

PROPOSED RESIDENCE DEVELOPMENT AT MYLAPORE, CHENNAI		
OVERALL SUMMARY		
S.No	Description	Amount
1	ARCHITECTURAL	
2	STRUCTURAL	
3	EXTERNAL WORKS	
4	SUPPLY AND INSTALLATION OF PLUMBING & SANITARY FIXTURES WORKS INCLUDING TREATMENT PLANTS	
5	SUPPLY AND INSTALLATION OF ELV SYSTEM(IBMS & BMS)	
6	SUPPLY AND INSTALLATION OF ELECTRICAL WORKS	
	TOTAL	
Note:		
GST 18% Extra		



PROPOSED APPARTMENT AT CHENNAI - INDIAN BANK							
SL. No	DSR CODE	DESCRIPTION	Qty	Unit	Rate in Figures	Amount in Figures	Remarks
ARCHITECTURAL WORKS							
A		Masonry Works					
1	NON DSR	Providing and fixing of 200mm thick solid block work in straight or curved walls, piers and architectural features at all levels using approved solid blocks of density not less than 1,800Kgs/cum, minimum average compressive strength of 4-5 N/mm ² as per IS 2185 (Part 1) : 2005 in cement mortar 1:6 including curing, scaffolding, staging, packing the residual space between masonry & other structural members like columns, beams, slabs etc., providing openings as directed and finishing neatly around the same, the cost of all materials, labour, equipment and machinery, work at all leads and lifts, loading and unloading, transportation, and all other incidental charges etc., complete. (Location -parapet wall)	19.72	m ³		-	
2	6.47	Providing and laying autoclaved aerated cement blocks masonry with 200mm thick AAC blocks with approved block laying polymer modified adhesive mortar of masonry all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).					
		200mm AAC Block	158.28	m ³		-	
2	NON DSR	Providing and laying Autoclaved Aerated Concrete (AAC) blocks masonry 150 mm/230 mm/300 mm thick with Grade-1 blocks of density 551-650 kg/m ³ , conforming to IS 2185 (Part 3), in superstructure above plinth level up to floor V level with RCC bands at sill and lintel levels, using approved polymer-modified adhesive mortar, all complete as per the direction of the Engineer-in-Charge.					
		100mm AAC Block	840.24	m ³		-	
3	13.4.1	Providing and applying 12mm thick plaster in cement mortar mix ratio CM 1:4 (1 cement : 4 sand), to internal surfaces of concrete and masonry work; including raking out joints, hacking concrete surfaces and applying approved chemical bonding agent and applying a scratch coat over concrete surfaces by bonding / adhesive chemical coat as directed by approved manufacturer to create a key, cleaning / grooving deep junctions of concrete & masonry, grouting then back by mortar mixed with non-shrinking compound along with packing of clean, fresh square cut aggregate; also providing and fixing 20 gauge GI chicken mesh @ 150 mm wide to junctions of concrete and masonry, preparing jambs, sills, grooves, bands, wattas, rounding of corners, etc. all complete as per architectural drawings, specifications and finished smooth with wooden rundha etc., at all leads, depth and lifts, doing independent double-legged scaffolding, cleaning of surfaces, curing, etc. complete as per specification. (Internal Wall)	4,106.07	m ²		-	
4	13.11	Providing and applying minimum 18mm thick double coat cement sand plaster ; first coat to be 12mm thick cement sand mortar of mix ratio CM 1:5 (1 cement : 5 sand) including adding 2% by weight of cement approved waterproofing compound of approved manufacturer, second coat to be 6mm thick in cement sand mortar of mix ratio CM 1:3 (1 cement : 3 sand), finished sand face or as required to receive specified architectural external finish to correct line, plumb and level to external faces of walls, soffits/ceiling if any, including hacking concrete surfaces then applying chemical adhesive coating and a scratch/dash coat as a positive bond, curing the same, raking out junctions of masonry and concrete, then pointing and grouting using non-shrinking compound, joints grouted by pressing square crushed stone, doing independent double legged scaffolding etc. (External Wall)	1,058.69	m ²		0.00	
5	13.7.1	Providing and applying 10mm thick ceiling plaster in slab & Beam in cement mortar mix ratio CM 1:3 (1 cement : 3 sand), to internal surfaces of concrete work; including hacking concrete surfaces then applying approved chemical bonding agent and applying a scratch coat over concrete surfaces by bonding / adhesive chemical coat as directed by approved manufacturer to create a key, cleaning / grooving deep junctions of concrete & masonry, grouting then back by mortar mixed with non-shrinking compound along with packing of clean, fresh square cut aggregate, preparing grooves, pattas, wattas, rounding of corners, etc. all complete as per architectural drawings, specifications and finished smooth with wooden rundha etc. or as specified; at all leads, depth and lifts, doing independent double-legged scaffolding, cleaning of surfaces, curing, etc. complete as per specification.	632.52	m ²		0.00	
Total for Masonry Works						0.00	
FLOORING FINISHES							
1	NON DSR	Providing and laying approved first quality, colour, design and shade Full Body vitrified Tiles 600mm x 1200mm of approved make (confirming to IS 15622, water absorption less than 0.05%) flooring in pattern as detailed in drawing. Tile to be bedded over minimum 20mm thick cement sand mortar mix ratio 1:6 (1 cement : 6 coarse sand) including cleaning and preparing the surface for bedding, spreading neat cement slurry by using minimum cement about 2 Kg/Sqm over prepared surface and spreading neat cement paste using minimum cement about 4.5 Kg/Sqm over cement mortar bed, joints to be cleaned and grouted with matching colour approved quality polymer based readymade grout, curing, cleaning, to required line, level, protecting till handing over. (Basic Price Rs.120/Sft Excluding GST) (Make: Simepla) (Epoxy Grout)	779.16	m ²		0.00	
2	NON DSR	Providing and laying approved first quality, colour, design and shade Full body Vitrified Tiles 600 x 1200 mm of approved make (confirming to IS 15622, water absorption less than 0.05%) flooring in pattern as detailed in drawing. Tile to be bedded over minimum 20mm thick cement sand mortar mix ratio 1:6 (1 cement : 6 coarse sand) including cleaning and preparing the surface for bedding, spreading neat cement slurry by using minimum cement about 2 Kg/Sqm over prepared surface and spreading neat cement paste using minimum cement about 4.5 Kg/Sqm over cement mortar bed, joints to be cleaned and grouted with matching colour approved quality polymer based readymade grout, curing, cleaning, to required line, level, protecting till handing over. (Basic Price Rs.120/Sft Excluding GST) (Make: Kajaria Marfil Rock) (Epoxy Grout) (Toilet&Balcony)	224.11	m ²		0.00	
3	NON DSR	Providing and laying 18mm (+/-) 1mm thick approved machine cut, machine polished Granite stone flooring as per drawing. Treads in one piece or as directed to full length of step to be rounded at front and all exposed edges machine polished. Further treads to have 2 nos of 5mm x 5mm deep grooves on top at front or as detailed in drawing. Treads & Riser to be bedded in cement mortar minimum 20 mm thick mix ratio 1:6 (1 cement : 6 M-sand) including preparing and cleaning surfaces, spreading cement slurry using minimum cement 2 kg/sqm over prepared surface and 4.5 kg/sq m over bedding, joints to be cleaned and grouted with matching colour approved readymade grout, curing, cleaning, polishing all complete at all heights (Basic Price Rs.160/Sft Excluding GST) (Location - Staircase)	138.83	m ²		0.00	
4	NON DSR	Providing and laying 18mm (+/-) 1mm thick approved machine cut, machine polished Granite stone flooring as per drawing. Treads in one piece or as directed to full length of step to be rounded at front and all exposed edges machine polished. Further treads to have 2 nos of 5mm x 5mm deep grooves on top at front or as detailed in drawing. Treads & Riser to be bedded in cement mortar minimum 20 mm thick mix ratio 1:6 (1 cement : 6 M-sand) including preparing and cleaning surfaces, spreading cement slurry using minimum cement 2 kg/sqm over prepared surface and 4.5 kg/sq m over bedding, joints to be cleaned and grouted with matching colour approved readymade grout, curing, cleaning, polishing all complete at all heights (Basic Price Rs.160/Sft Excluding GST) (Location - Lobby)	121.63	m ²		0.00	
5	NON DSR	80mm thick cement concrete flooring with mix of Grade M20 using vacuum dewatering technique and power trowelling to obtain antiskid finish. This includes cost of cement slurry, including cutting 4mm wide and 20mm deep grooves on the finished floor at the spacing of 1.40 m x 1.40 m (Panel size not more than 2 sqm in area and not more than 2.00 m in length) and filling the groove with pavement grade PU sealant etc. all complete including the cost of masking tape all complete as per direction of Engineer - In-charge. Finally finished with anti-static flooring / PVC flooring of min 2mm thickness at the time of commissioning of the building.	78.00	m ²		0.00	
6	NON DSR	Polishing Concrete Car Parking - Abrasion Resistance AR3 Layer : Charges for Supply and Installation of Abrasion resistance layer (AR class 3) of 1 to 2 mm thickness using nonmetallic colored floor hardeners at the recommended dosage of 4 kgs / sq.m using dry shake application Colour: Cement Grey. MATT POLISHING: Charges for grinding the concrete floor surface with 200 Grits then cleaning the surface for the densification process, then apply our @ KONGRIT HARD - MAX LIQUID Sprinkle Lithium Silicate densifier by mechanical Sprayer, spread by Micro Fiber Wet tool and leave the floor for a minimum 12-24 hours without any physical touch. After that Honing the surface by 400 Grits to finish the floor (Process : KONGRIT Wet on Wet Polishing System),(Location: Basement & Parking)	78.00	m ²		0.00	
7	NON DSR	Screed Concrete: Minimum 50 mm thick concrete pavement of design mixed concrete. The concrete shall be laid and finished with screed board vibrator and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge.	1,072.10	m ²		0.00	
(v)		Marble top					
	NON DSR	Supply and fixing Nano white Marble counter top and counter top shall be finished with polishing and full noising at all exposed edges. Finished with necessary adhesives.(Pooja)	11.50	sqm		0.00	
(vi)		Granite top					
	NON DSR	supply and fixing table top and counter top shall be finished with 18mm thick approved granite with all side full bull noising at all exposed edges of the granite.(Dinning crockery storage, wash basin counter, Kitchen island counter top)	75.00	sqm		0.00	
Total for Flooring Finishes						0.00	
WALL CLADDING							
1	NON DSR	Providing and laying Full body Vitrified Tile cladding of size 600mm x 600mm as detailed in drawing. Tile to be laid using the approved adhesive and to required line, level; joints to be cleaned and grouted with matching colour approved quality readymade grout, curing, cleaning, polishing, protecting etc. all complete at all heights and leads to the entire satisfaction of the Engineer-in-charge (Basic Price Rs.80/Sft Excluding GST) (Location - Kitchen/Utility) (Make: Simepla)	231.91	m ²		0.00	
2	NON DSR	Providing and laying Full body Vitrified Tile cladding of size 200mm x 1200mm as detailed in drawing. Tile to be laid using the approved adhesive and to required line, level; joints to be cleaned and grouted with matching colour approved quality readymade grout, curing, cleaning, polishing, protecting etc. all complete at all heights and leads to the entire satisfaction of the Engineer-in-charge (Basic Price Rs.60/Sft Excluding GST) (Location - Toilet) (Make: Kajaria)	583.93	m ²		0.00	
3	NON DSR	supply and fixing Granite cladding shall be finished with 18mm thick approved granite with all side full bull noising at all exposed edges of the granite with necessary adhesive.	32.00	m ²		0.00	
Total for Wall Cladding						0.00	
PAINING WORKS							



1		Providing and applying Royal emulsion paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the EC/Client must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); over 2 coats of suitable 1mm thick putty of approved manufacturer including preparing surfaces, filling up with white cement based putty, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two coats of paint (of approved make and shade), required scaffolding, cleaning and protecting till the handing over of site to the Client all complete to entire satisfaction of the EC/Client with required scaffolding, leads and lifts at all levels. (Internal Wall)	4,321.72	m ²		0.00
2	NON DSR	Providing and applying Exterior Emulsion Paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the EC/Client must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor) of newly plastered wall surface with ready mixed paint of first class quality and approved colour over a priming coat with over textured finish including thorough scrapping, clean removal of dirt, and including necessary plaster of paris putty, wherever required etc., required scaffolding, leads and lifts at all levels. (Ultima Protek - Weather Shield) (External Wall)	1,058.69	m ²		0.00
3		Providing and applying Royal emulsion paint of approved make and colour conforming to IS in two coats (surface and finish acceptable to the EC/Client must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); over 2 coats of suitable 1mm thick putty of approved manufacturer including preparing surfaces, filling up with white cement based putty, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two coats of paint (of approved make and shade), required scaffolding, cleaning and protecting till the handing over of site to the Client all complete to entire satisfaction of the EC/Client with required scaffolding, leads and lifts at all levels.(Ceiling)	1,674.88	m ²		0.00
Total for Painting Works						0.00
LIFT WORKS						
1	NON DSR	Provide and install a machine-room-less (MRL) passenger elevator suitable for a G+5 floor building, with a rated capacity ranging from 630 kg to 1000 kg (8 to 13 persons). The elevator shall operate at a speed of up to 1.6 meters per second and use a gearless traction drive system with a permanent magnet synchronous motor (PMSM) for energy-efficient operation. The travel height shall accommodate up to six stops, with door openings measuring 1100 mm in width and a height between 2100 mm to 2400 mm, as per the architectural design. The elevator cabin and doors shall be constructed from stainless steel grade SS304 with a premium interior finish as per the project requirements, which may include decorative ceilings with LED lighting, back-painted glass or laminated wall panels, stainless steel handrails, and anti-skid granite, marble, or vinyl flooring. The elevator shall be equipped with a microprocessor-based control system with VVVF (Variable Voltage Variable Frequency) drive, enabling smooth, efficient, and low-noise operation. It shall feature automatic center-opening or telescopic doors, digital indicators in the cabin and on each landing, voice announcements, and energy-saving modes. The system must support smart building integration with options for IoT connectivity, remote diagnostics, and destination control. The installation must comply with relevant international and local codes such as EN 81-20/50, IS 14685, and applicable fire and accessibility standards. The elevator shall include safety features such as an overspeed governor, dual braking system, buffers, and an Automatic Rescue Device (ARD) to return the elevator to the nearest floor during power failures. Upon completion, the supplier shall provide all as-built drawings, operating manuals, test certificates, and commissioning reports.	1	Nos		0.00
Total for Lift works						0.00
Total for Architectural works						

