a safe distance as directed by the engineer-in-charge and owner of the premises (MTNL).The work shall be done with utmost care to avoid any structural or physical damage to the existing structure, usable furniture ,electrical wiring, plumbing works, doors, ventilators, exhaust fans etc. complete.	75	Job/sqm		
9.2	Same as point no 9.1 but cash, clerical counters, tables, side units etc. and shifted the same in a suitable places as per the instruction of the Offered premises by MTNL including cleaning, shifting charges within the offered premises etc. complete.	120	Job/sqm		
9.3	Same as point no 9.1 old Alluminium /Glass/ wooden partitions/ wiremesh partitions/ SS railing / false ceiling/wooden flooring and shifting to a suitable place as per the instruction of the Offered premises by MTNL including shifting charges within the premises	477	Job/sqm		

C	Part C: Civil, Plumbing & Painting works				
10	Flooring Work				
10.1	Providing and fixing 1st class premium quality, double charged vitrified tiles in floor, skirting of approved size (800mm x 800mm or 600mm x 600mm as directed) of make Simpolo, Kajaria, Nitco, Bell, Johnson, Somany etc, or equivalent in first quality conforming to IS:15622 of approved make in all colours shades of any size in floors and skirting over 20 mm thick bed of cement mortar 1:4 and jointing with grey cement slurry @3.3 kg per Sqmt, and fixing the same on existing floor after roughening the surface ,with approved adhesive viz Carebond or Nitobond or Balendura including pointing in white cement mixed with pigment of matching shade complete.	744	Sqm		
10.2	REMOVAL OF EXISTING FLOORING/TILES : Removing cement tiles, or marble or polished shahabad floor or dado without bed concrete including stacking the materials as directed with all leads, lifts etc. complete	138	Sqm		
11	Painting Works :				
11.1	Rates to include cost of all materials, labour, curing, tools & machinery, transportation, scaffolding, ladders and all incidental and operational charges, at all heights, etc., complete and as directed by SBIIMS. All glasses, surfaces to be cleaned of the paint marks/drops due to work/splashes.				
11.2	Plastic Emulsion Paint :	977	Sqm		
	Providing & applying Plastic emulsion paint on walls, columns etc. Removing, scrapping & cleaning the existing color wash/distemper/oil bond distemper / plastic/ luster etc. paint by scrapping, washing and scrubbing and applying Birla putty nor equivalent. The surface shall then be allowed to dry for atleast 24 hours. It shall be then sand papered to give a smooth & even surface. Holes shall be filled with BIRLA putty, made with plaster of paris.				
	Then first coat of primer to be applied. After this necessary leveling shall be done with putty and second primer coat shall be applied. The plastic emulsion paint of approved shade and make shall be applied in minimum 2 coats (finishing paint) including scaffolding, cleaning the floors, fittings, furniture's, ladders, glasses, removing of debris out of the compound etc. complete as per the instructions of the Bank.				
11.3	Enamel Paints to Doors, Windows, Grills, Metallic Surfaces, Walls :	205	Sqm		
	Providing & applying Enamel Paints to Doors, Windows, Grills, Metallic Surfaces, walls, etc. Removing, scrapping & cleaning the existing enamel paint on doors, windows, grills, metallic surfaces, etc. paint by scrapping, sand papering and scrubbing. Then first coat of primer to be applied. After this necessary leveling shall be done with putty & second primer coat shall be applied.				
	The enamel paint of approved shade shall be applied in minimum 3coats (finishing paint) including scaffolding, cleaning the floors, fittings, furniture's, ladders, glasses, removing of debris out of the compound etc. complete as per the instructions of the Bank.				

	(The grills, metallic surfaces, etc. shall be finished with after scrapping, applying red oxide & finish with minimum 2 coats of enamel paint in two different shade).				
11.4	OIL BOND DISTEMPER : Two ore more coats of Acrylic oil bond distemper with brush over the existing wall surfaces, after scrapping the existing finish, applying one coat of cement premier and one coat of putty to repair the wall as per the site condition including all materials, labour etc complete.	728	Sqm		
11.5	DAMPROOF COAT: Providing and applying Asian paint dampproof coating to affected wall with seepage after scrapping and cleaning of surface etc complete	50	Sqm		
12	WALL/DADO TILES:- Providing and laying ceramic tiles of having size 300 x 600 mm or as directed and confirming to corresponding I.S. for dado and skirting in required position with ready made adhesive mortar of approved quality on plaster of 1:2 cement mortar including joint filling with white/ colour cement slurry cleaning curing etc. complete.(Kitchen and wash basin area)	79	Sqm		
13	DOOR & WINDOW GRANITE FRAME:- Providing and fixing machine cut machine polished 18 mm to 20 mm thick telephone black / Amba White / Cat bary brown / RBI red / Ocean Brown granite stone for treads and risers of steps and staircases of approved colour and shade with full moulding and three grooved line for the treads on bed of 1:4 Cement mortar including float filling joints with neat cement slurry curing polishing and cleaning etc. complete	7	Sqm		
14	INTERNAL PLASTER: Providing internal cement plaster up to 15 mm. thick in Single coats in cement mortar 1:3 wirh Gujrat Sand without neeru finish, to concrete, brick surface, in all positions including scaffolding and curing etc. complete.	56	Sqm		
15	BLOCK MASONARY WORKS:- Providing LIGHT WEIGHT: Oven dry density of SIPOREX ie 400 to 650 kg/cums in cement mortar 1:4 including scaffolding, racking out joints and watering etc. in pillar of rectangular shapes as shown in the drawings or as directed complete.	13.3	Cum		

