

**VAIDYARATNAM P.S.VARIER'S
ARYAVAIDYA SALA, KOTTAKKAL
KOTTAKKAL P.O. MALAPPURAM Dt. KERALA.**

BILL OF QUANTITIES FOR THE CONSTRUCTION OF PROPOSED NEW BRANCH BUILDING AT VADAKKANTHARA PALAKKAD

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
A	<u>GROUND FLOOR</u>					
1	Barricading construction site using green shade Net with minimum 3 Mtr.height as per the instruction of SE	Rm	150.00			
2	Earthwork excavation in in all kinds of soil, except hard rock (which requires Pneumatic breaker), and depositing on bank with initial lead up to 50 m and lift upto 1.50 m including de-watering if necessary, back filling after breaking clods, watering, ramming, consolidating to 95% procter density and transporting the excess earth upto an initial lead of 50m and lift upto 1.50 m as directed by the Engineer in charge for footings and plinth beams, plinth protection etc complete. The work including trench (cable/ pipe/ Septic tank, etc) excavation wherever necessary.					
a)	Lift upto 1.50Mtr	m3	500.00			
b)	Lift 1.5 to 3mtr	m3	310.00			
3	Diluting and injecting chemical emulsion for preconstructional antitermite treatment and creating a continuous chemical barrier under and all round the column pits, wall trenches+B1s, base ment excavation, top surface of plinth filling junction of wall and floor, along the external perimeter of the building, expansion joints,over the top of the consolidated earth on which apron is to be laid, surroundings of pipes and conduits etc complete as per specifications (plinth area of the building at ground floor only shall be measured for payment) with CHLORPYRIPHOS EMULSIFIABLE CONCENTRATE 20% with 1% concentration. (The work should be done by any approved agency)	m2	500.00			
4	Plain Cement Concrete 1:4:8 using 40mm nominal size broken stones below footing, plinth beams,and flooring including cost of all materials labour charge, laying, consolidating, curing, shuttering, etc complete .	m3	100.00			
5	Laying Damp proof course (1:11/2:3) for a thickness of 50mm using 6mm metal.	Rm	250.00			
5 a)	Providing and apply a coat of Residual petroleum bitumen of grade of VG- 10 of approved quality 1.70 Kg per square meter on the damp proof course after cleaning with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	m2	75.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
6	Masonry works in cement mortar 1:6 using Solid Blocks 400 x 200 x 200 mm including cost and conveyance of all materials, labour charge etc. complete. Where ever necessary below Plinth level	m3	100.00			
7	Plastering with C.M. 1:4, 12mm thick over Block masonry upto sill level, one coat, floated hard and trowelled smooth adding approved quality water proofing agent (including adding poly prime to prevent capillary action), including cost of all materials, scaffolding, curing, etc complete. For outer wall	m2	180.00			
8	Supplying and installing rebaring wherever required (by Hilti or equivalent).					
a)	16mm dia bar	Each	10.00			
b)	20 mm dia bar	Each	10.00			
c)	12mm dia bar	Each	10.00			
d)	10mm dia bar	Each	10.00			
e)	08 mm dia bar	Each	10.00			
9	Providing Plinth Protection 60 CMS WIDE Around the building including PCC 1:4:8 and plastering with CM 1:4 20mm thk, including cost of all materials, providing thread lining, block work protection at the edge etc complete as directed by site in charge.	m2	60.00			
10	Reinforced cement concrete M25 Grade using 20mm down size aggregate for column footing including cost of cement, all form work watering, curing, dewatering if necessary etc. complete but excluding the cost of reinforcement.	m3	100.00			
11	Reinforced cement concrete M25 Grade using 20mm down size aggregate for plinth beam including cost of cement, all form work watering, curing, dewatering if necessary etc. complete but excluding the cost of reinforcement.	m3	45.00			
12	Red earth filling using earth available at site including watering, consolidation in layers to get a proctor density of 95%.	m3	600.00			
13	Red earth filling using earth brought from outside including watering, consolidation in layers to get a proctor density of 95%.	m3	120.00			
14	Reinforced cement concrete M30 grade using 20mm down size aggregate for Columns including all materials , labour all form work watering, curing etc. complete but excluding the cost of reinforcement.	m3	30.00			
15	Reinforced cement concrete M30 grade using 20mm down size aggregate for Column Pedestals all materials , labour all form work at all heights watering, curing etc. complete but excluding the cost of reinforcement.	m3	15.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