Note
18% GST Extra



Sl. No	DSR CODE	DESCRIPTION	QTY	UNIT	RATE IN FIGURES	AMOUNT IN FIGURES
		Existing Building Dismantling Works				
	Non DSR	Demolition Of Existing Building : Demolition of existing building using Machine/Manually Including all Items Including Foundation and rate should include lead, lift, carting away and clearing of the debris from the site, etc., complete, as per drawing.				-
		Credit charges for demolition and disposal of old building up to foundation level	-1.00	L.S		-
		Charges for Steel Barricade				-
	Non DSR	Vertical pipe size 2 inch square tube 2mm thickness. pipe size 1 1/4 inch square tube 2mm thickness. sheet thickness .47 mm.	Horizontal Galvanized 6,130.00	Sqft		-
		Sub Total for Demolition work				-
		Total Demolition works				-
		STRUCTURAL WORKS				
I		SUB STRUCTURE				
A		Pile Work				
1.00	DSR 20.2A	Boring, providing, and installing bored cast-in-situ reinforced cement concrete piles of M-30 grade concrete of the specified diameter and length below the pile cap, designed to carry a safe working load not less than specified. The work shall exclude the cost of steel reinforcement but shall include the cost of boring using bentonite slurry and providing temporary casing of appropriate length for setting, installation, and subsequent removal. Piling shall be carried out using a crawler-mounted, telescopic boom hydraulic piling rig only; the use of truck-mounted rotary rigs, tube well boring machines, or similar equipment is strictly prohibited. The scope includes excavation, removal and disposal of excavated earth with all lifts and leads, cleaning of boreholes, tremie concreting, and ensuring verticality and alignment as per specifications. The length of the pile for payment purposes shall be measured up to the bottom of the pile cap. The rate also includes chipping of the pile heads after concreting to the required level, removal of debris, and preparation for pile cap construction, all complete as per drawings and technical specifications.				
		Sump area Piles - @ 27m Depth	412.50	m		-
		Drive Way area - @ 30m Depth	780.00	m		-
2.00	DSR 20.6.3.1	Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform by kentledge/Anchor piles method and preparation of pile head or construction of test cap and dismantling of test cap after test etc.	2.00	nos		-
3.00	DSR 20.8.2	Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile	QRO	nos		
4.00	DSR 20.9	Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, all complete as per direction of Engineer-in-charge.	41.00	nos		-
		Total for Reinforcement works				-
B		EXCAVATION AND FILLING				
1.00	NON DSR	Earthwork in excavation for foundations, plinth beams, cess pits, trenches, drains etc. in all kinds of soil including medium dense clay and medium stiff clay up to the required depth from the existing ground level to the required line, level and grades in both dry and wet conditions including shoring, strutting, bailing, pumping out water from all sources, dressing of sides, ramming of bottom and disposal of excavated materials up to a lead of 1.50 KM including spreading, levelling and compacting, as directed by Engineer-in-Charge.				
		From average ground level to 1.5m depth	408.45	m3		-
		1.50 m to 3.00 m depth	408.45	m3		-
		3.00 m to 4.50 m depth	54.46	m3		-
2.00		Filling with selected, suitable excavated earth (excluding rock) already available at site in plinths. In layers each not exceeding 200mm in depth, breaking clods, watering, compacting each layer with vibratory compactor and at inaccessible places with wooden/steel rammers to achieve 95% proctor density at optimum moisture content; dressing up embankments; if required, bailing/pumping out of water to keep site dry while back filling; costs includes transportation of all materials, labour, machinery etc. complete as per direction and entire satisfaction to the Engineer-in-charge				
a		Available at Site	753.00	m ³		-
a	NON DSR	Providing and filling in foundation and plinth and under floors and in trenches etc., with Brought out Earth/Layers of 150mm thick including watering, ramming with power rammers and consolidating dressing etc., with all leads complete. Measurement shall be as per consolidated depth L x B x H.	528.00	m ³		-
3.00		Providing and injecting chemical emulsion for Pre-construction anti-termite treatment (should be carried out in accordance to I.S.No.6313 (Part II) 1981) and create a chemical barrier under and around the column piers, wall trenches, basement excavation, top surfaces of plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, surrounding of pipes, conduits etc. with all leads complete (plinth area of the building at Ground floor only shall be measured). The treatment is to be guaranteed for a period of 10 years by PCI approved/ listed operator from date of completion and is to be executed by an approved specialised agency, with aqueous emulsion having concentration 1:499 with Premise 350 SC (imidachlorid 30.5% SC) solution and water i.e. 0.07% solution	528.00	m ²		-
4.00	NON DSR	Sheet Piling: Providing and fixing ISMB 350 beams (vertical) shall be inserted up to required depth of 6.00 m at a regular interval of 3m etc. at the earmarked place of work. Below the 6m depth level, the beam section to be inserted by making 500mm dia pit and after inserting the beam section, the pit gaps to be filled with M15 grade of concrete. On the outer surface (horizontal) channel of ISMC 175 to be fixed at 1.2m spacing perpendicular to the ISMB beams all along the boundary of about 6.00 m deep. Further this channel sections should be braced with ISA 60*50*6mm (Diagonal support system) and finally Corrugated sheets of 6mm thick to be inserted to the required depth of 3.5 m in order to prevent the soil from collapsing for a max excavation depth of 3.5m. Corner support system ISMB 200 beam sections at interval of 6m may be installed by anchoring with dedicated concrete block of size 600*600*450 at 5m level depth etc., all complete. The specifications is not limited to, but the entire shoring/ strutting system shall be carried out as per the detailed drawings and Vendor shall hold responsibility in execution, adopting standard safety norms for entire works, men & materials & Equipments etc. complete to the satisfaction of Engineer - In charge. Vendor shall submit the shop drawing for sheet pile shoring system and obtain the necessary approvals from structural consultant prior to kick start the execution at site. This rate is includes all material, labour cost, equipments, lead, lift, transportation / inter-carrying, lifting arrangements etc, all complete as per the instruction of Engineer incharge.	80.00	m		-
5.00	NON DSR	Disposing off all excess materials beyond the initial lead of 50m and upto 2 km out of site including the cost of labour, cost of equipment and machinery hire charges, lead & lift loading and unloading, transportation, levelling the excavated material at disposal yard and all other incidental charges etc. complete. The work shall be carried out as per the directions of the Engineer in charge of the works.	QRO	Cum	250.00	
		Total for Excavation and Filling works				-
C		CEMENT CONCRETE WORKS				
		Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland / Portland Slag cement, proportions as per IS: 9103 to accelerate / retard setting of concrete, admixtures in recommended proportions to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding of the engineer-in-charge; for the following grades of concrete, the cost of centering, shuttering and finishing as per direction. Concrete of M10 grade with minimum cement content of 220 kg /cum.				
	DSR 4.20.1.1	Footings, Plinth Beams & Below the Grade Slab	19.00	m ³		-
		Total for Cement Concrete works				-
D		REINFORCED CONCRETE WORKS				
		Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland / Portland Slag cement, recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of reinforcement as per direction of the engineer-in-charge, for the following centering, shuttering, finishing and grades of concrete.: Concrete of M30 grade with minimum cement content of 350 kg /cum				
	DSR 5.33.1.2	Raft & Pile Cap	136.00	m ³		-
		Column Stump	12.11	m ³		-
		Basement Column	12.11	m ³		-
		Basement Wall	32.55	m ³		-
		Stilt Floor Slab	18.41	m ³		-
		Stilt Floor Beam	13.32	m ³		-
		Staircase	2.63	m ³		-
		Total for Reinforced Concrete works - Substructure				-



E		FORMWORK				
		Providing, fabricating, erecting form work and deshuttering at all levels and places wherever needed/specified as per drawing including striking with 12mm Plastic coated, marine resistant waterproof ply with adjustable steel props of acceptable Staging system and with sufficient bracing as approved by consultant. Cost to include designing of proper form work and staging system to suit the requirements, Submission of design calculations and shop drawings for approval, sealing the joints with heavy duty brown self adhesive tape, aligning to line and levels including M.S. Ties, PVC Spacer, Providing openings / cutouts / pockets, applying deshuttering chemical, Deshuttering as approved by the consultant etc., complete at all levels, double floor heights and profiles.				
	NON DSR	Raft & Pile Cap	77.00	m ²	-	
			128.13	m ²	-	
		Basement Column	96.10	m ²	-	
		Basement Wall	325.49	m ²	-	
		Stilt Floor Slab	122.73	m ²	-	
		Stilt Floor Beam	124.54	m ²	-	
		Staircase	17.55	m ²	-	
		Total for Formworks - SubStructure				-
F		REINFORCEMENT WORKS				
		Providing,supplying, collecting, fabricating & fixing in position reinforcement for RCC work with high yield strength ribbed cold twisted for steel (HYSD-Fe550-D) bar of various diameters and grade of steel at all levels conforming to IS specification including transporting from yard, decoiling, straightening, cutting, bending, hoisting/Lifting, fabricating, and placing in position according to drawings and binding the reinforcement with GI annealed binding wire of double fold of 18 gauge and providing PVC/Concrete cover blocks, for placing the reinforcements in position and for maintaining the cover specified and/or according to relevant IS codes. The quantities including of dowels reinforcement,				
		Grade of reinforced steel - Fe 550-D Grade				
	DSR 5.22.6	Raft & Pile Cap (including chip/piling, carting & disposal)	10,880.00	Kg	-	
		Column Stumps	2,664.02	Kg	-	
		Basement Column	2,664.02	Kg	-	
		Basement Wall	3,255.00	Kg	-	
		Stilt Floor Slab	1,380.71	Kg	-	
		Stilt Floor Beam	2,664.00	Kg	-	
		Staircase	394.95	Kg	-	
		Pile	23,878.15	Kg	-	
		Total for Reinforcement works - SubStructure				-
		Total for Structural works Sub Structure				-
II		SUPER STRUCTURE				
		REINFORCED CONCRETE WORKS - Super Structure				
		Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads; having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, Improve workability without impairing strength and durability as per direction of the Engineer-in-charge. Concrete of M30 grade with minimum cement content of 350 kg /cum				
		M30 Grade Concrete				
		Columns & Lift Wall & Shear Wall				
		Ground floor to Terrace Floor -Column	91.90	m ³	-	
		Roof Beam				
		Ground floor to Terrace Floor	135.14	m ³	-	
		Roof Slab				
		Terrace Floor	178.26	m ³	-	
		Staircase				
		Flights and Stairs	18.43	m ³	-	
		Lintels				
		Beam	18.00	m ³	-	
		OHT & HEADROOM				
		Slab, wall & beam	19.09	m ³	-	
		Total for Reinforced Concrete works				-
B		FORMWORK				
		Supplying and erecting steel centering including necessary supports for plane surfaces for Reinforced Cement Concrete works such as column footings, column pedestals, plinth beams, grade beams, staircase steps, etc. which require only nominal strutting using mild steel sheets of size 90cm x 60cm and 10 BG stiffened with welded mild steel angles of size 25mm x 25mm x 3 mm for boarding, laid over silver oak joists of size 10cm x 6.5cm spaced at about 75cm centre to centre or at suitable intervals etc. complete in all floors complying with standard specification.				
		Providing, fabricating, erecting form work and deshuttering at all levels and places wherever needed/specified as per drawing including striking with 12mm Plastic coated, marine resistant waterproof ply with adjustable steel props of acceptable Staging system and with sufficient bracing as approved by consultant. Cost to include designing of proper form work and staging system to suit the requirements, Submission of design calculations and shop drawings for approval, sealing the joints with heavy duty brown self adhesive tape, aligning to line and levels including M.S. Ties, PVC Spacer, Providing openings / cutouts / pockets, applying deshuttering chemical, Deshuttering as approved by the consultant etc., complete at all levels, double floor heights and profiles.				
		Columns & Lift Wall & Shear Wall				
		Ground floor to Terrace Floor - Column	976.99	m ²	-	
		Roof Beam				
		Ground floor to Terrace Floor	1,227.80	m ²	-	
		Roof Slab				
		Ground floor to Terrace Floor	1,188.38	m ²	-	
		Staircase				
		Flights and Steps	122.87	m ²	-	
		Lintels				
		Beam	80.00	m ²	-	
		OHT & HEADROOM				
		Slab, wall & beam	185.30	m ²	-	
		Total for Formworks				-
C		REINFORCEMENT WORKS				
		Providing,supplying, collecting, fabricating & fixing in position reinforcement for RCC work with high yield strength ribbed cold twisted for steel (HYSD-Fe550-D) bar of various diameters and grade of steel at all levels conforming to IS specification including transporting from yard, decoiling, straightening, cutting, bending, hoisting/Lifting, fabricating, and placing in position according to drawings and binding the reinforcement with GI annealed binding wire of double fold of 18 gauge and providing PVC/Concrete cover blocks, for placing the reinforcements in position and for maintaining the cover specified and/or according to relevant IS codes. The quantities including of dowels reinforcement				
	DSR 5.22.6	Grade of reinforced steel - Fe 550-D Grade	78,950.48	Kg	-	
1.00						-
D		WATERPROOFING WORKS				
1		W/P membrane system-Basement Positive Side Waterproofing Horizontal Surface Below Raft Slab Area (HDPE Membrane)				
		Supplying and installing waterproofing treatment by using 1.2mm thick fully bonded Preapplied HDPE using Fosroc Membrane HDPE-P Standard with a film of pressure sensitive adhesive and allows poured concrete to bond fully with the membrane on Raft Slab/Stitch Slab/Footing/Grade slab as shown in drawing. The waterproofing membrane shall comply with BS 8102 - 2009 for grades 1, 2 and 3 and Indian Standard 16471 : 2017 for Protection of structures against water from the Ground.				
		Waterproofing membrane shall be supplied with side overlaps of 75mm provided on the self adhesive selvedge and end laps using HDPE P Sealed tape of 100mm wide. Membrane shall be installed in strict accordance with the manufacturer's instructions with and shall provide an intimate bond to resist water migration. The fully bonded HDPE membrane is loosely-laid on the PCC before casting of the RCC raft slab / Footings/Stitch Slab/as shown in drawings or wherever applicable etc. The membrane waterproofing shall taken to the height of grade slab concrete in aid of shuttering sheets or block work over and above lapping with Retaining wall waterproofing system				
		The fully bonded Preapplied HDPE sheet waterproofing membrane shall have following typical properties :	259	Sqm	-	
		1) Membrane thickness : 1.2mm				
		2) Tensile strength (film) : >21 Mpa (ASTM D412)				
		3) Elongation >400% (ASTM D412)				
		4) Peel adhesion to concrete: > 880N/m (ASTM D 903 Modified)				
		5) Puncture Resistance: >700N (as per ASTM E154)				
		6) Resistance to hydrostatic pressure : >70m (ASTM D5385)				
		7) Low temperature flexibility : <-25°C, no crack (ASTM D1970)				
		8) Linear Dimensional change : 0.1% (ASTM D1204)				
		Side overlaps shall be a minimum of 75 mm on the selvedge and end overlaps of minimum 75 mm.				
		The item rate shall include base preparation which include wire- brushing the Concrete/Masonry surface & cleaning with air jet , treating all joints, cracks, honeycombs on the RCC members as per manufactures specification and approved methodology. Item rate also include cost of all materials, miscellaneous consumables,labor,transportation of material to all required locations by approved means ,Curing , tools, plant and machinery, hire and fuel charges and all other incidental charges etc., all as per manufacturer's specification				