16	KITCHEN PLATFORM:- Providing and constructing raised platform of 750 mm wide and 600 to 750mm high using minimum 40mm thick polished kadappa stone slab base with minimum 15mm thk. polished Ruby red / jet black / Hasan green Granite slab at top and facia,supported by both side polished, 40mm thk. and minimum 700mm wide kadappa spaced at not more than 1200mm clear, including polished facia of min. 100mm height as specified below with chamfered/rounded at the top edges, jointing in approved adhesives, machine cutting, leveling, smooth cement plastering along the sides to match the existing surface & Platform in cement mortar, filling the joints with pigment mixed with cement, cleaning, finishing, curing etc complete as directed by Engineer In Charge.	5.00	Rmt		
17	KITCHEN SHUTTER: Providing and fixing new kitchen shutter with 19 mm thick ply with laminate 1 mm thick, ss handle,hinges etc complete. Rates are inclusive of all the necessary framing work.	4.00	Sqm		
18	WASH BASIN PLATFORM: Providing and constructing raised platform of 550-600 mm wide and 800 to 950mm high using minimum 40mm thick polished kadappa stone slab base with minimum 15mm thk. polished Ruby red / jet black / Hasan green Granite slab at top and facia,supported by both side polished, 40mm thk. and minimum 550-600mm wide kadappa spaced at not more than 1200mm clear, including polished facia of min. 100mm height as specified below with chamfered/rounded at the top edges, jointing in approved adhesives, machine cutting, leveling, smooth cement plastering along the sides to match the existing surface & Platform in cement mortar, filling the joints with pigment mixed with cement, cleaning, finishing, curing etc complete as directed by Engineer In Charge.	4.00	Rmt		
19	WASH BASIN: Providing and fixing white counter wash basin of size 350x450x165mm with approved make pillar cock, C.P. Angular stop cock long thread approved make continental including SS bottle trap of approved make having necessary pipe connection up to the outside face of the wall etc complete as directed by Engineer in charge.	3.00	nos		
20	Removing and refixing of sanitary fittings from existing dining area.	1.00	job		
21	KITCHEN SINK:- Providing and fixing Stainless Steel A ISI 304 (18/8) Kitchen sink of 510x1040 mm bowl depth 200mm as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required	1.00	nos		
22	SOAP DISH : C.P. (polyurethane) jaquar make continental (Cat. No. AQN 7733)	4.00	nos		

23	GRANITE FOR SERVICE COUNTER,WALL PANELLING: Granite slab 16-25mm thick at top with champhered/rounded at the top edges, jointing in approved adhesives, machine cutting, leveling, smooth cement plastering along the sides to match the existing surface & Platform in cement mortar, filling the joints with pigment mixed with cement, cleaning, finishing, curing etc complete as directed by Engineer In Charge	3.00	sqm		
24	PLUMBING FITTINGS				
24.1	25mm DIA CPVC PIPE: Providing and fixing on walls/ ceiling/floor 25 mm dia. CPVC pipe with necessary fittings, remaking good the demolished portion etc. complete. Including removing existing pipe line if necessary and conveying and stacking the same or as directed etc. complete.	20.00	Rmt		
24.2	75mm LINE PVC: Providing, laying and fixing P.V.C. pipe of 75mm dia. with fittings such as bends, tees, reducers, clamps, etc. including necessary excavation, trench filling etc. complete. Including removing existing pipe line if necessary and conveying and stacking the same or as directed etc. complete.	15.00	Rmt		
24.3	Providing and fixing Angle cock (Jaguar or equivalent make) as per directions of the Bank	4.00	nos		
24.4	Providing and fixing Stop cock (Jaguar or equivalent make) as per directions of the Bank	2.00	nos		
24.5	Providing and fixing of Nahani Trap with Jali	4.00	nos		
24.6	Providing and fixing waste pipe to the wash basin/sink.	4.00	nos		

PART A TOTAL

PART-B

ELECTRICAL WORK

Sr.No.	Particulars	Qty.	Units	Rate	Amount
I	PANELS & D.B.S				
1.1	Main Panel				
	Incomer:				
	Incomer : 1 No., 250Amps Four Pole, Microprocessor based Moulded Case Circuit Breaker of approved make with built in E/F, O/C, S/C releases .and as per the specifications given in Technical Specification. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 35 KA for 1 Sec				
	Metering Section :- 1 No., of Digital Multifunction meter type of Approved make. Indication Section For Incoming Section :- The following indicating lamps shall be provided for Incomer Section 3 Nos., Phase Indicating lamps, Led type of approved make . 2 Nos., One Red and One Green Led type lamps for indicating MCCB is in 'ON' or 'OFF' position. 1No. Of amber lamp for MCCB auto trip indicating				
	Current Transformers For Incoming Section : 4 Nos. of 250/5 Amps Cast Resin type Current Transformers, having 15 VA burden and Class-1 accuracy for metering purpose.				