16	Reinforced cement concrete M25 grade using 20mm down size aggregate for Dummy Columns for a height of 1.3m all materials , labour all form work watering, curing etc. complete. (reinforcement rods shall be coated with corrosion resistant paint and kept bend wherever necessary) but excluding the cost of reinforcement.	m3	7.50			
17	Reinforced cement concrete M25 grade using 20mm down size aggregate for Roof Beams including all materials , labour all form work watering, curing etc. complete but excluding the cost of reinforcement .	m3	10.00			
17A	Same as above but Form work height up to 3.90 Mtr (Rate only)	M3	R/O			
18	Reinforced cement concrete M25 grade using 20mm down size aggregate for lintels including all materials , labour all form work watering, curing etc. complete but excluding the cost of reinforcement	m3	10.00			
19	Reinforced cement concrete M25 grade using 20mm down size aggregate for roof slab , including all materials , labour all form work watering, curing etc. complete but excluding the cost of reinforcement	m3	10.00			
19A	Same as above but Form work height up to 3.90 Mtr (Rate only)	m3	R/O			
20	Reinforced cement concrete M25 grade using 20mm down size aggregate for Mezzanine lvl slab, (over Deck slab) including all materials , labour all form work watering, curing etc. complete.but excluding the cost of reinforcement	m3	7.00			
21	Reinforced cement concrete M25 grade using 20mm down size aggregate for sloped sunshade including all materials , labour all form work watering, curing etc. complete.but excluding the cost of reinforcement	m2	70.00			
22	Reinforced cement concrete M25 grade using 20mm down size aggregate for precast slab including all materials , labour all form work watering, curing etc. complete but excluding the cost of reinforcement	m2	5.00			
23	Reinforced cement concrete M25 grade ready mix concrete including all materials , labour all form work watering, curing etc. complete but excluding the cost of reinforcement : For form work height as per drawing.	m3	120.00			
23 A	(Optional Item): Reinforced cement concrete M25 grade ready mix concrete including all materials , labour all form work watering, curing etc. complete but excluding the cost of reinforcement : For form work height up to 3.90 Mtr	m3	R/O			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
24	Reinforcement using for steel for R.C.C works bent, placed and tied in position using 20 gauge binding wire with necessary chairs and spacers, including cost of steel, labour etc. complete. (quantity includes reinforcement steel for deck slab also).	mt	45.00			
25	Masonry works in cement mortar 1:6 using Solid Blocks (400 x 200 x 200) including cost of cement and conveyance of all materials, labour charge etc.complete.	m3	100.00			
26	Block Masonry in cement mortar 1:6 for partition walls (10cms Thk) including cost of all materials conveyance, labour charges, providing 2nos 6mm dia reinforcement bars at every 120cms ht etc. complete. For 10 cm wall.	m2	390.00			
27	Plastering with C.M. 1:3 9mm thick for under sides of slabs one coat floated hard and trowelled smooth including cost of cement, scaffolding, curing, etc complete.	m2	560.00			
28	Plastering with C.M. 1:4, 12mm thick for sunshade, sloped slab, one coat, floated hard and trowelled smooth including all cost of materials, labour, scaffolding, curing, adding approved quality water proofing compound etc complete.	m2	70.00			
29	Plastering with C.M. 1:4, 12mm thick for outer walls, one coat, floated hard and trowelled smooth including all cost of material, labour, scaffolding, curing, etc. complete above sill level	m2	500.00			
30	Plastering with C.M. 1:4, 12mm thick for inner walls, one coat, floated hard and trowelled smooth including all cost of material, scaffolding, curing, etc complete.	m2	1,400.00			
31	Plastering with C.M. 1:4, 20 mm thick over open terrace floor slabs one coat floated hard and trowelled smooth including all cost of materials labour , adding water proofing compound, curing, etc complete.	m2	500.00			
32	Providing and fixing 26 gauge chicken mesh, necessary "u" clamps at wall joints, RCC -wall joints etc of inner and outer walls (20cms wide) including scaffolding etc. complete.	Rm	1,400.00			
33	Supplying and paving approved quality vitrefied tiles (Kajaria/ Johnson, 60x120cms) size over a bed of 20mm thk C.M. 1:6 cement grout for binding, using 3mm spacers and filling the joints with suitable coloured joint epoxy filler (latecrete or equivalent brand)including all cost of materials. labour etc, complete. (including skirting, edge moulding) Baisic price of Tile Rs. 70/sft. (For Ground & Mezzanine Floor)	m2	400.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