		The item rate shall include base preparation which include wire- brushing the Concrete/Masonry surface & cleaning with air jet , treating all joints, cracks, honeycombs on the RCC members as per manufactures specification and approved methodology. Item rate also include cost of all materials, miscellaneous consumables,labors,transportation of material to all required locations by approved means ,Curing , tools, plant and machinery, hire and fuel charges and all other incidental charges etc., Protection screed for basement waterproofing is not required and reinforcement shall be tied over the membrane after providing cover blocks and binding of rods without puncturing the membrane. Any defects or puncture spots shall be suitably repaired using HDPE sealed tape before concreting. The treatment for pile preprofiling, PRP, active anchors, etc shall be executed prior to waterproofing application as per manufacturer's recommendation and at extra cost				
2		Retaining Wall Waterproofing Supplying and installing waterproofing treatment by using 1.2mm thick fully bonded Preapplied HDPE sheet membrane Fosroc Membrane HDPE P Standard for the Retaining wall as shown in drawing. Membrane shall be installed in strict accordance with the manufacturer's instructions and shall provide an intimate bond to resist water migration. The fully bonded HDPE sheet membrane shall consist of a multi layer composite film which consists of highly resilient HDPE film, self adhesive polymer layer and trafficable. The fully bonded HDPE membrane is loosely-laid before casting of the RCC Retaining wall as shown in drawings or wherever applicable etc. The fully bonded Preapplied HDPE sheet waterproofing membrane shall have following typical properties : 1) Membrane thickness : 1.2mm 2) Tensile strength (film) : >21 Mpa (ASTM D412) 3) Elongation >400% (ASTM D412) 4) Peel adhesion to concrete : > 880N/m (ASTM D 903 Modified) 5) Puncture Resistance: >700N (as per ASTM E154) 6) Resistance to hydrostatic pressure : >70m (ASTM D5385) 7) Low temperature flexibility : <-25°C, no crack (ASTM D1970) 8) Linear Dimensional change : 0.1% (ASTM D1264)	325	Sqm		
		Side overlaps shall be a minimum of 75 mm on the seldedge and end overlaps of minimum 75 mm. The item rate shall include base preparation which include wire- brushing the Concrete/Masonry surface & cleaning with air jet , treating all joints, cracks, honeycombs on the RCC members as per manufactures specification and approved methodology. Item rate also include cost of all materials, miscellaneous consumables,labors,transportation of material to all required locations by approved means ,Curing , tools, plant and machinery, hire and fuel charges and all other incidental charges etc., all required as per specifications, drawings and as directed by EIC.				
3		UG Sump/OHT Tank waterproofing Providing and applying flexible polymer modified elastomeric waterproof coating using Brushbond Ultraflex of Fosroc Chemicals at 1mm thick in 2 coats at a coverage rate of 16 sqm per 25 kg bag with interval period of 6 hours over a substrate with Saturated Surface Dry condition. Termination to be done on wall extending the coating to min.300mm height above the finished floor level and sealed in the termination groove of 20mm wide and 10mm deep flushed with polymer modified mortar as per vendor recommendation. Coating shall be applied to the entire surface of floor and wall. The waterproofing system shall include necessary surface preparation, injection grouting of construction joints and honey combs with cementitious pressure grouting with 40 psi pump using Cebex 100 @ 225gms mixed to 50 kg bag of cement including joints packing using polymer modified mortar. Chamfering the floor wall junctions with cement mortar 1:4 admixed with Nitobond SBR @ 2 litres per 50 kg bag of cement. Down take pipe annular gaps shall be properly packed using Conibextra GP2 mixed with water in ratio 0.16. The applied material of Brushbond Ultraflex should have a Tensile strength as per ASTM D638 is 1.5 N/mm ² , elongation >175%, Adhesion to concrete is greater than 1.0N/mm ² . Hardness- 79 Shore A and crack bridging ability (ASTM C1305 Modified) - >1.5 mm Migration test (CFR 175-300 of UD FDA) etc. The second part consists of waterproofing to internal surfaces by 12mm thick in CM 1:4 for walls with waterproofing admixtures Conplast WL Xtra @ 200ml per bag of cement as per manufacturer's specifications and consultants approval, curing etc. complete. Cost to include necessary grouting of porous areas, wetla at the junction of floor and walls, termination at the ends etc. complete.	185	Sqm		
			24	Sqm		
3.1		Grade Epoxy Coating for OHT Providing, supplying and spray applying solvent free food grade epoxy resin system using Fosroc Nitocole EP 405. The vertical surface/ horizontal surface of the concrete shall be taken up for thorough surface preparation with compressed air blowing and mechanical removal of debris, laitance, etc. It shall be waterproofed with a mechanical spray application to achieve a minimum DFT as specified below, of approved make, a solvent free, Food grade eco-friendly, epoxy resin system applied as per manufacturer recommendation etc. complete. Providing and applying of first coat of solvent free epoxy resin at 0.1 litre /sqm for achieving 100 microns, after 8 hours Apply a second coat of solvent free epoxy resin @ 0.1 litre /sqm and allow to cure. The product shall have volume of solids : 100% , Specific gravity / Mixed density : 1.85 g/cc, Adhesive bond strength with concrete : > 1 N/mm ²	235	Sqm		
4		Roof Slab Waterproofing Preparation of the concrete surface by mechanical means (mechanical grinding) to ensure a good bond between the coating and the substrate. Supplying and applying High Build Elastomeric waterproofing membrane Nitoproof 600PF based on pitch free polyurethane, cold applied of spray / brush applied single component membrane which is root resistant with minimum elongation of 400% as per ASTM D 412 and the system includes final base preparation, applying Nitoproof 600 PF in two coats with solid content not less than 85% applied at 2.25 kgs / sqm over the primed surface using Nitoproof WB primer on prepared concrete surface as per manufacturer's specification. The required thickness of 1.2mm DFT and the mixing, composition, proposition etc shall be as per manufacturer specifications and approved by consultants. The cracks / construction joints / honey combs / leaking spots in the slab shall be provided with pressure grouting using cementitious system by admixing Cebex 100 - 225 grams to 50 kg bag of cement. The junctions shall be chamfered using Nitobond SBR admixed polymer mortar prior to application of waterproof coating. In addition treatment for Cut-outs, pipes/cables penetrations, Bore packing, sleeves, drainage etc. Termination to be done above the FFL to a height of 300mm after taking U groove of 10mm wide x 10mm thick flushed with polymer modified mortar as per vendor recommendation. The exposed portion of waterproof coating over integral pedestal, parapet wall shall be applied with aliphatic polyurethane coating using Dekguard PU at 90 microns. The material shall comply to - ASTM C 836.Elongation (ASTM D412) : 500 to 700 % , Specific gravity : 1.5 , Solid content : 85% ,Tensile strength (ASTM D412): 2 N/mm ² , Tear resistance (ASTM D624) : 15 N , Water vapour transmission(ASTM E96) : 0.6 g/m ² /hr., Water permeability @ 5 bar : Nil,Crack bridging (ASTM C836/ASTM C1305 modified): 2 mm, Shore A hardness (ASTM D2240) : 60	235	Sqm		
		Roof Slab	96	Sqm		
		Parapet wall				
4.1		Protection Layer On completion of waterproofing application, providing and fix 200gsm non woven Polypropylene geo textile membrane with over lap of minimum 50mm as protective medium before screed concrete or landscaping works	235	Sqm		
4.2		Screed Concrete Fixing 3mm diameter, 75mm square weld mesh over the geo textile surface followed by providing and laying screed concrete of M20 grade of average 75mm thickness with a minimum thickness of 50mm at drain points and a slope of 1:150 or required as per the site condition at all levels by admixing necessary admixtures Conplast WL Xtra @ 200ml per bag of cement of Fosroc Chemicals or approved equivalent and mixing Graded fibrillated 100% virgin poly propylene fibres in concrete at the rate of 0.90 kg/cum as per manufacturers specifications. Treatment to continue along the vertical surface for 300mm height in shape of round Chamfering, curing etc. The concrete shall be provided with groove cutting of 6mm x 10mm at every 5m x 5m area, the joints shall be treated with elastomeric sealants Nitoseal PU 50.	235	Sqm		
5		Wet Area Waterproofing				
5.1		Surface Preparation The cleaning and preparation of the substrate to which the waterproofing barrier applied must be carried out thoroughly to leave a sound base for the application. Any laitance present on the surface must be removed mechanically. Release oil and other contaminants which may impair adhesion must be removed prior to the application. Surface shall be maintained in dry condition before applying waterproof coating.				
5.2		Coving at Right Angle Junctions All the right angle junctions between floor and wall shall be provided with coving of size 75mm x 75mm minimum 15mm thickness in cement mortar 1:4 admixed with Nitobond SBR @ 2 litres per 50 kg bag of cement after saturating the surface with water and applying a slurry primer coat with Nitobond SBR. For non sunken slabs / composite deck / precast slabs, Nitobond Corner Tapes shall be used as per manufacturer specification				
5.3		Down Take Pipe Packing The pipes to be fixed should be filed in order to provided a proper bond and the same to be aligned by the respective agency. The annular space around the Rain water pipe shall be packed using Conibextra GP2, a high strength free flow non shrink grout mixed water in ratio 0.16. The surface shall be suitably prepared using wire brush, primed with Nitobond SBR on the core surface fixing leak free form work followed by fixing Nitobond Collars sandwiched with waterproof coating as per manufacturer's specification.				
5.4		Pressure Grouting at Leaking points Water ponding for minimum 48 hours and 50mm height shall be done to observe weak points in the concrete. Providing cementitious based injection grouting at construction joints, leaking spots and honey combs with 40 psi pump using Cebex 100 @ 225gms mixed to 50 kg bag of cement including joints packing using polymer modified mortar. Fixing of nozzles and chipped portions of nozzles shall be reinstated using Randocor Plug as per manufacturer's specification				
5.5		Waterproof coating				



		Providing and applying flexible polymer modified elastomeric waterproof coating using Brushbond Ultraflex of Fosroc Chemicals at 1mm thick in 2 coats at a coverage rate of 16 sqm per 25 kg bag with interval period of 6 hours over a substrate with Saturated Surface Dry condition. Termination to be done on wall extending the coating to min 400mm height above the finished floor level and sealed in the termination groove of 20mm wide and 10mm deep flushed with polymer modified mortar as per vendor recommendation. The applied material of Brushbond Ultraflex should have a Tensile strength as per ASTM D638 is 1.5 N/mm ² , elongation >175%, Adhesion to concrete is greater than 1.0N/mm ² , Hardness > 79 Shore A and crack bridging ability (ASTM C1305 Modified) - >1.5 mm, Migration test (CFR 175-300 of UD FDA) etc. (Location - Toilet, Balcony)	327	Sqm		
5.6		Sunken Filling				
		Fine sand shall be sprinkled while the coating is in tacky condition. Providing and laying plastering of 12mm thickness in CM 1:4 mixed with Integral waterproofing compound Complast WL Xtra @ 200ml per bag of cement. System include necessary preparation, curing with water, chemicals used, labour, etc as per specification complete before providing screed concrete / brick bat cobbles / cinder filling.	215	Sqm		
		Total for Waterproofing works				-
6		STEEL STRUCTURE FOR PUFF SHEET FOR ROOF				
a	NON DSR	SUPPLY AND INSTALLATION	2965	KG		
b		SUPPLY AND INSTALLATION OF PUFF SHEETS FOR ROOF	1483	SFT		
c		SUPPLY AND INSTALLATION OF GUTTER	19	RM		
		Total for steel structure puff sheet Works				-
		Total for Structural works Super Structure				-
		Total for Structural works (A+B)				-



SI. No	DSR CODE	DESCRIPTION	Qty	Unit	Rate in Figures	Amount in Figures
		STRUCTURAL WORKS				
I		SUB STRUCTURE				
A		CEMENT CONCRETE WORKS				
		Providing, machine mixing and laying Plain cement concrete (PCC) M10 grade of required thickness for foundation, rafta, plinth beams, levelling course and all locations, etc. (minimum cementitious content shall be as specified in the IS Code and as approved); including compacting, curing, required shuttering and its removal, dewatering where required and vibrating, cleaning, preparing surfaces, junctions, etc.; complete at all depths and leads as per the drawing and to entire satisfaction of the Engineer-in-charge				
	DSR 4.20.1.1	Footings, Plinth Beams & Below the Grade Slab	3.80	m³		-
		Total for Cement Concrete works				-
B		REINFORCED CONCRETE WORKS				
	DSR 5.33.1.2	Providing, transporting, pumping and laying batched design mixed, controlled concrete of M30 (as specified in the Structural drawings) conforming to (IS 456) with minimum cement content and maximum water cement ratio as per IS or as specified by Structural Consultant including using approved quality admixtures and placed either with pump/manual/lift for following grades of concrete including compacting, vibrating, curing and protecting against excess etc. complete at all lead, lift & heights as per the drawing and to entire satisfaction of the Engineer-in-charge.				
		M30 Grade Concrete				
		Column	2.03	m³		-
		Beam	8.62	m³		-
		Total for Reinforced Concrete works - Substructure				-
C		FORMWORK				
		Providing, fabricating, erecting form work and dethuttering at all levels and places wherever needed/specified as per drawing including striking with 12mm Plastic coated, marine resistant waterproof ply with adjustable steel props of acceptable Staging system and with sufficient bracing as approved by consultant. Cost to include designing of proper form work and staging system to suit the requirements, Submission of design calculations and shop drawings for approval, sealing the joints with heavy duty brown self adhesive tape, aligning to line and levels including M.S. Ties, PVC Spacer, Providing openings / cutouts / pockets, applying dethuttering chemical, Dethuttering as approved by the consultant etc., complete at all levels, double floor heights and profiles.				
		Column	40.51	m²		-
	NON DSR	Beam	86.16	m²		-
		Total for Formworks - SubStructure				-
D		REINFORCEMENT WORKS				
		Providing, supplying, collecting, fabricating & fixing in position reinforcement for RCC work with high yield strength ribbed cold twisted tor steel (HYSD-Fe550-D) bar of various diameters and grade of steel at all levels conforming to IS specification including transporting from yard, decolling, straightening, cutting, bending, hoisting/lifting, fabricating, and placing in position according to drawings and binding the reinforcement with GI annealed binding wire of double fold of 18 gauge and providing PVC/Concrete cover blocks, for placing the reinforcements in position and for maintaining the cover specified and/or according to relevant IS codes. The quantities including of dowels reinforcement,				
	DSR 5.22.6	Grade of reinforced steel - Fe 500-D Grade				
		Column	506.40	Kg		-
		Beam	2,155.00	Kg		-
		Pile	14,103.96	Kg		-
		Total for Reinforcement works - SubStructure				-
E		Pile Work				
	1.00 DSR 20.3.1	Boring with hydraulic piling rigs with power units, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete.	103.20	m		-
		Total for Pile works				-
F		MASONRY WORKS				
	1.00 NON DSR	Providing and fixing of M15 Solid Concrete 200mm thick block work using 20mm ISS HBG stone Cement Concrete in straight or curved walls, piers and architectural features at all levels using approved solid blocks of density not less than 1,800Kgs/cum, minimum average compressive strength of 4-5 N/mm² as per IS 2185 (Part 1) : 2005 in cement mortar 1:6 including curing, scaffolding, staging, packing the residual space between masonry & other structural members like columns, beams, slabs etc., providing openings as directed and finishing neatly around the same, the cost of all materials, labour, equipment and machinery, work at all leads and lifts, loading and unloading, transportation, and all other incidental charges etc., complete.	40.51	m³		-
	2.00 13.11	Providing and applying minimum 18mm thick double coat cement sand plaster; first coat to be 12mm thick cement sand mortar of mix ratio CM 1:5 (1 cement : 5 sand) including adding 2% by weight of cement approved waterproofing compound of approved manufacturer, second coat to be 6mm thick in cement sand mortar of mix ratio CM 1:6 (1 cement : 6 sand), finished sand face or as required to receive specified architectural external finish to correct line, plumb and level to external faces of walls, soffits/ceiling if any, including hacking concrete surfaces then applying chemical adhesive coating and a scratch/dash coat as a positive bond, curing the same, racking out junctions of masonry and concrete, then pointing and grouting using non-shrinking compound, joints grouted by pressing square crushed stone, doing independent double legged scaffolding etc.	405.12	m²		-
	3.00 NON DSR	Providing and laying 18mm thick (+/-1mm) approved machine-cut, machine-honed (matt finish) granite stone flooring of specified size and shade, with all exposed edges machine-polished (honed), treads in single piece as per drawing with rounded nosing and 2 nos. of 5mm x 5mm deep anti-skid grooves on top front edge; laid over a minimum 20mm thick cement mortar bed (1:6 mix - 1 part cement: 6 parts M-sand), with cement slurry @ 2 kg/sqm on prepared base and 4.5 kg/sqm on back of stone, joints to be filled with approved colour-matched readymade grout, including curing, cleaning, and final surface polishing to matt finish, complete in all respects as per drawing and instruction at all heights (Basic price of granite Rs.120/Sft excluding GST)."	254.00	m²		-
		Total for Masonry Works				-
G	NON DSR	PAINTING / SUNDRISE/ ELEVATION WORKS				
	1.00	Providing and applying two coats of Acrylic Texture Application over one coat of Primer and Two Coats of Ultima Protek Apply One Coat of Exterior Primer + One Coat of Apex Duracast Cross Texture + Two Coats of Ultima Protek	405.12	m²		-
	2.00	Supply and Install Motorised MS Telescopic Gate CE Certified As Per European Standard EN 13241-1:2003+A1:2011 Single Side - 2 Leaf Avians Std Design Surface Finish - Enamel Paint Automation System Push Button - 1 No.	1.00	Nos		-
	3.00	Supply and laying of 60mm thk paver block laid over 50mm thick M sand filling with necessary compaction to the level satisfaction to the engineer - in- charge	257.00	m²		-
	4.00	Supply and Backfilling of M Sand/Dust	115.65	m³		-
		Total for Structural works External Works				-