	Busbar 250 Amps uniformly rated, continuous duty, 415 V AC, 3 Phase and Neutral electrolytic grade 99.95% Purity Tinned Copper Bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 200 Amps.			
	Out goings :- 3 No., of 160 Amps., Four Pole, Thermo Magnetic based Moulded Case Circuit Breaker with built in over-current, short circuit releases. The breaker shall be suitable for 415V, 50 cycles operation. Icu=Ics=Icw=36 kA=1sec. 5 No., 63 Amps Four Pole, "C" curve Miniature Circuit Breaker of approved make. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 16KA. 3 No.,40 Amps Four Pole, "C" curve Miniature Circuit Breaker of approved make. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 16KA.	1	Nos	
	Out goings Capacitor bank:- 02 Set of 63 Amps TP MCCB with 02 Nos 60 Amps Semi Conductor Type 120 KA Din Type Fuses with Thyristors and 7% Detuned reactors alongwith and 02 Nos 15 KVAR Dry Type Capacitors of approved make. ADDRESS: -GR. FLOOR, CR2 MALL, NARIMON POINT , MUMBAI Total Amount In Rs Sr. No Description Unit The items given below are forming the part of the work to be carried out. The job includes for design, supply, storing, safety, security handling, MAT. - Stands for supply of equipment. INS. - Stands for installation of the equipment is including, providing of erection accessories hardware, consumables, labor charges, testing, Providing means supply of materials, installation, testing and commissioning of the same. 02 Set of 40 Amps TP MCCB with 02 Nos 60 Amps Semi Conductor Type 120 KA Din Type Fuses with Thyristors and 7% Detuned reactors alongwith and 02 Nos 10 KVAR Dry Type Capacitors of approved make. 02Set of 32 Amps TP MCCB with 01 Nos 30 Amps Semi Conductor Type 120 KA Din Type Fuses with Thyristors and 7% Detuned reactors alongwith and 02 Nos 5 KVAR Dry Type Capacitors of approved make.			
1.2	UPS OUTPUT VTPNDB			
	Incomer: 1 No., 160Amps Four Pole,Thermo Magnetic based Moulded Case Circuit based of approved make with built in E/F, O/C, S/C releases .and as per the specifications given in Technical Specification. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 KA for 1 Sec Out goings :- 4 Nos., of 63Amps., Four Pole Miniture Circuit Breaker The MCB shall be suitable for 415 Volts 50 Hz., AC supply & fault level should be 16 KA. The MCB shall be "D" Curve.	1	Nos	
1.3	Lighting Distribution Board - 8 WAY	2	Nos	
	Comprising of : Incoming of 40 A TPN MCB - 1 No. Phase indicating lamps Outgoing 32 Amp, DP 30 mA RCCB – 3 Nos. 6 A SP MCB - 8 Nos. per phase Total-24 Nos.			
1.4	Power Distribution Board - 8 WAY	2	Nos	
	Comprising of : Incoming of 63 A TPN MCB - 1 No. Phase indicating lamps Outgoing – 32 Amp, DP 30 mA RCCB – 3 Nos. 16A SP MCB - 8 Nos. per phase Total-24 Nos.			
1.5	UPS Distribution Board - 8 WAY	2	Nos	

	Comprising of : Incoming of 63 A TPN MCB - 1 No. Phase indicating lamps Outgoing – 32 Amp, DP 10KA MCB – 3 Nos. 16A SP MCB - 8 Nos. per phase Total-24 Nos.				
1.6	8WAY SPN	3	Nos		
	Comprising of : Incoming of 20 A DP MCB - 1 No. Outgoing – 10 A SP MCB - 8 Nos.				
1.7	63 A 4P MCB With MS Enclosure	6	Nos		
SUB					
II	CABLES				
2.1	Supply, Installation of 1100 V Grade XLPE insulated, FRLS , flat steel GI wires armoring, tough heat resisting outer sheets multicore Aluminum/copper Stranded conductor, Cable of following sizes to be laid in prepared trenches/ excavated trenches/ on wall / on trays complete with dressing saddling clamping etc. Including civil work and required accessories spacers, clamps and hardware etc all complete as required and as per the fianl direction and the				
2.1.1	3.5 Core x 150sq.mm., XLPE Insulated Aluminium Conductor Armoured Cable	52	Mtrs		
2.2.2	1 Core x 50 sq.mm., PVC Insulated Copper Conductor Flexible Cable	150	Mtrs		
2.2.3	4 Core x 16 sq.mm., XLPE Insulated copper Conductor Armoured Cable	150	Mtrs		
2.2.4	4 Core x 10 sq.mm., XLPE Insulated copper Conductor Armoured Cable	140	Mtrs		
2.2.5	3 Core x 4 sq.mm., XLPE Insulated copper Conductor Armoured Cable	250	Mtrs		
2.2	Termination of cables with double compression Brass cable gland including gland earthing and with crimping type copper lugs suitable for copper conductor cable with consumable such as tape, hard ware all complete as required and as per the fianl direction and the approval of the Consultants.				
2.2.1	3.5 Core x 150sq.mm., XLPE Insulated Aluminium Conductor Armoured Cable	2	Nos		
2.2.2	1 Core x 50 sq.mm., PVC Insulated Copper Conductor Flexible Cable	20	Nos		
2.2.3	4 Core x 16 sq.mm., XLPE Insulated copper Conductor Armoured Cable	8	Nos		
2.2.4	4 Core x 10 sq.mm., XLPE Insulated copper Conductor Armoured Cable	12	Nos		
2.2.5	3 Core x 4 sq.mm., XLPE Insulated copper Conductor Armoured Cable	8	Nos		
SUB TOTAL OF PART II:					
III	LIGHT POINT WIRING				
	Concealed points wiring for light, fan, 6A socket switch point, using ISI marked rigid MS 16 SWG 25 mm dia. Conduit along with PVC conduit accessories, boxes, switches, regulators, sockets, plug top, mounting plates, hardware, ceiling rose, holders, ball socket, anchor hooks, PVC. clamps etc. Wiring through PVC conduit including termination.				
	2 Nos. of 2.5 mm ² copper conductor PVC wire for phase, neutral and 1.5 mm ² copper conductor PVC wire for earthing will be used for-				
	Primary Point includes conduiting and wiring from LDB to Switch Board, Switch Board to looped Switch Board and Switch Board to first point measured as one Primary point.				

	3 Nos. of 1.5 mm ² copper conductor PVC wire for phase, neutral and earthing will be used for-				
	wiring from primary point to looped point said as Secondary Point				
	Point wiring will be done as per IE rules all complete as required and as per the fianl direction and the approval of the Consultants.				
3.1	Primary Light point WITH MCB CONTROL all complete as required and as per the fianl direction and the approval of the Consultants.	20	Nos		
3.2	Primary Light point WITH SWITCH CONTROL all complete as required and as per the fianl direction and the approval of the Consultants.	80	Nos		
3.3	Secondary Light point looped from above mentioned Primary Light point with distance over 1 meter all complete as required and as per the fianl direction and the approval of the Consultants.	200	Nos		
3.4	6 A switch and 6A socket mounted on switchboard along with lighting switches all complete as required and as per the fianl direction and the approval of the Consultants.	30	Nos		
	RAW POWER WIRING				
	Providing concealed 6/16A Switch Socket + 16A switch Power Point comprising of -				
3..5	1 No. of 16A/6A socket & 1 No.16A switch in M. S. Box Conduiting from J. B. of RAW Power Raceway embedded in floor to point as directed through wall/partition, by 25 mm ISI marked 2.0 mm Wall thickness PVC Conduit, conduit accessories, plated MS pull boxes Maximum Two Nos. of Power points to be looped and will be measured as Two separate points all complete as required and as per the fianl direction and the approval of the Consultants.	40	Nos		
3.6	Providing concealed 6A switch sockets Power Point comprising of - (WORKSTATION POINT)	200	Nos		
	UPS POWER WIRING				
	Concealed 6/16 Amps Universal Sockets 2 Nos and 1 No 16A switch combined power point as UPS Point.				
	Providing concealed UPS Point comprising of –2 Nos. of 6/16 A Universal Socket & 1 No.16A switch.				
	Conduiting from J. B. of UPS Power Raceway embedded in floor to point as directed through wall/partition, by 25 mm ISI marked PVC conduit, conduit accessories, plated MS pull boxes.				
	Wiring by 3 Core 2.5 Sq. mm. copper conductor PVC insulated and overall PVC sheathed multicore flexible Black color cable through PVC conduit and raceway including termination.				
	Cost of providing raceways will be covered in separate item mentioned elsewhere.				
3.7	Maximum four Nos. of UPS points to be looped and will be measured as Four separate points. However, location such as Three / Two UPS points are together then one circuit for Three UPS points respectively to be used.	200	Nos		