Note:
GST 18% Extra



Name of the Work : APARTMENT - INDIAN BANK						
ABSTRACT ESTIMATE - PLUMBING						
Sl NO	DESCRIPTION	QUANTITY	Rate	UNIT	AMOUNT	
	B) INTERNAL WATER SUPPLY PIPES AND FITTINGS					
	EXPOSED ABOVE FALSECELLING AND TERRACE FLOOR(HOT,COLD,FLUSHING)					
1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to ASTM D-2846, SDR11 upto 50mm dia for above 50mm dia, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings that is Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings connection between CPVC & metal pipe(GI) ie. Brass Adaptors (both Male & Female threaded), including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement conforming to ASTM F493 and testing of joints complete as per direction of Engineer in Charge. Rate Quoted shall be inclusive of cost of other consumables like hacksaw blade, solvent for CPVC pipe, etc.					
a	65 mm dia.SDR 11	QRO		Rmt		
b	50 mm dia.SDR 11	148		Rmt	-	
c	40 mm dia.SDR 11	105		Rmt	-	
d	32 mm dia.SDR 11	45		Rmt	-	
e	25 mm dia.SDR 11	40		Rmt	-	
f	including concealed line 20 mm dia.SDR 11	790		Rmt	-	
	EXPOSED SHAFT					
2	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to ASTM D-2846, SDR11 upto 50mm dia for above 50mm dia, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings that is Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings connection between CPVC & metal pipe(GI) ie. Brass Adaptors (both Male & Female threaded), including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement conforming to ASTM F493 and testing of joints complete as per direction of Engineer in Charge. Rate Quoted shall be inclusive of cost of other consumables like hacksaw blade, solvent for CPVC pipe, etc.including supporting channel					
a	50 mm dia.SDR 11	85		Rmt	-	
b	40 mm dia.SDR 11	120		Rmt	-	
c	32 mm dia.SDR 11	120		Rmt	-	
d	25 mm dia.SDR 11	95		Rmt	-	
3	BALL ISOLATION Valve - Providing and fixing cpvc ball valve					
a	(BUTTER FLY VALVE)55 mm dia	QRO		Nos		
b	50 mm dia	35		Nos	-	
c	40 mm dia	15		Nos	-	
d	32 mm dia	10		Nos	-	
e	25 mm dia	15		Nos	-	
f	20 mm dia	85		Nos	-	
4	Providing and fixing of approved make automatic air release valve15mm ball valve as directed by Engineer-Incharge.	QRO		Nos		
	Sub-Total - Part -B-					
	C) INTERNAL DRAINAGE (SOIL & WASTE)					
	CONCEALED AND EXPOSED ABOVE FALSECELLING					
5	Providing and fixing of UPVC as per IS-13592, Type B with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowl, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonry walls etc., and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete.					
a	50 mm O.D pipe Type - B	105		Rmt	-	
b	75 mm O.D pipe Type - B	230		Rmt	-	
c	110 mm O.D pipe Type - B	195		Rmt	-	
	INTERNAL DRAINAGE (SOIL, WASTE & VENT)					
	EXPOSED IN SHAFT					
6	Providing and fixing of UPVC as per IS-13592, Type B with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowl, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonry walls etc., and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete.					
a	80 mm-vent pipe	85		Rmt	-	
b	75 mm O.D pipe Type - B	130		Rmt	-	
c	110 mm O.D pipe Type - B	105		Rmt	-	
7	Floor Trap with Boss 'T'					
	Providing & fixing in position deep seal multiway PVC floor trap with cockroach trap and PVC extension piece of required length depth of following size to suit site conditions and multiple inlets, to suit site conditions with inlet sizes ranging from 40 mm to 75 mm. The bottom of the sump shall be dummied water tight. Wherever, sumps are shown to have water seal, the seal depth shall be minimum 40 mm. The sump shall be laid in cement concrete bed with 1:3:6 mix with 20 mm brick jelly bed all around. Providing and fixing heavy class C.P. brass mosquito proof grating with frame of approved design including setting in floor with cement mortar to match with floor finish.	105		Nos		
	ROOF DRAINAGE (RAIN WATER DRAINAGE)					
7	Providing and fixing of UPVC as per IS-13592, Type B with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowl, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonry walls etc., and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete.					
a	160 mm OD pipes	95		Rmt	-	
b	110 mm O.D pipe Type - B	48		Rmt	-	
8	Providing and fixing of Approved make or Equivalent make ROOF DRAIN, CI body with aluminium ring, with SS flat grate and screws including making necessary sleeve arrangement in the slab, core packings, water leak arrests, etc., chasing in the floor, fixing the grating support in the concrete, fixing the grating in the support and making connection to the rain water down coming pipe without any leak, painting the grating with one coat of primer and two coats of black enamel paint.					
	Roof drains outlet 160mm Dia	4		Nos	-	
	Roof drains outlet 110mm Dia	2		Nos	-	
	Sub-Total - Part -C-					
	D) EXTERNAL AND BASEMENT PUMP ROOM WATER /SEWER / STORM DRAINAGE					
	EXTERNAL AND BASEMENT DOMESTIC, FLUSHING WATER SUPPLY TO BUILDING					
9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes conforming to ASTM D-2846, SDR11 upto 50mm dia & Sch 40 for above 50mm dia, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings that is Tees, Elbows, Couplers, Unions, Reducers, brushings etc. including transition fittings connection between CPVC & metal pipe(GI) ie. Brass Adaptors (both Male & Female threaded), including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement conforming to ASTM F493 and testing of joints complete as per direction of Engineer in Charge. Rate Quoted shall be inclusive of cost of other consumables like hacksaw blade, solvent for CPVC pipe, etc.(NOTE:including of EXCAVATION WORKS UPTO 400 to 600mm.)					
a	50 mm dia (COLD AND FLUSHING, MUNICIPAL)	70		RMT	-	
b	50 DI-PLUNGED TYPE-(METRO WATER INLET)	QRO		RMT		
	EXTERNAL AND BASEMENT /STILT DRAINAGE -(SEWER LINE)					
10	Providing and fixing of UPVC as per IS-10124, 10 kgf/cm2 with selfit type joints together UPVC pipes with necessary reducers if required, together uPVC pipe specials, vent cowl, of approved make, The pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality fix . The pipe shall be fixed properly aligned vertical with suitable MS pipe clamps. Work to include making necessary holes in the masonry walls etc., and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. The work shall include Providing and fixing of necessary angles/ channels for supports, chasing of walls, grouting of supports, painting of supports etc., complete. including excavation work upto 600mm depth					
a	160 mm O.D pipe(SEWER LINE AND RAWIN WATER)	165		RMT	-	
b	110 mm O.D pipe Type B(SEWER LINE AND RAWIN WATER)	45		RMT	-	
c	75 mm O.D pipe Type B	35		RMT	-	
11	Supply, Erection, Testing and Commissioning of Cast Iron Body Butterfly Isolation Valves (PN:16) with necessary fittings and accessories like flanges, GI bolts, nuts & washers, painting etc. The Valves shall be of Lever operated valves for 150NB and below and gear operated valves for 200NB and above					
a	65 mm dia	QRO		Nos		
b	50 mm dia	4		Nos	-	
12	Providing and fixing of approved make of Non return valve (screwed), suitable for both horizontal & vertical application conforming to BS 1982 tested to a pressure of 15 Kg/sqcm. threaded joints) complete as required and as complete, as directed by Engineer-Incharge.					
a	65 mm dia	QRO		Nos		
b	50 mm dia	4		Nos	-	
13	Supply, Installation, Testing and Commissioning of C.I body & cover-PN-16, SS304 strainer & carbon steel bolts & nuts. - Pot type Strainer.					
a	65 mm NB.	QRO		Nos		
b	50 mm dia	2		Nos	-	
	GREY AND BLACK WATER CHAMBER					
14	Construction of sewer chambers of required internal dimension of 600X600mm depth upto 0.8 Mtr depth with brick masonry in cement mortar 1:5 thickness of masonry 225 mm, 1:3:6 cement concrete foundation 150 mm thick over 150 mm sand bed, channelling in 1:2:4 cement concrete, plastering in 1:3 cement mortar for internal and external surface finished with floating coat of neat cement. Neco make Heavy duty ductile iron manhole cover with hinged frame C-250, fixed over 100 mm P.C.C. including painting of the frame, cover with 2 coats of anti-corrosive bitumastic paint over a coat of primer all as per specifications. The work shall include necessary excavation and backfilling.	9				



16	Supply of Glazed stoneware gully trap of size 150 x 100 mm with 100 mm outlet , CI grating to suit the size of the gully mouth, CI cover & frame of 300 x 300 mm clear opening of 7 kg weight, complete. Laying in position the above glazed stone ware gully trap including embedding trap in concrete 1:3:6 and constructing chamber of size 300 x 300 mm inside clear in brick masonry, 15 mm thick plaster with cement mortar 1:3 on both internal and external surfaces, internal finished with floating coat of neat cement. Fixing CI frame and cover 300 x 300 mmX7 kgs wt (clear opening), cover painted with 2 coats of anti-corrosive black bitumastic paint etc., complete. The work shall include necessary excavation and backfilling. (Air tight heavy duty covers for gully traps which falls in parking area)	3		Nos	-
17	Supply and fixing of 1200 mm dia rain water harvesting pit to depth of 1200 mm with included excavation ,pcc,fixing of rcc ring filling with 40 mm blue metal fine sand cover slab necessary bore with sloped pvc pipe 1.8mt as per drawing. SOAP PIT	9		Nos	-
Sub-Total - Part -D-					
UTILITY PUMPS					
18	Supply and installation of DOMSATIC Water supply Hydro Pneumatic System Pumps , of approved make Variable flow 1 Pump system, 1 working + 1 stand by. For pumping the UG water from sump to kitchen and area. The cost shall include necessary Control Valves, pressure vessel, pressure switch, Non-Return Valves, interconnecting pipes in the system, foot valves, etc., 5m3/Hr@ not less than 40mtr Head , Each Pumps shall deliver 5m3/hr @ head of 40 mtr with necessary starter, starter panel and cabling With required Pressure vessel tank-100 ltr of walmet make impeller SS304. The electrical contractor will leave the cable near the pump room with MCB or MCCB. The PHE contractor shall consider the cabling from the MCB or MCCB to individual pumps and starters. apprx length of cable shall be 20 RMT. (KITCHEN LINE THROUGH MUNICIPAL LINE)	1		Nos	-
19	Supply & Fixing of Water supply SUBMERSIBLE FLUSHING WATER TRANSFER PUMP, one working and one stand by , 10000 litres per hour (LPH) , 5 m3/hr@ 40mtr Head With the cost shall include necessary Control Valves, pressure vessel, pressure switch, Non-Return Valves, interconnecting pipes in the system, foot valves, etc. (COLD AND FLUSHING WATER)	2		Nos	-
20	Supply and installation of approved make, submersible Dewatering non clog pump (1working + 1 stand by), 5m3/Hr vertical height of 15 mtr , with complete connections, float switches, drain points, required couplings, valves, non return valves, stater panel, required cabling between panel and motors, required pump supports and suffling threads, etc. - Inside Pump Room - collection pit.	1		Nos	-
21	Supply, installation, testing & commissioning of Water level controller for OHT & SUMP, Pump must On/Off based on with high/low level signals on OHT, with necessary float switch. The scope of work includes, fixing of float switch, termination of sensor cable terminations, starter provision for 1w+1s pump of capacity 3 phase , auto/manual selector. float control system wire upto pump to pump	2		Set	-
22	Supply & Fixing of Water supply Terrace Booster Pump , approved make Variable flow Terrace Booster, 1 working + 1 stand by, For pumping the water from oht to proposed campus., Horizontal multistage pumps mounted on a common base frame, with common galvanized suction & delivery manifold 2nos.s of isolation valve and 2nos of non return valves. Control panel - Voltmeter, ammeter, Three phase preventer, with dry run control provision. Impeller SS304 Pressure vessel 100 ltrs Each Pumps shall deliver 5m3/hr @ head of 30 mtr with necessary starter. The electrical contractor will leave the cable near the pump room with MCB or MCCB. The PHE contractor shall consider the cabling from the MCB or MCCB to individual pumps and starters. apprx length of cable shall be 20 RMT.	1		Nos	-
23	Aquamet-w voltmann type bulk water meter (up to 50 deg/c), removable mechanism type ,magnetically sealed totaliser ,retorofittable for pulse output and conforming to iso-4084 class-b, with flange and connections, with flanged end connection ,with pulse wire and rs-485 totalizer and ms box. NOTE: CONSIDE TYPICAL FLOOR COLD & FLUSHING SUPPLY	3	50 MM	NOS	-
24	Borewell - Digging of Pilot hole of 200-mm-dia to a depth of 130-mts with 4M3/Hr submersible pumpset , supply of required materials by the firm including 2" G.I delivery pipe and erection of pumpset including accessories, testing and commissioning of pumpsets. The scope of work includes supply and erection of class 3 PVC casing pipe of 150 mm dia including slotting covered with nylon Mesh to a length of 110 mtrs. Supply and installation of submersible pump set with necessary cables, control boards, protective devices etc. Laying of 2" dia G.I Pipeline from pump delivery at ground level to HLR - 5 meters length. Pipes required for suction and delivery will be provided by the contractor. Drilling of Borewells anywhere in TamilNadu including transportation from one place to another with in TamilNadu in alluvial soil sedimentary strata of clay and sand stone shale penins boulders etc. By first taking a pilot bore of 140mm/150mm dia and then enlarging to required dia direct or reverse rotary mud circulation method using rotary rigs fuel, labour and drilling bentonite and water required for drilling at site. - Up to 60m depth ending below ground level. (borewells each 120 RM) (INCLUDING OF BORE WELL WORKS AND BORE WELL PUMPS AND PIPES AND FITTINGS WORK UPTO UG SUMP AND HYDROGEOLOGICAL INVESTIGATION 5 POINTS)	1		set	-
Sub-Total - Part -E-					
25	UG SUMP-FRP TANK (6KLD -3 NOS)	3		Nos	-
The work includes the supply, installation, testing, and commissioning of 3 numbers of modular panel-type FRP (Fiber Reinforced Plastic) water storage tanks, each having a dimension of 1.2 m (width) x 2.5 m (length) x 2.3 m (height), with a total volume of approximately 6.9 kilolitres (KL) including freeboard, as per approved drawings. The tanks shall be constructed using high-strength, food-grade, UV-stabilized FRP/GRP panels suitable for potable or process water storage. The panel-based construction method shall ensure ease of installation, structural rigidity, and long service life. The standard tank wall thickness shall be as follows: bottom panels 8 mm to 10 mm, side wall panels 5 mm to 8 mm, top cover panels 4 mm to 6 mm, and corner/reinforcement areas shall be strengthened up to 10 mm or more as required. All panels shall be bolted together using stainless steel hardware (SS 304/316) with EPDM rubber gaskets to ensure a leak-proof and corrosion-resistant seal. The tanks shall be mounted on a leveled RCC or steel foundation, and installation shall include all necessary accessories such as inlet, outlet, overflow, drain, air vent, internal bracing, access manhole, and external support if needed. Hydrostatic testing shall be carried out after installation to verify performance and structural integrity. The entire installation must conform to relevant IS standards and industry norms					
GRAY WATER TREATMENT PLANT-SKLD					
a) MECHANICAL EQUIPMENT					
b) GTP -FRP TANKS-INCLUDING					
26	AUTOMATIC GREY WATER TREATMENT PLANT-SKLD				
AUTOMATIC GREY WATER TREATMENT PLANT-SKLD					
a) MECHANICAL EQUIPMENT					
b) GTP -FRP TANKS-INCLUDING					
Sl. No	Description	QUANTITY	Rate	UNIT	AMOUNT
1	Design, Fabrication, Supplying, Installing, Testing and Commissioning of FRP skid consisting of Bar screen, Equalization tank, Aeration tank and Treated water tank FRP thickness shall be 6mm. Overall dimension of the skid appx. 3.1m L x 5m W x 1.7m Ht Note : Site fabrication only possible, since its basement Bar screen chamber: Size - 0.5m L x 0.5m W x 0.6m Ht, MOC : FRP Equalization Tank : Size - 1m L x 1.5m W x 1.7m Ht, MOC : FRP, Capacity : 2.5KL Including Air grid arrangement using UPVC pipes Inlet, outlet, Drain and over flow Nozzles to be provided Aeration Tank : Size - 1m L x 1.5m W x 1.7m Ht, MOC : FRP, Capacity : 2.5KL Including Air grid arrangement using UPVC pipes Inlet, outlet, Drain and over flow Nozzles to be provided Treated water Tank: Size - 0.6m L x 1.5m W x 1.7m Ht, MOC : FRP, Capacity : 1.5KL Inlet, outlet, Drain and over flow Nozzles to be provided-Ion exchange/E5 Enviro technologies	1		Skid	
2	Design, Fabrication, Supplying, Installing, Testing and Commissioning of FRP type bar screen with 10 mm normally placed gaps in screen to allow sewage water flow and prevent higher size debris from entering into the Collection tank at the very entry point itself of the tank. Screen kept inclined at 45 degree to the horizontal with hand track etc as required. Size of the screen 500mm Length x 600mm Ht-Ion exchange/E5 Enviro technologies	1		No.	
3	Supplying, Installing, Testing and Commissioning of Centrifugal, Monoblock, horizontal raw water pumps to pump grey water from equalisation tank to aeration tank suitable for handling minimum 2-5 mm solid particles having a liquid discharge rate of minimum 0.5 m3/hrs at a head of 10 meters suitable for operation on 1 phase 240 Volt AC supply etc as required., (1 working and 1 Stand by = 2 nos) -KBL/CR/Lubi	2		Set	
4	Supply, Transportation, installation, Testing & commissioning of diaphragm type operation Air blower including piping arrangement, ball valve, NRV for 240± 10% volts, 1 phase A/C supply etc as required. minimum 12 m3/hrs at a head of 2 meters (1 working and 1 Stand by = 2 nos) -Fujimac /Hailea	2		Set	
5	Supplying, Installing, Testing and Commissioning of Centrifugal, Monoblock, horizontal Filter Feed pump having a liquid discharge rate of minimum 0.5 m3/hrs at a head of 25-30 meters suitable for operation on 1 phase 240 Volt AC supply etc as required., (1 working and 1 Stand by = 2 nos) -KBL/CR/	2		Set	
6	Supplying of Multi Grade filter of FRP construction with Fully automated multiport valves, suitable supports for mounting, pressure gauge etc., complete as per the detailed specification for the efficient working of system. The maximum working Pressure shall be 2 Kg/Sqcm. H.O.S -65 inch. Diameter - 14 inch. Multiport valve - side mounted-Ion exchange/Pentair/Tata	1		Set	
7	Supplying of Activated carbon filter of FRP construction with Fully automated multiport valves, suitable supports for mounting, pressure gauge etc., complete as per the detailed specification for the efficient working of system. The maximum working Pressure shall be 2 Kg/Sqcm. H.O.S -65 inch. Diameter - 14 inch. Multiport valve - side mounted-Ion exchange/Pentair/Tata	1		Set	
8	Supplying, installation, Testing & commissioning of single phase dosing pump set having flow rates 0-6 LPH and LDPE dosing tank 100 ltrs for storage of chl-UKL / E-Doseorine dosing solution as required.	2		Set	
9	Instruments: Pressure gauge - Dial size- 2.5 inch-ORG/Baumer Level switch - For Filter Feed tank-ORG/Baumer	1		Lot	
10	Supply of Auto motor control Panel with necessary safety ancillaries connecting Grey water transfer pump, Blowers, Filter Feed pump, chlorine dosing unit including cabin, level switch etc complete-Ion exchange/Aster-Ion exchange/Aster	1		Lot	
10a	Necessary Cabin, earthing, electrical items required -Polycab/Finox	1		Lot	
11	Supplying inter unit piping of UPVC SCH 40 with necessary flanges, bolts, nuts, gaskets, wherever necessary, with necessary control valves, non return valves etc -Astral / surma	1		lot	
12	Supply, Transportation, installation, Testing & commissioning of MS painted supports as required-ISI make	1		Lot	
	Total Basic price				
	GST 18 %				
	Total price including GST				



TOTAL GREY WATER TREATMENT PLANT-5 KLD				
27	WATER TREATMENT PLANT-6 KLD-1000 LPH WITH SOFTNER			
<p>The work includes the supply, installation, testing, and commissioning of a complete skid-mounted Water Treatment Plant (WTP) with a capacity of 6 KLD (1000 Litres Per Hour), designed to deliver treated water that meets applicable quality standards and complies with Pollution Control Board (PCB) norms for potable or process use. The system shall be of Ion Exchange make or equivalent, and incorporate pre-treatment, filtration, and softening units, engineered to handle input water with typical turbidity, hardness, and TDS values as per site conditions. The treatment train shall include a raw water feed pump, multi-grade filter (MGF) for turbidity and suspended solids removal, an activated carbon filter (ACF) for organic contaminants and odor removal, and a high-efficiency water softener unit for hardness reduction, all housed in FRP or MSRL pressure vessels. The softener shall use food-grade ion-exchange resin with adequate capacity and include an automatic or semi-automatic regeneration system using industrial-grade salt (NaCl), complete with brine tank and accessories. The plant shall include all necessary valves (multiport/ball type), flow meters, pressure gauges, and piping in UPVC or CPVC, with a common skid frame and suitable electrical control panel for plant automation. Provision for backwash, rinse, and regeneration shall be incorporated with appropriate drainage piping. The treated water shall comply with BIS 10500 standards for potable applications or IS 4985/10500 standards for process use, with TDS, hardness, iron, and turbidity within permissible limits. All materials used shall be corrosion-resistant and suitable for continuous operation. After installation, the system shall be tested under live conditions and commissioned, with performance testing, O&M manual, and water quality report submitted to the Engineer-in-Charge (EC) for approval.</p>				
RAW WATER CHARACTERISTICS:-				
pH : 6.5 – 8.5 Hardness : < 500 mg/l				
WTP TREATED WATER CHARACTERISTICS:-				
pH : 6.5 – 8.5 Hardness : < 50 mg/l				
Design Basis : Flow Rate : 6.0m ³ /hr OBR (Operation Between Regeneration) : 48.0 m ³				
1	Filter Feed Pump	2		Nos
Quantity : 2 Nos (1W+1SB) Type : Monobloc Centrifugal, Horizontal Pump Flow : 1000 LPH Head : 30 MWC MOC : CI Motor : 1.5 HP Make : Lubi/Kirloskar/Equvt				
2	Hypo Dosing Pump and tank	1		Nos
Type : Electronic Dosing Pump Capacity : 0-1LPH @ 4 Bar Quantity : 1 No. Tank Capacity : 100 Liters Make : Vertilo/NZO/Equvt				
3	Pressure sand filter	1		Set
FQuantity : 1 No. Duty : To remove Suspended Solids from treated water. Flow Rate : 1000 LPH Size : 16" x 60" MOC : FRP Frontal Pipeline : 1 Lot - 32 NB UPVC Type of Valve : Automatic Multiport Valve – 32 NB - 1 No. Distribution Inlet : Strainer Distribution Outlet : Strainer Media : Graded Pebbles and Sand. Make : Pentair/Tata/Equvt				
3	Activated carbon filter	1		Set
Quantity : 1 No. Duty : To remove the organic traces, colour and odour from raw water Flow Rate : 1000 LPH Size : 16" x 60" MOC : FRP Frontal Pipeline : 1 Lot - 32 NB UPVC Type of Valve : Automatic Multiport Valve – 32 NB - 1 No. Distribution Inlet : Strainer Distribution Outlet : Strainer Media : Graded Pebbles and Sand. Make : Pentair/Tata/Equvt				
4	Softener Filter	1		Set
Quantity : 1 No. Duty : To remove hardness from treated water. Flow Rate : 1000 LPH Size : 16" x 60" MOC : FRP Frontal Pipeline : 1 Lot - 32 NB UPVC Type of Valve : Automatic Multiport Valve – 32 NB - 1 No, with Ejector Distribution Inlet : Strainer Distribution Outlet : Strainer Resin Qty : 300 Ltrs Resin Make : Ion Exchange 220 Na/Equvt Salt : 48 Kgs Capacity of Brine Tank : 200 Ltrs MOC of Brine Tank : PP OBR : 55.0 m ³ Make : Pentair/Tata/Equvt				
5	Inter Connecting Piping, Fittings and Valves	1		Lot
MOC : UPVC SCH 40 Make : Astral/Aashirvad/Equvt				
6	Control Panel for Pump	1		Set
1 No. Control Panel - Non compartmental - Indoor - Wall mountable - type for the following electrical drives:- a). Filter Feed Pump : 2 Nos b). Hypo Dosing System : 1 No. c). Level Switch : 1 Nos with 5 meters cables d). Suitable In Plant Cable : 1 Lot				
7	Instrumentation's for UF System	1		Lot
Pressure Gauge, Level Switch and Rota meter				
WATER TREATMENT PLANT-6 KLD-1000 LPH WITH SOFTNER				
28	GAS PLANT			
<p>The work involves the supply, installation, testing, and commissioning of an 8-cylinder LPG gas manifold system, complete with all associated fittings, valves, and safety equipment, along with copper pipeline work extending from the ground-level cylinder bank up to a kitchen located on the 5th floor. The LPG manifold system will consist of 8 nos. LPG cylinders (4 working + 4 standby or as required), connected via heavy-duty high-pressure rubber hoses with brass end fittings, mounted on a powder-coated MS manifold frame. A changeover valve will be included to allow automatic or manual switching between working and standby cylinders. The pipeline from the manifold to the kitchen shall be constructed using Type-L or heavy-duty ISI-marked copper pipes of appropriate diameter (typically 15mm to 25mm OD), brazed using silver brazing rods to ensure leak-proof joints. The piping will be securely clamped along the building structure using heavy-duty saddles or clamps at regular intervals and laid with suitable slope for drainage. The installation shall include a pressure regulator (high-pressure or low pressure, depending on burner type), isolation ball valves at strategic points and at the kitchen inlet, flame arrestors, and pressure gauges for monitoring. All work shall be done in accordance with IS 6044 and PESO norms, ensuring proper ventilation and safety clearance. Necessary wall sleeves, fire-sealed penetrations, and labelling will be provided. The system shall be leak-tested with nitrogen or soap solution and commissioned in the presence of a certified gas technician. A completion report and safety certificate shall be furnished post-installation.</p>				
1				Nos
SOLAR WATER HEATER-1000 LPD				
<p>Supply and installation of the Solar Water Heater system with a capacity of 1000 Litres Per Day (LPD), including a 500-litre stainless steel (SS) storage tank (Make: Venus or equivalent), is designed for efficient and reliable domestic or commercial hot water supply. The system typically consists of either Flat Plate Collectors (FPC) made of copper with selective coating or Evacuated Tube Collectors (ETC) made of borosilicate glass tubes, both mounted on a durable powder-coated MS or aluminum frame with optimal tilt and south-facing orientation. The collector area ranges between 10 to 15 square meters depending on the type and efficiency. The system includes a 500-litre inner tank made of food-grade stainless steel (SS304/SS316) with 1.5-2 mm thickness, insulated with 50-75 mm thick high-density PUF and encased in an outer powder-coated GI or aluminum shell, capable of withstanding pressures up to 2.5 bar in pressurized configurations. Hot water output reaches temperatures of up to 60°C under standard solar radiation. The system comes equipped with essential plumbing such as insulated piping, valves (ball valve, non-return valve, air vent, and pressure relief valve), and an optional electric backup heater of 2-3 kW with thermostat control. It is suitable for installation on RCC or metal roofs and occupies approximately 12-20 square meters of space. The system is MNRE approved, BIS certified, has a life expectancy of 15-20 years, and typically comes with a 5-year warranty on the tank and collectors.</p>				
1				Nos
GRAND TOTAL				



Name of the Work : APARTMENT -INDIAN BANK					
ABSTRACT ESTIMATE - PLUMBING AND SANITARY WORKS					
SI NO	DESCRIPTION	QUANTITY	Rate	UNIT	AMOUNT
	A) SANITARY FIXTURES & FITTINGS INCLUDING (Providing and fixing)				
1	Supplying and fixing in position White / Colour Glazed Model WALL MOUNTED European Water Closet of best quality and approved make with 100mm "P" or "S" trap connecting with CI pipe of 100mm dia / PVC pipe of 110mm dia, double flapped rigid PVC black seat and seat cover with CP brass hinges including cost of white cement, cement for packing, spun yarn, teak wood plugs, brass screws, etc., including supplying and fixing low level flushing tank with a pair of CI brackets, etc., complete with all fittings, such as, 15mm brass ball valve with polythene float with brass handle, union coupling connected by means of 40mm white PVC flush hand using indian adopter joint including all internal fittings, such as, 15mm brass connections, 15mm GM wheel valve, 15mm brass nipple (2 Nos.), 15mm nylon connection, TW plugs, screws and also giving necessary connection to the PVC pipe and painting the CI brackets with 2 coats of approved paint over one coat of red oxide primer, dismantling the masonry and re-doing the dismantled masonry to original condition, etc., complete complying with standard specifications. (The EWC and flushing tank with all accessories should be got approved by the Executive Engineer before use on works) Floor Fitting	5		Nos	-
	EWC: LAS-WHT-91953BIUFMS-JAQUAR				-
	DROPLET FACEPLATE POLISHED CHROME -JCP-CHR-152415-JAQUAR				-
	CONNECTOR ACCESSORY PACK -JAQUAR				-
	M12 RACK BOLTS FOR WH INSTALLATION -JAQUAR				-
	INSTA FLUSH MECH. JCS-WHT-2400WS-JAQUAR				-
2	Supplying and fixing in position White / Colour Glazed Model WALL MOUNTED European Water Closet of best quality and approved make with 100mm "P" or "S" trap connecting with CI pipe of 100mm dia / PVC pipe of 110mm dia, double flapped rigid PVC black seat and seat cover with CP brass hinges including cost of white cement, cement for packing, spun yarn, teak wood plugs, brass screws, etc., including supplying and fixing low level flushing tank with a pair of CI brackets, etc., complete with all fittings, such as, 15mm brass ball valve with polythene float with brass handle, union coupling connected by means of 40mm white PVC flush hand using indian adopter joint including all internal fittings, such as, 15mm brass connections, 15mm GM wheel valve, 15mm brass nipple (2 Nos.), 15mm nylon connection, TW plugs, screws and also giving necessary connection to the PVC pipe and painting the CI brackets with 2 coats of approved paint over one coat of red oxide primer, dismantling the masonry and re-doing the dismantled masonry to original condition, etc., complete complying with standard specifications. (The EWC and flushing tank with all accessories should be got approved by the Executive Engineer before use on works) Floor Fitting	20		Nos	-
	EWC: ONS-WHT-10953BIUFMS-JAQUAR				-
	DROPLET FACEPLATE POLISHED CHROME -JCP-CHR-152415-JAQUAR				-
	CONNECTOR ACCESSORY PACK -JAQUAR				-
	M12 RACK BOLTS FOR WH INSTALLATION -JAQUAR				-
	INSTA FLUSH MECH. JCS-WHT-2400WS-JAQUAR				-
3	Supply & installation of JAQUAR ESSCO make Squating Pan with rubber buffers, complete with internal syphon fittings and finish, together with connection pipe to the squatting pan. Including cutting & making good the walls & floors wherever required.	2		Nos	-
	SQUATING- ECS-WHT-455LEJAQUAR				-
	Fixing of the above squatting pan complete with supply of CPVC connectors, & necessary fasteners, fixing of the angle cock connection pipe to the pan. Providing water to the squatting, together with cutting and making good the walls and floors wherever required				-
4	Supply & installation of approved make wall mounting taller type European water closet Cistern with elbow operated knob, C.P. bolts, nuts, toilet seat and cover complete with all accessories. Including cutting & making good the walls & floors wherever required.	5		Nos	-
	EWC -FLS-WHT-5353PPZ-JAQUAR				-
	CONNECTOR ACCESSORY PACK AND CONNECTING HOSE(ANGEL COCK TO EWC)				-
	Angle Stop Valve-AQT-CHR-3057P-JAQUAR				-
	Fixing of the above closet complete with supply of PVC / Brass Pan connectors, & necessary fasteners, fixing of the angle cock & CP brass connection pipe to the cistern. Providing water & Soil connections to the closet, together with cutting and making good the walls and floors wherever required.				-
5	Wash Hand Basin of size with all accessories such as Cast Iron Brackets, 32mm dia CP Waste Coupling, Rubber Plug and Chain, 32mm dia 'B' Class GI Waste Pipe, 15mm dia GM Wheel Valve, 15mm dia Nylon Connection, 15mm dia Brass Nipples, 15mm CP Pillar Tap etc	25		Nos	-
	ABOVE COUNTER WASH BASIN-JDS-WHT-25907N-JAQUAR				-
	PILLAR COAK:KUP-CHR-35441KPM-JAQUAR				-
	CONCEALED:ALD-CHR-441-JAQUAR				-
	Grid Drain With Over Flow Hole - ALD-CHR-727L130-JAQUAR				-
	Standard Bottle Trap -ALD-CHR-769L300X190-JAQUAR				-
6	Wash Hand Basin of size with all accessories such as Cast Iron Brackets, 32mm dia CP Waste Coupling, Rubber Plug and Chain, 32mm dia 'B' Class GI Waste Pipe, 15mm dia GM Wheel Valve, 15mm dia Nylon Connection, 15mm dia Brass Nipples, 15mm CP Pillar Tap etc	5		Nos	-
	ABOVE COUNTER WASH BASIN-OPS-WHT-15931PM-JAQUAR				-
	PILLAR COAK:FLP-CHR-5011PM- JAQUAR				-
	CONNECTING HOSE				-
	Grid Drain With Over Flow Hole - ALD-CHR-727L130-JAQUAR				-
	Standard Bottle Trap -ALD-CHR-769L300X190-JAQUAR				-
	Angle Stop Valve-AQT-CHR-3057P-JJAQUAR				-
7	Wall Mounted -Wash Hand Basin of size with all accessories such as Cast Iron Brackets, 32mm dia CP Waste Coupling, Rubber Plug and Chain, 32mm dia 'B' Class GI Waste Pipe, 15mm dia GM Wheel Valve, 15mm dia Nylon Connection, 15mm dia Brass Nipples, 15mm CP Pillar Tap etc	2		Nos	-
	Wall MOUNTED- WASH BASIN-CNS-WHT-801-JAQUAR				-
	PILLAR COAK:FLP-CHR-5011PM- JAQUAR				-
	CONNECTING HOSE				-
	Grid Drain With Over Flow Hole - ALD-CHR-705 -JAQUAR				-
	Standard Bottle Trap -ALD-CHR-769L300X190-JAQUAR				-
	Angle Stop Valve-AQT-CHR-3057P-JJAQUAR				-
8	Providing and fixing Hand Spray / with Button control (Health Faucet) with pressure including flexible hose 1m/1.2m long connection and holder for hand spray ,making good the same, complete of Engineer-in-charge. Polished Chrome Finish Brass 15 mm dia bore angle valve Note : Rate should be inclusive of lifting charges.	30		Nos	-
	Health Faucet -ALD-CHR-573 ,HOSE-SHA-CHR-549D8-JAQUAR				-