3.8	Supply, Installation of testing and commissioning of POPUP BOX CONTAINS 2 UPS SOCKET 6A /16A +1 SWITCH+ 2 DATA + 1VOICE FOR MEETING ROOM TABLE BRUSH STAINLESS STEEL FINISH	6	Nos		
	Providing raceways in the floor comprising rectangular aluminum extruded tubes with cover plate including with cover plate chasing of floor and tiles, cleaning wherever necessary, fixing the raceways, minor civil work with providing sealing at joints at junction boxes and proper alignment, vacuum cleaning and connection of following sizes. Job includes Chiseling of pcc if required for laying of data/voice/power conduit & throwing the debris outside the builder premises all complete as required and as per the final direction and the approval of the Consultants.				
SUB					
IV	RACEWAYS				
4.1	300 x 40mm x2mm thick Al Raceway	50	Mtrs		
4.2	100 x 40mm x2mm thick Al Raceway	125	Mtrs		
4.3	40 x 40mm x2mm thick Al Raceway	120	Mtrs		
4.4	Providing 25 mm PVC ISI marked Rigid conduit for with accessories.	300	Mtrs		
4.5	Providing 25 mm PVC ISI marked Flexible conduit for with accessories.	200	Mtrs		
	Providing junction boxes for aforesaid raceways fabricated out of ms sheet steel, powder coated, having following sizes made out of 2 mm thick crca sheet, 50 mm deep, with cut outs for raceways and SS grade 364 grade cover plate duly chamfered. Cover plate of the junction box will be flush with top of cement screed floor all complete as required and as per the final direction and the approval of the Consultants.				
4.6	Junction Box of size 300 mm x 200 mm.x 50mm	60	Nos		
4.7	Junction Box of size 250 mm x 250 mm.x 50mm	70	Nos		
4.8	Junction Box of size 260 mm x 260 mm.x 50mm	25	Nos		
SUB					
V	EARTHING				
5.1	Providing new ground earth pit with GI pipe 2" X 2" earth chamber complete set	2	Nos		
5.2	Providing single core 16 mm ² copper conductor PVC FRLS insulated PVC sheathed cable in PVC conduit with Termination all complete as required and as per the final direction and the approval of the Consultants.	100	Mtrs		
5.3	Providing copper earth Busbar of size 450 mm x 50 mm x 4 mm mounted on insulators having holes on it with termination arrangement, nut bolts etc. Fitted in ms junction box with acrylic cover all complete as required and as per the final direction and the approval of the Consultants.	1	Nos		
5.4	Providing 25 mm x 3 mm GI earthing flat all complete as required and as per the final direction and the approval of the Consultants.	10	Mtrs		
5.5	Providing 1C X 6 Sq.mm copper earthing wire all complete as required and as per the final direction and the approval of the Consultants.	200	Mtrs		
SUB					
VI	MISCELLANEOUS ITEMS				

6.1	Providing Structural fabrication for Cable Tray supports made out of 40 x 40 x 3mm angle, plate, Anchor fasteners etc in wall/ceiling including supply of steel, cutting, welding, drilling, erecting at site including consumables like welding rods, gas drill bits etc. Job also includes for minor civil work, duly Painted with two coats of Red oxide and two coats of Synthetic enamel paint of grade 631 all complete as required and as per the final direction and the approval of the	60	Kg		
6.2	Providing 300mm x 50mm x 2mm Hot Dip Galvanized Perforated Cable with removable cover of 1.6 mm. Job includes providing cable Raceway and its supports / hangers installation. Fully threaded GI bolts will be installed on two numbers of 10mm (3/8") x 75mm Anchor Fasteners. MS angle of 25mm x 25mm x 6mm will be mounted to these hangers by check nuts and spring washers, on which cable trays will be provided. Hangers will be installed as per site condition but not over than 1 Mtr all complete as required and as per the	80	Mtrs		
6.3	Only labour charges for fixing 2"X2" LED light fitting	150	Nos		
6.4	Only labour charges for fixing 18/15/10W LED spot light	150	Nos		
SUB					
VII	TELEPHONE NETWORK				
7.1	Providing telephone wiring from Telephone Jack Panel to individual socket outlet using approved make CAT-6 Geega Speed wires of required length through trunking and extending the same using GI conduit of minimum 25 mm dia and 1.8 mm wall thickness of Gerad make concealed in wall in floors/chasing or through floor raceways existing in the floors with necessary junction boxes/pull boxes for Telephone Point. The rates shall also includes Supply and fixing of 100 MPS, Cat-6 Information Outlet with Dust cover and approved color face plates and suitable size G.I box concealed in wall/ structure all complete as required and as per final direction and approval of the Consultant.	100	Nos		
7.2	Providing and fixing in G.I. powder coated enclosure, Telephone Tag Block KRONE Type only of the following number of ways including supply of 1 No., punching tool complete with interconnections for incoming and outgoing telephone cables including ferruling, testing the joints, including all frame works for mounting the tag block systems.				
a)	200 Pair KRONE Type, Telephone Tag Block.	2	Nos		
7.3	Supplying and fixing in surface PVC insulated, PVC sheathed, armoured Jelly field telephone cables having minimum conductor cable size 0.51 dia tinned copper conductor of the following pairs complete with all fixing accessories such as G.I. saddles, G.I. screws, G.I. spacers /G.I. clamps etc. complete from Telephone Tag Block to floor Tag Block.				
a)	100 Pair, PVC sheathed unarmoured telephone cables.	150	R.M		
SUB					
	Summary				
I	PANELS & D.B.S				
II	CABLES				