	Angle Stop Valve-AQT-CHR-3057P-JJAQUAR				-
9	supply and fixing of shower set including mixer and round shower arm.with all necessary screw fitting to complete of Engineer-in-charge	5		Nos	-
	DIVERTORALD-CHR-681N -JAQUAR-THERMOSAT				-
	CP COVER-KUP-CHR-35681NKPM-JAQUAR				-
	HAND SHOWER-HSH-CHR-1731 WITH HOSE-SHA-CHR-549D8				-
	ANGEL HOLDER HAND SHOWER-SHA-CHR-566S-JAQUAR				-
	RAIN JOY-OHS-CHR-1619-JAQUAR				-
	SHOWER HARM-SHA-CHR-455L600-JAQUAR				-
10	supply and fixing of shower set including mixer and round shower arm.with all necessary screw fitting to complete of Engineer-in-charge	15		Nos	-
	DIVERTORALD-ALD-CHR-065M-JAQUAR				-
	CP COVER-LAG-CHR-91065MK-JAQUAR				-
	HAND SHOWER-HSH-CHR-1937 WITH HOSE-				-
	ANGEL HOLDER HAND SHOWER-SHA-CHR-555JAQUAR				-
	OUTLET TAP- SPJ-CHR-15463PM-JAQUAR				-
	SHOWER HARM-SHA-CHR-479L450-JAQUAR AND ROUND -OHS-CHR-1789				-
11	supply and fixing of shower set including mixer and round shower arm.with all necessary screw fitting to complete of Engineer-in-charge	5		Nos	-
	DIVERTORALD-ALD-CHR-065M-JAQUAR				-
	CP COVER-FLP-CHR-5065MKPM-JAQUAR				-
	OUTLET TAP- SHA-CHR-477-JAQUAR				-
	SHOWER HARM-SHA-CHR-4770-JAQUAR AND ROUND -OHS-CHR-1789				-
12	supply and fixing 25 ltrs gyser-VRM-WHT-HD035-JAQUAR work should inclusive of 2 number of angel cock and connect hose and asseries with all necessary screw fitting to complete of Engineer-in-charge	5		Nos	-
13	supply and fixing 25 ltrs gyser-MET-WHT-PV025-JAQUAR work should inclusive of 2 number of angel cock and connect hose and asseries with all necessary screw fitting to complete of Engineer-in-charge	20		Nos	-
14	Providing and fixing of Polished Chrome Finish Brass Single Coat Hook with all necessary screw fitting to complete of Engineer-in-charge. Note : Rate should be inclusive of lifting charges:AKP-CHR-35761P	50		Nos	-
15	Providing and fixing of Polished Chrome Finish Brass Single towel bar with all necessary screw fitting to complete of Engineer-in-charge. Note : Rate should be inclusive of lifting charges:AKP-CHR-35711P	25		Nos	-
16	Supplying and fixing of SS Sink of size-sink MARINO 36*19*9-singel liver outlet-FLP-CHR-5179BPM,angel cock-AQT-CHR-3057P and connecting hose	5		Nos	-
	Providing and fixing of Approved 'make single bowl sink with drain points for connect the waste couplers, with necessary supports, brackets, bolts, nuts, at equal intervals, etc.Fixing of Double bowl sink, wall hook and angle valve, including wall chasing, making good the same, complete.of Engineer-in-charge. Note : Rate should be inclusive of lifting charges(KITCHEN AREA)				-
17	Providing and fixing Polished Chrome Finish Brass Wall Mounted Single Toilet Paper Holder with cover. with CP brackets fixed to wooden cleats with CP brass screws.of Engineer-in-charge. Note : Rate should be inclusive of lifting charges:ACN-CHR-1153S	30		Nos	-
18	Providing and fixing of approved make, matt finish Cockroach trap 125 x 125 mm SS floor grating with Hinge of Engineer-in-charge.Note : 7275IN-CP	98		Nos	-
	Providing and fixing of approved make, chrome finish stop cock of Engineer-in-charge.	45		Nos	-
	OPP-CHR-15083KPM-stop cock				-
	ALD-CHR-089FT-concealed				-
19	supply installation of tap-FLP-CHR-5037PM-Jaquar of Engineer-in-charge.	2		Nos	-
19-A	supply and installation of shower booster pump its included of all the accessories fitting of Engineer-in-charge.	5		Nos	-
TOTAL SANITARY					25,14,015



. Name of the work:PROPOSED RESIDENTIAL DEVELOPMENT FOR INDIAN BANK, MUSURI SUBRAMANIAM SALAI, MYLAPORE								
ELECTRICAL INSTALLATION								
PART-A : MEDIUM VOLTAGE INSTALLATION LIKE M.V. SWITCHBOARDS, DISTRIBUTION BOARDS, EARTHING, ETC.								
S.No.	Description	Unit	Qty.	Supply		Erection		Total
				Rate	Amount	Rate	Amount	
1	Supply of 3 way RMU with configuration of Two LBS and VCB R-R-L (M+CCT2) as per TANGEDCO Specifications.(Provisional)	Nos	1		-			-
	Supply and Erection of other materials except RMU as per attached annexure.(Provisional)	Nos	1		-			-
	Charges of coordinating with TNEB MTO&M(Provisional)	Nos	1		-			-
	TOTAL OF PART-A (H/C) TO SUMMARY:							
1a.	Supply, erection, testing & commissioning of floor mounting type Cubicle pattern,front operated M.V. Switchboard fabricated from 16 SWG sheet steel with adequate reinforcement, foundation bolts, 40 x 6mm. Aluminium flat earthing enamel coat paint finished with Opaline green or Powder coated paint (RAL 7032) equipped with the following: INCOMER:- 1 No. 250A TPN isolator. 1 Set of 300A TP cutouts including neutral link with rewirable type fuses. (sealable type) 1 set SMC mounted disconnectable neutral link made out of 40x6mm tinned copper mounted on 2nos. of 25 mm dia SMC spout. (The incoming/outgoing switch shall have locking/sealing arrangement by Electricity Board. Note: Neutral wires/busbars and interconnecting wires/busbars shall be same size as phase wires/busbars. OUTGOING:- 6 Nos. 63A 4P 10KA MCB. 6 Sets (6 sets of 100A rewirable cutouts (3 Nos. for each set for R,Y & B phases) with 6 sets of neutral links made out of 25 X 3 mm tinned copper mounted on 2nos. 25mm dia SMC spout as control. 5 Sets (5 sets of 100A rewirable cutouts (3 Nos. for each set for R,Y & B phases) with 10 sets of neutral links made out of 12 X 3 mm tinned copper mounted on 2nos. 25mm dia SMC spout as control. 10 Sets of 63A 4P ATS (Motor operated Auto transfer switch of Socomec/ Havels make) complete with control wiring, protection circuit, indicating lamps, provision for manual operation, 2sets of separate R,Y,B & ON LED status indication, etc. The board shall have provision for KWH meter of 30 or 100A (To be supplied and sealed by Electricity Board) Rate shall be for the complete board with danger caution board, interconnections, etc. The board shall be equipped with 40 X 6mm aluminium busbars duly colour sleeved by heat shrink type sleeves for phase & neutral duly supported at regular intervals not exceeding 450mm with 10mm thick SMC sheet, removable cut out fuses to match the rating of the incoming/outgoing fuse switches with provision for sealing by electricity board, a KWH meter chamber with 5mm thick transparent perspex sheet at the front for reading purpose with sealing provision by TNEB. All incoming and outgoing cables shall have top/bottom entry. Rate shall be for the complete board with danger caution boards, feeder identification marks, rigid interconnections, cadmium plated bolts and nuts, etc. Note 1: The meter board shall be economical and semi cubicle type with separate chamber for busbars, meters, MCB, etc. It shall be simple in design and as per relevant of TANGEDCO & CEIG. 2) The meter board to be erected from the ground with min 450-600mm clearance. To achieve this the meter board to be fabricated with single outgoing in each vertical with M.S. pedestal to obtain the required ground clearance. (Refer Meter Panel).							
		Set	1		-		-	-
2.	Same as above but switchboard meant for common services with following combinations INCOMER:- 1 No. 160A 4P 10KA MCB. 1 Set of R,Y,B indicating lamps OUTGOING:- VTPN 8 way MCB DB fitted with: 5 Nos. 63A 10KA 4P MCB. 3 Nos. 40A 10KA 4P MCB. (Refer SB-C of schematic diagram).							
		Set	1		-		-	-
3.	Same as above but with the following: INCOMER:- 1 No. 400A 4P 25KA MCCB. 1 Set of ON & OFF LED indicating lamps 1 Set of R,Y,B indicating lamps OUTGOING:- VTPN 10 way MCB DB fitted with 10Nos. 63A 4P 10KA MCB and 2Nos. (Refer SB-DG of schematic diagram).							
		Set	1		-		-	-
4	Same as above but with the following: INCOMER:- 1 No. 16A TP+N 30mA RCBO. OUTGOING:- TPN 6 way MCB DB fitted with 3 Nos. 16A DP MCB for phase control & 18 Nos. 6-10A SP MCB (common area LDB) (Refer LPDB-C).							
		Set	1		-		-	-
5.	Supply and installation of earth electrode as per IS-3043 with cast iron earth electrode complete with excavation of earth, blasting if necessary, re-filling with soil treating media like charcoal, salt, etc. The earth electrode shall be of 100mm dia 6.5mm thick 3.0mtrs. long complete with funnel etc. Rate shall be inclusive of brick work, cast iron or RCC heavy duty cover slab, identification mark of earth electrode, testing, furnishing test reports, etc. as per G.A. drawing.							
		Each	2		-		-	-
6.	Supply and installation of earth electrode with 3/4" dia, 10 feet long, UL listed, min 254 micron copper coating over mild steel. Each earth electrode shall be supported with RoHS certified, low resistivity (≤ 0.2 ohm mtr) Ground Enhancement Material (min 22.6 Kg), performs in all soil condition, increases the contact area with earth electrode, A suitable clamps shall be used for termination of down conductors to earth electrode. The resistance shall be $\leq 10 \Omega$. Rate shall be inclusive of brick work, cast iron or RCC heavy duty cover slab, identification mark of earth electrode, testing, furnishing test reports, etc. (The earth electrode along with other materials shall be of OBO/DHEN/INDELEC make only) For Lifts : 1 (2# for lifts)							
		Each	2		-		-	-
7a.	Supply and laying of 25 x 6 mm. G.I. flat with M.S spacer clamp, etc. for body earth. (For main grid earthing from building to ground).	Mtr	100		-		-	-
b.	Same as above but 25 x 3mm G.I. flat (For secondary earthing like meter boards, vertical risor, etc.).	Mtr	75		-		-	-
c.	No. 8 SWG G.I.wire.	Mtr	75		-		-	-
d.	No. 10 SWG G.I.wire.	Mtr	30		-		-	-
e.	No. 8 SWG copper wire for lift control panel earthing.	Mtr	100		-		-	-
8a.	Supply and installation of 63A TPN 10KA MCCB mounted on a suitable size cubicle type M.S.box with floor/wall mounting frame work complete with cable adaptor boxes, R, Y & B LED type indicating lamps, etc. (Provisional)	Set	QRO		
b.	Same as above but 32A TPN 10KA MCB.	Set	QRO		
c.	Same as above but 63A TPN fuse switches with HRC fuses.	Set	QRO		
d.	Same as above but 32A TPN fuse switches with HRC fuses.	Set	QRO		
9.	Supply & installation of heavy duty low loss capacitor bank suitable for operation 415 volts 3 phase 4 wire system mounted above the switchboard for P.F improvement with 32A TPN contactor with control circuit, etc to trip the contactor during DG running with the following. 1 Set of 5 KVAR Capacitor Bank (Provisional item & to be installed if TANGEDCO insists)							
		Set	1		-		-	-
	TOTAL OF PART-A (H/C) TO SUMMARY:							
	NOTE:- QRO - Quote rate only : This may be required or not and will be decided during execution.							



PART-B: MAINS FROM METER BOARD, DISTRIBUTION BOARDS, WIRING, TO APARTMENTS INCLUDING WIRING TO CAR PARK, STAIR CASE, LOBBY, PROVISION OF CABLE TRAYS, ETC.

S.No.	Description	Unit	Qty.	Supply		Erection		Total
				Rate	Amount	Rate	Amount	
1.	Supply, erection, testing and commissioning of wall/floor mounting type cubicle pattern Medium voltage switchboards/ distribution boards for power and lighting comprising TPN busbars with of equal size in all phases and neutral made out of 16 SWG sheet steel, reinforced angle iron frame work with adequate rated tinned copper busbars to handle full load and short time rating. The switchboard and distribution board shall be equipped with incoming fuse switch/ MCB / MCCB and outgoing Switch fuses or MCB as per requirement. It shall be complete with earthing, feeder identification markers, inter-connections, cable identifications, danger caution boards, incoming and outgoing cable chamber, mounting angles, channels, etc. All MCCB/MCB type switchboards/ distribution boards shall be erected on wall with minimum projection from the wall. All incoming and outgoing cables/ conduits shall be taken in surface /concealed. The entire board shall be of originally manufactured by the respective and approved supplier and local fabrication shall not be allowed. The board shall be complete in all respect and shall meet the requirement of local CEIG and other relevant authorities. The rate shall be for the complete board including supply and fixing of all components, hardwares, etc. including all connected civil works as per the following combinations at different locations.							
a	INCOMING: 1 No. 80A 4P 30mA MCCB							
	OUTGOING : VTPN 4 way MCCB DB fitted with 1 Nos. 63A 4P MCCB & 3 Nos. 32A 4P MCCB control individual phase and outgoing and rest with dummy plates. The DB shall have exclusive neutral & earth bar mounted on SMC spout with 20 x 6 mm tinned copper flat or as per the manufacturer standard.(Include Surge Protection Devices(SPD). (Refer typical PDB meant for apartments)	Set	5		-		0	-
b	INCOMING: 1 No. 63A 4P 30mA RCBO							
	OUTGOING : TPN 8 way MCB DB fitted with 3 Nos. 63A DP MCB to control individual phase and 18 Nos. 6A 10KA SP MCB as outgoing and rest with dummy plates. The DB shall have exclusive neutral & earth bar mounted on SMC spout with 20 x 6 mm tinned copper flat or as per the manufacturer standard.(Include Surge Protection Devices(SPD). (Refer typical LPDB meant for apartments)	Set	5		-		-	-
2.	Supply, laying and dressing of the following sizes of 1.1 KV grade PVC/XLPE insulated flat / round armoured cable with aluminium conductor or copper conductor as specified on wall/ceiling/trench/cable rack with proper clamping, cable identification tags, etc.							
a.	3 1/2C 120 sqmm Al. Armoured.	Mtr	QRO		
b.	4C 25 Sqmm Al. Armoured.	Mtr	50		-		-	-
c.	4C 16 Sqmm Al. Armoured.	Mtr	250		-		-	-
d.	4C 10 Sqmm Al. Armoured. (Provisional)	Mtr	30		-		-	-
e.	4C 6Sqmm Cu. Armoured.	Mtr	300		-		-	-
3.	End termination to the above cable with single compression type cable gland and heavy duty tinned copper cable sockets. Rate shall be inclusive of all sundry materials like adhesive Tapes, PVC sleeves, bolts and nuts, washers, etc. including plugging unused hole.							
a.	3 1/2C 120 sqmm Al. Armoured.	Each	QRO		
b.	4C 25 Sqmm Al. Armoured.	Each	4		0		0	0
c.	4C 16 Sqmm Al. Armoured.	Each	30		0		0	0
d.	4C 10 Sqmm Al. Armoured.	Each	2		0		0	0
e.	4C 6Sqmm Cu. Armoured.	Each	14		0		0	0
4.	Supply and laying of following sizes of PVC insulated 660 volts grade multistrand copper conductor wire in a suitable size PVC conduit pipe complete with all accessories, clamps, etc.							
a.	4 runs of 10 Sqmm + 2 runs 6 Sqmm in 1 run 32/38 mm dia 1.8 mm thick PVC rigid conduit pipe.	Mtr	230		0		0	0
b.	4 runs of 6 Sqmm + 2 runs 4 Sqmm in 1 run 25/32 mm dia 1.8 mm thick PVC rigid conduit pipe. (For common area LDB)	Mtr	40		0		0	0
c.	4 runs 4 Sqmm + 2 runs of 2.5 Sqmm in one run 25 mm dia 1.8 mm thick PVC rigid conduit pipe. (Provisional)	Mtr	5		0		0	0
5.	End termination to the above with suitable size PVC couplers and crimping type copper sockets							
a.	4 runs of 10 Sqmm + 2 runs 6 Sqmm.	Each	10		0		0	0
b.	4 runs of 6 Sqmm + 2 runs 4 Sqmm.	Each	4		0		0	0
c.	4 runs 4 Sqmm. + 2 run 2.5 Sqmm.	Each	2		0		0	0
	INTERNAL & EXTERNAL AREA LIGHT FITTINGS							
	Unloading, Storage, Handling and providing necessary mounting supports with accessories, installation, testing & commissioning of light fixtures complete as required as per site condition.							0
	Supplying, Erecting, connecting & commissioning of 40W LED PRIDE WEATHER PROOF FITTING IP65 (6500K)	Nos	55		-		-	-
	Supplying, Erecting, connecting & commissioning of 20W LED GLAZE TUBE LIGHT COOL WHITE	Nos	56		-		-	-
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 12W CW-xc	Nos	8		-		-	-
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 12W CW-xc	Nos	175		-		-	-
	Supplying, Erecting, connecting & commissioning of LED NERO SURFACE ROUND 12W COOL WHITE	Nos	25		-		-	-
	Supplying, Erecting, connecting & commissioning of 1 LT CLEAR GLOBE GLASS WITH ROSE GOLD FINISHING PENDANT	Nos	40		-		-	-
	Supplying, Erecting, connecting & commissioning of 6 LT CLEAR GLASS WITH BRUSHED BRASS FINISHING CHANDELIER	Nos	QRO		-		-	-
	Supplying, Erecting, connecting & commissioning of LED INDOOR 15W STRIP LIGHT WARM WHITE	Nos	250		-		-	-
	Supplying, Erecting, connecting & commissioning of POWER SUPPLY 96W INDOOR 24V. 4A	Nos	5		-		-	-
	Supplying, Erecting, connecting & commissioning of RECESS BARE PROFILE 3000X16X12MM ANODIZED FINISH	Nos	5		-		-	-
	Supplying, Erecting, connecting & commissioning of LED ERIS ROUND TILT TABLE 7W NW	Nos	45		-		-	-
	Supplying, Erecting, connecting & commissioning of OTC ERIS SURFACE ROUND 10W COB DOWNLIGHT WW	Nos	125		-		-	-
	Supplying, Erecting, connecting & commissioning of 2 LT OPAL GLASS WITH CHROME FINISHING WALL LAMP	Nos	25		-		-	-
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 12W CW xc	Nos	5		-		-	-
	Supplying, Erecting, connecting & commissioning of LED ALUMINIUM PROFILE LIGHT SUSPENDED 50X70MM 36W NEUTRAL WHITE	Nos	250		-		-	-
	Supplying, Erecting, connecting & commissioning of 8 LT CLEAR GLASS WITH BRUSHED BRASS FINISHING CHANDELIER	Nos	QRO		-		-	-
	Supplying, Erecting, connecting & commissioning of 6 LT FROSTED GLASS WITH CHROME FINISHING CHANDELIER WITH LED BULB	Nos	QRO		-		-	-
	Supplying, Erecting, connecting & commissioning of EMINA: RECESSED COB DOWNLIGHT 15W NEUTRAL WHITE	Nos	25		-		-	-
	Supplying, Erecting, connecting & commissioning of HANGING RING LIGHT 36W NW DIA 600MM	Nos	3		-		-	-
	Supplying, Erecting, connecting & commissioning of WALL UP LIGHT	Nos	10		-		-	-
	Supplying, Erecting, connecting & commissioning of LED LUCENT SLIM DOWNLIGHT 9W CW	Nos	2		-		-	-
	Supplying, Erecting, connecting & commissioning of 1 LT CLEAR GLOBE GLASS WITH ROSE GOLD FINISHING PENDANT	Nos	5		-		-	-
	Supplying, Erecting, connecting & commissioning of 3 TIER CIRCULAR 60 WATT CHROME WITH AS FOUR CRYSTAL	Nos	5		-		-	-
	Supplying, Erecting, connecting & commissioning of WALL LIGHT	Nos	65		-		-	-
	Supplying, Erecting, connecting & commissioning of LED RING GATE TOP 40W WW 400MM	Nos	4		-		-	-
	Supplying, Erecting, connecting & commissioning of LED STREET LIGHT 45W 100LM/W 1-3WLED POTTED DRIVER	Nos	12		-		-	-
	Supplying, Erecting, connecting & commissioning of LED ALUMINIUM PROFILE LIGHT SUSPENDED 50X70MM, 36W COOL WHITE	Nos	5		-		-	-
	Supplying, Erecting, connecting & commissioning of EMINA: RECESSED COB DOWNLIGHT 15W WARM WHITE	Nos	2		-		-	-
	Supplying, Erecting, connecting & commissioning of EMPHA: RECESSED EXTENDED COB FOCUS LIGHT 7W WARM WHITE	Nos	5		-		-	-
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 15W CW	Nos	26		-		-	-
	Supplying, Erecting, connecting & commissioning of LED AREVA PRIME ROUND 15W CW	Nos	120		-		-	-
	Supplying, Erecting, connecting & commissioning of LED BULKHEAD 10W CW	Nos	33		-		-	-
	Supply, Installation, Testing and commissioning of 1200mm Decorative Ceiling fan with suspended rod bolt nut with all accessories. Etc.	Nos	10		-		-	-
	Supply, Installation, Testing and commissioning of 900mm ceiling fan with suspended rod bolt nut with all accessories. Etc.	Nos	25		-		-	-
	Supply, Installation, Testing and commissioning of Wall Mount fan with bolt nut with all accessories. Etc.	Nos	3		-		-	-



6.	Wiring to light/Fan/Exhaust Fan/ Call Bell/6A plug points with 1.5 Sqmm. multistranded copper conductor wire as circuit mains and 1.0 Sqmm. multi-strand copper conductor wire as group/ individual control wiring in a suitable size 20mm. or 25 mm. medium class rigid PVC conduit pipe concealed to the ceiling, floor, wall column, etc. The conduit drop or riser shall be embedded in the wall with chase cutting and rough plastering. The rates shall be inclusive of all materials like switches, wires, pipes and accessories like bends, M.S. junction boxes, switch boxes, concealed type fan hooks, 1.0 sqmm. multistranded PVC insulated copper conductor (green colour) as earth continuity wire separately for each. Wiring shall be carried out from distribution boards to various points, etc. The rate shall be for the complete work including all civil works connected with the installation. (Note: No. circuit mains primary and secondary points, staircase point, etc. shall be counted separately and the rate quoted shall be inclusive of all per point).									
a.	Light points, 6A plug points away from switch boxes, exhaust fan points, etc. (20+148+81+83+1+14+20+5+15) + 23 Nos provisional 6A for Lobby, misc works, etc.	Pt	410	-	-	-	-	-	-	-
b.	Fan points with fan hook junction box, modular step type fan regulator.	Pt	52	-	-	-	-	-	-	-
c.	6A switched socket (on board 6A) counted as half point.	Pt	25	-	-	-	-	-	-	-
d.	Same as above but wiring for Bell point with 1.0sqmm instead of 1.5sqmm as circuit mains.	Pt	5	-	-	-	-	-	-	-
e.	Same as above but 2 way light points inside the apartment with 2 way switches, etc. (4# each in apartments)	Pt	20	-	-	-	-	-	-	-
7.	Wiring to common areas (like parking, staircase, etc) without local control switches. Group control of lights shall be controlled directly from the MCB in DB. (MCB & MCB DB covered separately)									
a.	One to Two lights controlled by one MCB.	Set	5	-	-	-	-	-	-	-
b.	Three to Four lights controlled by one MCB.	Set	5	-	-	-	-	-	-	-
c.	Five to Eight lights controlled by one MCB.	Set	2	-	-	-	-	-	-	-
8.	Supply & fixing of 6/16 Amps 6 pin combined DP switch and socket with indicating lamp mounted in a suitable size M.S. Box concealed to wall /partition, etc. Rate shall be inclusive of wiring to the above with 2 runs of 2.5 Sqmm. multistrand copper conductor wire with single run of 1.5 Sqmm. multistranded copper conductor wire as earth from DB to the 16A Power socket in a suitable size concealed 20/25 mm. 1.8/1.6mm thick rigid PVC conduit pipe complete with all accessories, all connected civil works, etc. (For geyser points the control switches shall be of 16A DP at switch box level & socket shall be at 2400mm/as per Architect near to geyser. 16A DP switch shall be with builtin indicating LED lamp). For other power points in kitchen, wash area, etc it shall be with DP indicating type switch mounted along with socket outlets.	Set	60	-	-	-	-	-	-	-
9a.	Supply & fixing of 20A DP switch (modular cover plate type) mounted in a suitable size M.S. box concealed/ surface mounted to wall/ column, etc. Rate shall be inclusive of wiring with 2 runs of 4 sqmm. multistrand copper conductor wire with single run of 1.5 sqmm. multistrand copper conductor wire for power outlets in a suitable size concealed 20/25 mm. 1.8mm thick rigid PVC conduit pipe complete with all accessories, all connected civil works, etc. (For A.C points the control switches shall be of 20A DP at bed side level & socket shall be at 2400mm/as per Architect near to A.C. (For AIR Conditioner points, etc.)	Set	28	-	-	-	-	-	-	-
b.	Same as above but only empty conduit pipe and empty M.S. Box concealed to wall (without outlets & wiring) suitable for mounting the 16A/ 20A outlets and MCB & wiring, if required, in future, complete with all accessories.	Set	QRO	...	-	-	-	-	-	-
10a.	Supply and laying of 20mm dia 1.6mm thick PVC conduit pipe for Telephones and T.V. outlets concealed to wall/ceiling / column, etc.(For Telephone)	Mtr	250	-	-	-	-	-	-	-
b.	Same as above but 25mm dia 1.8mm PVC pipe. (For T.V)	Mtr	250	-	-	-	-	-	-	-
c.	Same as above but 32mm 1.8mm dia PVC pipe. (For Misc. at car park)	Mtr	25	-	-	-	-	-	-	-
11.	Supply and laying of PVC insulated 0.51mm dia twisted 1 Pair Telephone cable in the above conduit pipe.	Mtr	200	-	-	-	-	-	-	-
12.	Supply and Installation of Data point in a suitable size M.S. box concealed to wall.	Set	10	-	-	-	-	-	-	-
13.	Supply and installation of TV jack plug in a suitable size M.S. box concealed to wall.	Set	10	-	-	-	-	-	-	-
14a.	Supply & installation of ladder type cable tray made out of 50mm x 50mm x 6mm M.S.angles as main runners and 2 Nos. of 25 x 25x 6 mm. M.S. Angles welded close to each other with 6mm gap as rugs, complete with suspension arrangement (maximum upto 800mm from ceiling) with rawl bolt and nut, etc. The rack system to be painted with enamel paint, etc. The width of the rack shall be 450mm.	Mtr	10	-	-	-	-	-	-	-
b.	Same as above but 150 mm. width tray (25 x 25 x 6 mm runners and rugs of 25x25x3mm).	Mtr	10	-	-	-	-	-	-	-
15.	Supply and installation of M.S. junction boxes made out of 16 SWG M.S. sheet Steel with adequate knock-outs on all sides, openable cover plate, etc., for looping the PVC conduit pipes. It should be fixed on the cable tray, ceiling, wall, etc., with adequate supports. The rate shall be inclusive of all sundry materials bolts and nuts, two coats of painting over base primer, etc., of following sizes.									
a.	450mm x 250 to 450 mmx25-65mm depth M.S.boxes.	Each	2	-	-	-	-	-	-	-
b.	300mm x 150 to 300mm x 25-65 mm depth M.S. boxes.	Each	2	-	-	-	-	-	-	-
c.	150mm x150mm x 25-65mm depth M.S. boxes.	Each	2	-	-	-	-	-	-	-
16.	Supply & installation of 75mm X 75mm X 40-50mm depth M.S.Junction boxes (as empty junction boxes) for Telephone, TV outlets, etc. covered with plain powder coated perspex cover plate.	Each	2	-	-	-	-	-	-	-
17.	UPS									
a.	Supply and Erection of 2 KVA UPS Systems with Single-phase input and Single phase output. Maintenance free batteries suitable for backup system should have Half an hour continuous rating. The scope includes providing necessary battery stand , inter connecting cables from UPS battery. The scope also includes providing necessary by-pass arrangement and all other requirements. The capacity of the battery shall be of 12V DC with a minimum of Suitable ampere hour and as per specification. 120 Minutes	Nos	6	-	-	-	-	-	-	-
18.	ETPN DB (UPS)									
a.	Fabrication, Supply, Installation, Testing and Commissioning of ETPN 4 WAY TP & N MCB Distribution Board and double door, dust & vermin proof and copper bus bar comprising of the following : Incoming : 1No 63 A, 4P MCB Outgoing : 8Nos 10-32 A, TP MCB	Nos	6	-	-	-	-	-	-	-
b.	Supply and laying of PVC insulated FRLS unsheathed multistranded copper conductor wire with 3 runs of 4sq.mm (P,N) and 1 run of 2.5sq.mm(E) complete with wiring terminations etc as per standards. The rate shall include supply of wires, termination etc., for ups db	Mtr	2200	-	-	-	-	-	-	-
	LIFT:									
19.	Supply & installation of lift control and wiring system with the following: INCOMER: 1 No. 40A TPN (MCB). 1 set R.Y & B LED Type indicating lamp connected through series resistor and surge suppressors. OUTGOING: 2 No. 32A TPN MCB to control lift. 1 No. 20A DP MCB for lift pit power. 1 No. 10A DP MCB for lift pit light control. 1 No. 10A DP MCB for lift car light. 1 No. 16A concealed / surface mounted plug & socket controlled by 1 No. 16A SP switch with wiring by 3 runs of 2.5 Sqmm in a suitable size ERW conduit pipe/ concealed PVC conduit pipe with all accessories. 5 Sets of bulk head light fitting 5 Sets of 6A switched socket with 1no. 6A SP switch to control bulk head light in M.S box with wiring from the above MCB with 3runs of 1.5Sqmm PVC copper wire in concealed PVC conduit pipe with all accessories.	Set	1	-	-	-	-	-	-	-
	Rate shall be inclusive of all materials, wiring, light fitting, DB, etc									
20.	Supply and laying of 2 core 0.5sqmm. Copper flexible for lift work.	Mtr	QRO	...	-	-	-	-	-	-
21.	Supply, installation, testing & commissioning of the following rated MCB / ELCB wherever required. (Provisional)									
a.	63A 4P MCB isolator	Set	7	-	-	-	-	-	-	-
b.	63A 4P RCBO	Set	1	-	-	-	-	-	-	-
c.	32-63A DP RCBO	Set	1	-	-	-	-	-	-	-
d.	6-10A SP MCB	Set	1	-	-	-	-	-	-	-
e.	10-20A SP MCB	Set	1	-	-	-	-	-	-	-
f.	10-20A DP MCB	Set	1	-	-	-	-	-	-	-
g.	20-63A 4P MCB	Set	1	-	-	-	-	-	-	-
h.	40KA Surge Suppressor (TVSS) with 1 set of 20A 4P MCB complete with interconnection, earthing, etc.	Set	QRO	-	-	-	-	-	-
	TOTAL OF PART-B C/O TO SUMMARY									
	NOTE: QRO - (Quote rate only - This may be required or not and will be decided during execution.									
PART-C:- ADDITIONAL ELECTRICAL INSTALLATION RELATING TO OTHER SERVICES LIKE , EB, DG, LIGHTNING, ETC.										
INSTALLATION NOT RELATED WITH APARTMENT ELECTRICAL WORKS.										
S.No.	Description of work	Unit	Qty.	Supply Rate	Erection Rate	Amount				Total
1.	INCOMING EB & DG INCOMING CABLE & RELATED WORKS:									
1a.	Supply and laying 3 1/2 C120 Sqmm 1.1 KV grade XLPE insulated armoured cable with aluminium conductor for incoming of metering panels & common area switchboard. (For EB Cable)	Mtr	75	-	-	-	-	-	-	-