III	LIGHT POINT WIRING				
IV	RACEWAYS				
V	EARTHING				
VI	MISCELLANEOUS ITEMS				
VII	TELEPHONE NETWORK				
	PART B TOTAL				
PART-C	FIRE FIGHTING WORKS				
Sl.No.	Description	Qty.	Unit		
	SECTION A- FIRE ALARM SYSTEM				
1	Supply, installation, testing & commissioning of Four Loop Networkable Intelligent Analogue Addressable Fire Alarm Control Panel with minimum 80 characters LCD display including single Loop driver cards, network card, in-built battery backup for 24 hrs.in standby mode & 30min in alarm condition mode and with required accessories. (Make Morley Honeywell)	1	Nos.		
2	Supplying, installation, testing & commissioning of intelligent analogue addressable photo thermal detector complete with mounting base complete as required. (Make Morley Honeywell)	71	Nos.		
3	Supplying, installation, testing & commissioning of intelligent analogue addressable thermal detector complete with mounting base complete as required. (Make Morley Honeywell)	2	Nos.		
4	Supplying, installation, testing & commissioning of addressable Horn cum strobe Complete as required. (Make Morley Honeywell)	5	Nos.		
5	Supplying, installation, testing & commissioning of addressable manual call point complete as required. (Make Morley Honeywell)	5	Nos.		
6	Supplying, installation, testing & commissioning of fault isolator complete with base as required. (Make Morley Honeywell)	8	Nos.		
7	Supplying, installation, testing & commissioning of response indicator on surface/recessed MS Box having two LED, metallic cover complete with all connections etc. as required. (Make:- Honeywell)	28	Nos.		
8	Supplying & laying of 2x1.5 Sqmm fire alarm armoured cable, 600/1000V rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required. (Make :- Polycab)	2500	Mtrs		
9	Intregation, Programming,Testing,Commissioning of Existing fire alarm system with new system	1	Job		
	SECTION B - FIRE EXTINGUISHERS				
1	CO2 type Fire Extinguisher 4.5 Kgs. Capacity, made from brand new seamless cylinder, as per IS: 7285 and CCE approval, fitted with Discharge hose and horn and Squeeze Grip type valve with initial Charge as per IS: 15683:2006 specification, bearing ISI Mark with wall mounting bracket. Fire rating shall be 21B. (Make - Kanex/Safex/Lifeguard)	15	Nos.		
2	6 Kg ABC Stored Pressure type Fire Extinguisher bearing ISI Mark for fighting ABC Class of Fire. The Extinguisher will be Manufactured Strictly as per BIS: 15683:2006 bearing ISI Mark with wall mounting bracket. Fire Ratng shall be 4A & 55B. (Make - Kanex/Safex/Lifeguard)	10	Nos.		

	SECTION C - FIRE SIGNAGES				
	Photoluminiscent Fire Signages for Extinguishers Fire exit & MCP etc.: Glow-in-the-dark sheeting with luminous properties enclosed in a weatherproof UV stabilized film. With UV screen printing by imported inks, 1mm (+10%) thickness -20 to 80C service temperature, glow visible upto> 24 hours in total darkness, these signs adheres to PSPA class A, DIN 67510 part 2, IMO A 757 (18), IMO A 653 (16), BS 5499-1 (PROLITE / INNOWARE / AUTOLITE)				
1	SIZE 6"x16"	16	Nos.		
2	SIZE 4"x12"	25	Nos.		
	SIZE 8"x8"	10	Nos.		
	SECTION D - PUBLIC ADDRESS SYSTEM				
1	Supplying, erecting, testing and commissioning amplifier 240 W for Public address system suitable to operate on 230 Volts A.C. / 12 Volts D.C. supply as per specification No. FF- PA/AFR & intergation of existing sytem. (Make- Ahuja)	1	Nos.		
2	6W Multi-Tap Ceiling Mount Speakers high quality type music speakers with fire dome to be fixed flushed with false ceiling with line matching transformer for direct connecting to 100/70 V output line. The speakers shall be of same make as that of the Control Panel & Amplifiers. They shall be compatible with supplied Amplifiers and shall work on 70.7Vrms. UL/EN Listed (Make-Ahuja / Bosch)	25	Nos		
3	2C x 1.5 mm2, Stranded Copper conductor, Type AST 1 PVC insulated, Armoured FRLS Cable 650 V as per IS 1554, with GI saddle spacers every 0.3 mtr with Single compression Cable Glands, ABS Junction Boxes (wherever required), terminals, Ferruling complete.(Make - Polycab)	625	Meter		
4	Providing Volume control - cum - ON - OFF switch flush mounted on wall along with other electrical switches with size & regulating knob matching the electrical fittings,upto 25 Watts- (Make -Bosch)	7	Nos.		
5	Intregation, Programming,Testing,Commissioning of Existing PA system with new system	1	Job		
	PART C TOTAL				
PART-D	DATA CABLING WORKS				
Sr.	Description	Qty.	Unit		
A.	Supply of the following LAN cabling material for 260 Workstations(D-Link,Digilink ,Molex or equivalente)				
1	Supply of UTP Cat-6 Cable	11200	Mtrs.		
2	Supply of Information Outlet With Face Plate Cat-6	260	Nos.		
3	Supply of 2 M. Patch Cords Cat-6	360	Nos.		
4	Supply of 3 M. Patch Cords Cat-6	160	Nos.		
5	Supply of One module Surface boxes	260	Nos		
6	Supply of Single Face Plate	260	Nos		
7	Supply of 1" PVC CONDUIT Pipe	600	Mtrs.		
8	Supply of Casing Patti	200	Mtrs		
9	Supply of 24 Port Jack Panel Cat-6	12	Nos.		
	Total A				

B.	Supply of the following Telephone cabling material for 50 Intercoms(Finolex,Polycab ,Delton equivalent)				
1	Supply and laying of Cat 5 (Four pair) Cable	2500	Mtrs		
2	Supply and termination of Telephone Faceplates	50	Nos.		
3	Supply and termination of Mount Boxes	50	Nos		
4	Supply and termination of RJ11 Jack IO	50	Nos		
5	Supply and installation of Casing Patti	100	Mtrs		
6	MDF 100 Pair with terminatuion, Punching, labelling etc	2	Nos		
7	Supply and installation of 10 Pair Krone Modules	20	Nos		
	Total B				
C.	Installation and Commissioning Charges				
1	Laying of UTP Cat-6 Cable	11200	Mtrs.		
2	Termination of Information Outlet with Face Plate Fixing	260	Nos.		
3	Termination of 24 Port Jack Panel Cat-6	12	Nos.		
4	Laying of 1" PVC CONDUIT Pipe	600	Mtrs.		
5	Casing Patti fixing Charges	200	Mtrs		
6	UTP Points (IOs) Testing With Labelling	260	Nos.		
	Total C				
D.	Supply of Network Racks (VALRACK or equivalent)				
1	Supply of 42 U Rack with accessories, 800x800(Power Supply Strip,Dual Power Strip)	1	Nos		
2	Supply of 1 u Cable Manager Rack Mount	5	Nos		
	PART D TOTAL				
PART-E	SECURITY SYSTEM WORKS				
Sr. No	PARTICULARS	QTY	UNIT	MAKE/RATE	AMOUNT
1	<p>ACCESS CONTROL - CONTROLLER</p> <p>Supply, Installation, Testing and Commissioning of HID V2000 Reader Interface/ Networked Controller with enclosure and required power Supply. Model (and Part #):EVO V2000 (72000BEPON01A) or latest, Mounting: Mount to any wall surface, using four screws. For UL compliance, one or more gateways can be mounted inside a locking customer supplied NEMA-4 rated enclosure, Dimensions: 5.8" W x 4.825" H x 1.275" D (147.32 mm x 122.55 mm x 32.38 mm), Weight: 12.4 oz (.35 kg), Housing Material : UL94 polycarbonate Audio / Visual Indicators : Power LED and Communications LED, Operating Temperature : 32° to 120° F (0° to 49° C), Operating Humidity :5% to 85% relative, non-condensing, Storage Temperature : -67° to 185° F (-55° to 85° C), Communication Ports: Ethernet (10/100), Certifications: UL294 (US) Listed Component, CSA 205 (Canada), FCC Class A (US), ICES-003 Class A (Canada), CE Mark EN 301 489-3 EN 55022 EN 50130-4 (EU), C-Tick S/NZS CISPR 22 (Australia, New Zealand) & Korea (KCC), Operating Current (MAX) @ 12-24VDC : 1000mA Operating Current: (AVG) @ 12VDC: 625mA (with 2 iCLASS Readers), Supervised Inputs Power (MAX): 0.025W (5mA sink, 5V nominal) 0 to +5VCD Ref, Output Power (MAX) for individual field devices Wiegand / C&D Reader : 12VDC, 250mA each, Relay Outputs : 30VDC, 2Amp, resistive. Integration With SSI, Snehapadma, Cybernetics or HID Authorised Application</p>	5	NOS	HID	

2	ACCESS CONTROL - BIO CLASS READER Supply, Installation, Testing and Commissioning of HID ICLASS BIO-METRIC READER at OUT side of define Door, card plus finger Two way Authentication, Enrollment Mode, Verification Mode.	5	NOS	HID	
3	ACCESS CONTROL - R10 READER Supply, Installation, Testing and Commissioning of HID ICLASS SE R10 Card READER at IN side of define Door, suitable to read Mifare, Proximate Card and SBI formatted HID cards.	5	NOS	HID	
4	ACCESS CONTROL - ELECTROMAGNETIC LOCK Supply, Installation, Testing and Commissioning of EM LOCK with all required accessories on define Door, Power Input through HID controller EVO V2000, 12V capacity, Electromagnetic mechanism for interlocking with all required Components.	5	NOS	essl or equivalent	
6	CABLING FOR CCTV and Networking Communication Supply, laying, Testing and Commissioning of CAT 6 UTP cable solid cable, Conductor : 23 AWG (Solid) , META : Bare Copper, Insulation Material : HD-PE, OD : 61.mm +- 0.2 , Resistance Unbalance : 5% Max, Capacitance Unbalance : 330pF/100m, Delay Skew : < 45Ns, laying through conduit with required accessories.	4500	Mtr.	d-link or equivalent	
7	CABLING FOR ACCESS SYSTEM Supply, laying, Testing and Commissioning of 04 core 22 AWG Shielded Cable laying through conduit with required accessories.	1500	Mtr.		
8	NETWORK VIDEO RECORDER (NVR) Supply, Installation, Testing and Commissioning of Network Video Recorder having Minimum 64 Channel Input and 16 SATA support up 10 TB by each SATA slot. Resolution : Minimum 1920*1080, Audio Output : Yes with latest Ports	1	Nos	ANY OUT OF OR EQUIVALENT TO AXIS, BOSCH , SAMSUNG	