b.	Same as above but 240Ssqmm. (For DG Cable)	Mtr	25						
c.	Same as above 4C 25Ssqmm. (Provisional)	Mtr	10						
d.	Same as above 4C 2.5 Ssqmm copper (Provisional For Misc works)	Mtr	50						
2.	End termination to the above cable with single compression type cable gland and crimping type aluminium sockets.								
a.	3 1/2 C 120 Ssqmm.	Each	2						
b.	3 1/2 C 240 Ssqmm.	Each	2						
c.	4C 25 Ssqmm.	Each	2						
d.	4C 2.5 Ssqmm Cu.	Each	6						
	EB FEEDER PILLAR								
3.	Supply & Installation of 300A 4 way floor mounting weather proof type feeder pillar with 300A rewirable cutouts, sealing type door, tinned copper busbars for phases & neutral, cadmium plated bolts & nuts with spring washers, etc. as per TANGEDCO norms.	Each	1						
	TOTAL OF SECTION I C/a TO SUMMARY								
II	BMS RELATED WORKS:								
9.	Towards labour charges for concrete chipping of BMS conduit pipes in the floor.	Mtr	30						
10a.	Supply and laying of 20mm dia 1.6mm thick PVC conduit pipe for BMS concealed to floor/ shaft, etc.	Mtr	225						
b.	Same as above but 25mm dia PVC pipe.	Mtr	30						
c.	Same as above but 32mm dia PVC pipe.	Mtr	10						
	TOTAL OF SECTION II C/a TO SUMMARY								
III	PUMP DB'S & RELATED WORKS:								
11.	Supply and installation of DB as described in Part-B but with the following:								
	INCOMER:								
	1 No. 40A 4P 10KA MCB.								
	1 set R, Y & B LED Type indicating lamps								
	OUTGOING:								
	VTPN 12 way MCB DB fitted with 12 Nos. 10-20A TPN MCB. (Refer PDB-PUMP).	Set	1						
12.	Supply, laying and dressing of the following sizes of 1.1 KV grade PVC/XLPE insulated flat / round armoured cable with aluminium conductor or copper conductor as specified on wall/ceiling/trench/cable rack with proper clamping, cable identification tags, etc.								
a.	4C 16 Ssqmm Al. Armoured	Mtr	30						
b.	4C 6Ssqmm Al. Armoured	Mtr	280						
13.	End termination to the above cable with single compression type cable gland and crimping type aluminium sockets.								
a.	4C 16 Ssqmm Al. Armoured.	Each	2						
b.	4C 6Ssqmm Al. Armoured.	Each	12						
14a.	Supply and laying of 25 x 3 mm. G.I. flat with M.S spacer clamp, etc. for body earth. (From main grid earthing to pump DB).	Mtr	30						
b.	No. 10 SWG G.I. wire for body earth. (For pumps).	Mtr	500						
	TOTAL OF SECTION III C/a TO SUMMARY								
IV	YARD AND STREET LIGHTING:								
15.	Supply and laying of 3 core 2.5sqmm. PVC (1 core for earth) insulated armoured cable with aluminium conductor for periphery and gate lights.	Mtr	150						
16.	End termination to the above cable with single compression type cable gland and crimping type sockets.	Each	10						
17a.	Labour charges for installation of 3 to 3.5 Mtrs high 80mm. dia MS powder coated ground mounted street lights (Poles will be supplied by the client. The rate shall be inclusive of suitable foundation, coil type (8SWG GI 200dia Of 115 turns) earth, wiring from connector block to fitting with 3C 1.5 Ssqmm insulated PVC sheathed wire, etc)	Set	10						
b.	Same as above but 1 to 1.5 mtrs high poles for Post Top lanterns. Landscape lights, etc.	Set	QRO						
18.	Supply and Installation of G.I. Bracket of suitable size for post top lantern on compound wall, in and out gates, etc.	Each	QRO						
19.	Towards Labour charges for fixing of the following light fittings supplied by the client. Rate shall be inclusive of mounting accessories like, bolts & nuts / screws, etc.								
a.	20 to 40 watts LED Street light fittings.	Each	10						
b.	10 to 25 watts LED Post top lanterns. Landscape lights, etc.	Each	QRO						
c.	Ornamental Bulk head. Ground mounted Landscape lights. Compound wall lights, etc.	Each	14						
20.	Labour charges only for installation only of 10 to 25 watts LED Gate lights.	Each	4						
	TOTAL OF SECTION IV C/a TO SUMMARY								
V)	LIGHTNING INSTALLATION:								
21.	Supply installation, testing & commissioning of the following lightning protection system. The lightning protection system shall be of conventional type as per the latest NBC & norms. Material selection shall be according to this conventional system. Shop drawing to be prepared & components to be shown with respect to locations, mounting system, etc. All components, screws, bolts & nuts to be included wherever required to make all the items as complete.								
a.	3 Mtr Vertical Air terminal with accessories. Providing air terminal as per standard & 16mm rod tapered to 10mm aluminium rod or without tapering.	Nos	1						
b.	Fixing clamp for air terminal. Tested as per Standard: EN 62561. This device is meant for erecting Air terminal to the building & looping the horizontal conductors (Air terminal of 8mm aluminium rod conductor covered separately)	Nos	1						
c.	Aluminium Round Conductor (Ø 8mm), Tested as per Standard: EN 62561. This is 8mm conductor being used to loop all vertical Air terminations, horizontal & down conductors upto bottom of the building.	Mtr	135						
d.	Round Conductor and Down conductor holder made out stainless steel (approx at every 1 mtr interval) for 8 mm aluminium round conductor laid at parapet wall. The conductor holder shall have all accessories like screws, bolts & nuts, etc.	Nos	175						
e.	Universal Clamp. Tested as per Standard: EN 62561. This device is meant for cross connection, T connection etc.	Nos	25						
f.	GI Strip for Down Conductor (25x6 mm). (This conductor will be connecting the 8mm conductor and link to the earth electrode)	Mtr	100						
g.	Earth Electrode : Earth electrode shall be 3/4" dia, 10 feet long, UL listed, min 254 micron copper coating over mild steel, - Each earth electrode shall be supported with RofS certified, low resistivity (<0.2 ohm mtr) Ground Enhancement Material (min 22.6 Kg), performs in all soil condition, increases the contact area with earth electrode, A suitable clamps shall be used for termination of down conductors to earth electrode. The resistance shall be ≤ 10 Ω.	Nos	4						
h.	GI Strip (25x6 mm). for interconnecting earth pits.	Mtr	50						
i.	Test Joint for earth pit for disconnections & connections.	Nos	4						
	TOTAL OF SECTION V C/a TO SUMMARY								
VI)	MISCELLANEOUS INSTALLATION:								
22a.	Supply and laying of 50mm. dia 2mm. thick PVC conduit pipe from ground floor telephone tag block to the upper floors concealed to wall.	Mtr	25						
	Rate shall also be inclusive of chase cutting of wall, rough plastering, etc., for intercom.								
b.	Supply and laying of the following Finolex, Havels, Polycab make telephone cable. Telephone cables shall be of 0.51mm dia twisted, sheathed PVC insulated cable.								
i.	5 pair Telephone cable.	Mtr	QRO						
ii.	10 pair -do-	Mtr	QRO						
iii.	50 pair -do-	Mtr	QRO						
c.	Supply and Installation Krone or equivalent make of 100 pair telephone tag block in ground floor in a suitable size concealed lockable type M.S. box.	Each	QRO						
d.	Same as above but of 50 pair telephone tag block.	Each	QRO						
e.	Same as above but 25 pair telephone tag block.	Each	1						
23.	Supply and fixing of heavy duty ball and socket (2Nos) for suspension of fluorescent fittings.	Set	QRO						
24.	Supply and Installation of 19 mm. 16 gauge ERW conduit as down rod to fittings wherever required including two coats of approved colour paint.	Mtr	QRO						
25.	Towards labour charges for installation of TNEB KWH Meter in all meter panels with necessary inter connection as per EB requirement.	Each	6						
26.	Supply and laying of the following sizes PVC pipe inserts for incoming power cable. Rate shall be inclusive of all miscellaneous items like bends, couplers, etc.								
a.	100mm diameter heavy duty PVC pipe.	Mtr	35						
b.	75 mm. diameter heavy duty PVC pipe.	Mtr	35						
c.	50 mm. diameter heavy duty PVC pipe.	Mtr	35						
27.	Excavation of earth & laying cable in outdoor upto 750mm from the finished ground level, three side brick covering, sand cushioning / quarry dust covering, back filling, ramming, consolidation of the earth, etc., including identification markers, etc.	Mtr	75						
	Note:- (This is a common trench for group/multiple runs of power cables/street light cables/controls cables to be laid in this trench)								
28.	Toward charges for providing RCC Access manhole with heavy duty RCC top cover. The size of the manhole shall be 600mm wide x 600mm length with a depth of 750mm. It shall be placed at regular intervals (not exceeding 20mtrs) and to be used for pulling the cable. The route to be decided to suit site conditions.	Each	6						
29.	Supply and installation of weather proof M.S. box made out of 16 SWG sheet steel with hinged door equipped with the following:								



	a) 1 No. DOL starter suitable for 2 to 5 HP motor.								
	b) 63A TPN MCB load break isolator.								
	c) R.Y & B LED type indicating lamp.	Set	QRO		
	Rate shall be inclusive of all connected civil works, M.S. angle iron frame work suitable for wall/floor mounting, cable adpeter boxes, etc.								
30	Supply and installation of M.S. sheet steel fabrication boxes meant for junction boxes for DB, junction boxes for floor crossing, etc., complete with all hardwares, paint, etc. The thickness of sheet steel, type of cover, etc., will be decided to suit site condition	Kg	35		-			-	
31	Supply and installation of M.S. angle iron frame work for cable rack, cable supporting clamps, etc. It shall be manufactured from M.S. angles/flats or channels as per site requirement complete with grouting, painting, etc. (For cable supports in Electrical duct)	Kg	300		-			-	
32	Supply, installation, testing & commissioning of the following rated DOL starters (with Solinoid Coils)								
a.	DOL starter suitable for 1 to 3HP three phase motor.	Each	QRO		
b.	DOL starter suitable for 1 to 3HP single phase motor.	Each	QRO		
c.	4 to 7.5HP suitable for three phase motor.	Each	QRO		
	TOTAL OF PART-C:- C/a TO SUMMARY								
VII)	HOME PIPES								
33.00	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching and refilling etc. as required.								
a	150mm dia	Mtr	55		0			0	-
b	200mm dia	Mtr	QRO						
c	300mm dia	Mtr	QRO						
33.01	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. direct in ground including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.								
a	100 mm dia (OD-160 mm & ID-135 mm nominal)	Mtr	40		0			0	-
b	160 mm dia (OD-160 mm & ID-135 mm nominal)	Mtr	50		0			0	-
33.02	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq. mm. direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.	Mtr	60					0	-
	TOTAL OF PART-C:- C/a TO SUMMARY								
VIII)	CABLE TRAY								
	Supply, erection of following sizes GI ladder / Perforated type cable rack system made out of sheet steel folded to required shape with adequate number of supports. (Cable tray support price is included in this items)								
	The cable rack shall have runners rugs of suitable size for Ladder Tray, horizontal elbow, vertical elbow 90 Deg. Up vertical elbow 90 Deg. Down, re-deep, coupler plates for both Ladder, Perforated Cable Tray. The cable racks shall be suspended from ceiling supported from side walls in columns etc. with adequate size of Thread rods, supporting angles / channels with fastners, welding, anchor bolts, nuts etc. The rack shall have suitable cable clamping arrangements etc.								
	150mm x 50mm Perforated Tray without cover	Mtr	30		-			-	-
	300mm x 50mm Perforated Tray without cover	Mtr	50		-			-	-
	450mm x 50mm Perforated Tray without cover	Mtr	45		-			-	-
	TOTAL OF PART-C:- C/a TO SUMMARY								
XI)	LIASONING TNEB APPROVALS								
	TNEB Preparation of drawings and submission to the statutory authorities such as obtaining approval from TNEB authorities including energizing the Installation for Electrical Installation and for commissioning the system.	Job	1						
	The necessary statutory fees/charges will be paid by the client against demand advice.	Job							
	AS BUILD DRAWING Preparation of AS BUILT Drawings -3 SET		1						
	TOTAL OF PART-C:- C/a TO SUMMARY								
	NOTE: QRO - Quote rate only : This may be required or not and will be decided during execution.								

ELECTRICAL WORKS - DG								
Sl.No.	DETAILS OF WORK			Rate		Amount		Total
		Unit	Qty	Supply	Erection	Supply	Erection	
1.00	Sub Head No : 1 - DG WORKS							
	DG SET WITH EXHAUST PIPE, STACK AND CONNECTED WORKS							
1.01	Supply, Installation, Testing and Commissioning of factory assembled and factory tested, radiator cooled, turbo charged after cooled diesel engine alternator set capable of generating full load of 200 KVA capacity at 50° C, power factor not less than 0.8 lag, 415 Volts, 1500rpm, 3 phase, 50 Hz, AC supply and driven with diesel engine complete with all accessories such as Base frame, inbuilt diesel tank, residential silencer, radiator, alternator capable of delivering 415 Volts, 50Hz, 3 phase, PF 0.8, 250 KVA load, coupling arrangement of alternator with engine, coupling guard, anti-vibration mounts suitable for 125 kVA DG set, fuel filter, oil filter, air filter, exhaust flexible piping, suitable batteries for starting / charging purpose , battery charging alternator, engine control panel, etc. (the anti-vibration mounting quantity as per the manufacturer's recommendation) and powder coated acoustic enclosure suitable for 1 No.250 KVA radiator cooled diesel generator with all accessories fabricated with 16 SWG CRCA sheet steel, mineral wool insulation of high density with perforated GI sheet covering, ventilation system complete & Civil foundation for DG set. (This enclosure should be as per CPCB norms.).	Set	1					
	Vendor/Contractor to study drawings & visit site to check space/site/height constraints and ensure/confirm in writing the suitability/feasibility of shifting the DG Set inside and installation in the spaces provided, check with authority for location of DG Set before starting execution and designs. This exercise is to be completed before quoting/accepting order. Note: The DG Set foundation civil work included in the cost.							
	Total for Sub Head No: 1						-	-
	Grand Total						-	-

ELECTRICAL WORKS									
Sl. No	Description	Unit	Qty	Rate	Amount	Rate	Amount	TOTAL	
				Supply		Installation			
1	ROOFTOP SOLAR POWER PLANT								
1	Engineering, Procurement & Commissioning (EPC) Turnkey basis, preparation of detail BOQ, Design, Engineering, manufacturing, testing at works, delivery to site of installation; storage and handling including unloading and shifting as required; cleaning and assembly as required, Installation inclusive of all kind of Civil, Electrical and structural works, Testing, Commissioning, Synchronizing, Operation and Maintenance of Rooftop Solar PV Systems for approximate capacity of minimum 380 KWp (Generation capacity shall be decided by the CONTRACTOR as per rooftop layout area), which includes solar panels, structures, cables, string monitoring cum junction boxes ,Inverters, panels, Circuit breakers, other required instruments, safety systems etc., Equipments required for interfacing with grid sub station, material storage and other auxiliaries, complete system erection testing and commissioning. The scope also includes supply, installation, testing, commissioning of Solar panel Incomer feeder in main PCC including extension of this existing main PCC (Refer SLD) and Sub DBs/Feeder Pillar, cabling system etc. up to main PCC. This also includes the cost of power evacuation system and metering system (s) as required up to the point of inter connection with the grid. Comprehensive operation & Maintenance of solar PV plant upto five years from the date of commissioning shall also be included in the same scope for completion of solar power plant in all respects.	kWp	1						
1	SITC OF 11KW solar panel		1						
2	SITC for the cabling		1						
3	SITC of Ms structural works for the above	kg	lot						
SOLAR PANEL SUB TOTALS									
ADDITIONAL COST(EB SCOPE)									
TRANSFORMER+EB CHARGES									
TOTAL ELECTRICAL WORKS									



Name of the work:PROPOSED RESIDENTIAL DEVELOPMENT FOR INDIAN BANK, MUSURI SUBRAMANIAM SALAJ , MYLAPORE								
ELV SYSTEM - ESTIMATE								
SNO	DESCRIPTION	ACTUAL QUANTITY						MAKE
		UNITS	QTY	UNIT RATE		AMOUNT		
				SUPPLY	ERECTION	SUPPLY	ERECTION	
1	CCTV SYSTEM							
9	Supply, Installation, Testing & commissioning of 25 mm PVC Conduit with necessary junctin boxes, bends, clamps, etc., for both concealed or open laying.	MTR	845			-	-	Precision/Javeri
	SUB TOTAL					-	-	
2	WIFI SYSTEM							
4	Supply, Installation, Testing & commissioning of 25 mm PVC Conduit with necessary junctin boxes, bends, clamps, etc., for both concealed or open laying.	MTR	450			-	-	Precision/Javeri
	SUB TOTAL					-	-	
3	INTERCOM SYSTEM							
	SUB TOTAL					-	-	
4	TV DISH SYSTEM							
1	Supply, Installation, Testing & commissioning of 25 mm PVC Conduit with necessary junctin boxes, bends, clamps, etc., for both concealed or open laying.	MTR	900			-	-	Precision/VIP
	SUB TOTAL					-	-	