9	<p>CCTV CAMERAS Supply , Installation, Testing and Commissioning of CCTV cameras 2.0MP Starlight Motorized Vandal proof IR Dome Camera with required accessories ,1/2.8" 2MP CMOS Sensor,H.265/H.264 HP/MP/BP/M-JPEG Encoding, Triple Stream, Up to 1920X1080 High Resolution, Motorized Lens:2.8mm/12mm, IR LEDs: 20m-30m, VCA: Tripwire/Perimeter/Crowd/Foreign & Missing Object/ Fast Moving etc., NIR,WDR, 3D DNR, HLC, Dual-ICR, AWB, AGC, BLC,1/1ch Audio I/O, 2/1ch, Alarm I/O, USB, Built-in Mic, PoE, DC12V/AC24V, TVS 6000V Protection, MicroSD Slot up to 128GB, Material: Metal, IP66, IK10.</p>	35	NOS	ANY OUT OF OR EQUIVALENT TO AXIS, BOSCH , SAMSUNG	
10	<p>CCTV CAMERAS Supply , Installation, Testing and Commissioning of CCTV cameras 4.0MP Starlight Motorized Vandal proof IR bullet Camera with required accessories,1/2.8" 4MP CMOS Sensor,H.265/H.264 HP/MP/BP/M-JPEG Encoding, Triple Stream, Up to 1920X1080 High Resolution, Motorized Lens:2.8mm/12mm, IR LEDs: 20m-30m, VCA: Tripwire/Perimeter/Crowd/Foreign & Missing Object/ Fast Moving etc., NIR,WDR, 3D DNR, HLC, Dual-ICR, AWB, AGC, BLC,1/1ch Audio I/O, 2/1ch, Alarm I/O, USB, Built-in Mic, PoE, DC12V/AC24V, TVS 6000V Protection, MicroSD Slot up to 128GB, Material: Metal, IP66, IK10.</p>	6	NOS	ANY OUT OF OR EQUIVALENT TO AXIS, BOSCH , SAMSUNG	
11	<p>NETWORK SWITCH FOR ACCESS CONTROL SYSTEM Supply , Installation, Testing and Commissioning of Switch MAKE : D-LINK 16-Port Gigabit Switch</p>	1	NOS	D-link	
12	<p>NETWORK SWITCH FOR CCTV CAMERA Supply, Installation, Testing and Commissioning of Switch MAKE : D-LINK 28-Port Gigabit Smart Managed PoE Switch, MODEL : DGS-1210-28P,24 x 10/100/1000BASE-T PoE ports,4 x Gigabit RJ45/SFP Combo ports, Advanced L2 switching and security features,L2+ Static Routing, Optional "standard mode" or "surveillance mode" management user interface,193 W PoE budget.</p>	2	NOS	D-link	
13	<p>STORAGE FOR CCTV FOOTAGE Supply , Installation, Testing and Commissioning of Hard Disk into NVR for storing of CCTV Footage Make: WD purple, Model : WD80PUZX, Formatted capacity: 8TB,Form factor 3.5-inch,Advanced Format (AF), RoHS compliant, Interface transfer rate,(max)2 Buffer to host: 6 Gb/s, Host to/from drive (sustained): 178 MB/s, Cache (MB) : 128, Performance Class :5400 RPM Class, Load/unload cycles : 300,000, Non-recoverable read errors per bits read : <1 in 1014, Average power requirements (W) Read/Write: 6.4, Idle: 5.7, Standby and Sleep :0.7, Temperature (°C, on the base casting) Operating: 0 to 65, Non-operating: -40 to 70, Shock (Gs) :30, Operating (2 ms, read/write) Operating (2 ms, read): 65, Non-operating (2 ms): 250, Acoustics (dBA)7 Idle: 20, Seek (average): 29, Height (in./mm, max): 1.028/26.1, Length (in./mm, max): 5.787/147, Width (in./mm, ± .01 in.): 4/101.6, Weight (lb/kg, ± 10%): 1.43/0.65.</p>	10	NOS	WD	
14	<p>RACK FOR SWITCH MOUNTING Supply , Installation, Testing and Commissioning of 4U rack for mounting Network PoE Switch with 28 Port Patch Paneling and rack Dressing with 1Mtr. D-Link Patch Cable for Each Port. 4 SOCKET Spy Guard for Power Distribution for FAN and Switch.</p>	4	NOS	Schneider or Equivalent	
15	<p>DISPLAY FOR CCTV Supply, Installation, Testing and Commissioning of B2B LED display having screen size 55" with resolution at least 1920*1080. Make : LG / SAMSUNG</p>	1	NOS	LG/ SAMSUNG	

16	Access Software Integration Integration, Installation, Testing & Commissioning of Newly Installed Access Control Devices in existing Access Control Software i.e. Cybernetics , SSI	1	Nos	-	
PART-E TOTAL					
TOTAL (PART-A+PART-B+PART-C +PART-D+PART-E)					