34	Supplying and paving approved quality of skid proof vitrified tiles (Kajaria/ Johnson,60x120cms) size over a bed of 20mm thk C.M. 1:6 cement grout for binding, using 3mm spacers and filling the joints with suitable colored joint epoxy filler (latecrete or equivalent brand), including all cost material labour etc complete. Basic price of tile Rs. 70/sft [for toilet floor and treatment floor] (including cost of cement).	m2	140.00			
35	Supplying and paving approved quality Vitrified tiles (Kajaria/ Johnson,60x120cms) size over a bed of 20mm thk C.M. 1:6 cement grout for binding, using 3mm spacers and filling the joints with suitable colored joint epoxy filler (latecrete or equivalent brand) including all cost material labour etc complete.(including edge moulding). Basic price of tile Rs. 70/-ft [for toilet wall & passage, treatment room, waiting area, C Room and Kitchen].	m2	400.00			
36	Providing WPC material sheets at jams/ sill level of all windows	Rm	40.00			
37	Providing 20mm thk. polished granite (black Colour) slabs at Jamps/ sill level	m2				
38	Providing 20mm thk. Granite (Lapothra finish) over ramp areas all as per details provided (cutting to 15cm wide strips and fixed in overlapping manner).	m2	20.00			
38A	Supplying and paving approved quality Porch Tile size 300x300x 25 mm over a bed of 20mm thk C.M. 1:6 cement grout for binding, etc al materials etc. complete.	M2	50.00			
39	Providing SS corner beading at main cladding joint areas. Make / brand all as approved by Architect	Rm	200.00			
40	Providing and fixing SS guard rail at 4ft height in Main passage areas all as directed by site in charge	Rm	30.00			
41	Supplying and fixing powder coated UPVC openable Windows of Fenesta or equivalent brand , 5mm thk glass, necessary fittings, clamps, neoprene beedings etc complete.	m2	60.00			
42	Supplying and fixing UPVC Ventilators using Fenesta or equivalent brand , 5mm thk. glass, necessary fittings, clamps, neoprene beedings etc complete.	m2	4.00			
43	Supplying and fixing UPVC Sliding doors of Fenesta or equivalent brand , 5mm thk glass, necessary fittings, clamps, neoprene beedings etc complete.	m2	10.00			
44	Supplying and fixing powder coated UPVC Fixed glass windows (FENESTA (or equivalent) brand, 5mm thk plain glass, necessary fittings, clamps, neoprene bedding all as per drawing etc complete	m2	8.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
45	Supplying and fixing 12mm plain toughened fixed glass with dorma or equivalent patch series fittings, floor spring, door handle,lock all as per drawing, including cost of all fittings,labour etc complete.	m2	25.00			
46	Supplying and fixing 12mm plain toughened glass door with Dorma or equivalent patch series fittings, floor spring, door handle, lock, including cost of all fittings, labour etc. complete. (All as per drawing)	m2	15.00			
47	Supplying and fixing M.S grills for windows and ventilators using 10mm squire MS rods as horizontals @ 30cm c/c and 25x6mm ms flat as verticals @ 15cm c/c and 25x6mm outer frame with necessary hold fasts and screws for fixing. including two coat of primer.	kg	1,500.00			
48	Providing FRP doors (Highness or equivalent) of 30mm thk (glossy finish), frame size 50mm *100mm including locking arrangements, handles, hinges etc. complete.	m2	21.00			
49	Supplying and fixing readymade door. WPC (Wood Polymer Composite Material) WPC Architrave Front 25 MM * 12 MM & Rear 25 MM * 12 MM Frame : Frame :WPC Melamine Paper Wrapping FL100-Fero Walnut / Architrave : WPC Melamine Paper Wrapping FL100-Fero Walnut Door : 32 MM Flush Door TPB Filled/ 84427-CENTURY-CAIRO WALNUT/ 84427-CENTURY-CAIRO WA LNUT/ Lock & Hinges Cutting/ All round PVC Edge banding/ FEB-100-Fero Walnut Door Finish : Front Side : Mica Lamination - 84427-CENTURY-CAIRO WALNUT Back Side : Mica Lamination - 84427-(CENTURY-CAIRO WALNUT)	m2	40.00			
50	Supplying and fixing readymade WPC door with Vision panel all as per drawing provided. WPC (Wood Polymer Composite Material) WPC Architrave Front 25 MM * 12 MM & Rear 25 MM * 12 MM Frame : Frame :WPC Melamine Paper Wrapping FL100-Fero Walnut / Architrave : WPC Melamine Paper Wrapping FL100-Fero Walnut Door : 32 MM Flush Door TPB Filled/ 84427-CENTURY-CAIRO WALNUT/ 84427-CENTURY-CAIRO WA LNUT/ Lock & Hinges Cutting/ All round PVC Edge banding/ FEB-100-Fero Walnut Door Finish : Front Side : Mica Lamination - 84427-CENTURY-CAIRO WALNUT Back Side : Mica Lamination - 84427-(CENTURY-CAIRO WALNUT)	m2	8.00			
51	Applying 2 coats synthetic enamel paint over two coats of zinc chromate primer after cleaning the surface with sand paper for iron work.	m2	65.00			
52	Applying cement Primer to the newly plastered surface, after cleaning the surface, free of dust, dirt etc. complete. (Asian of equivalent).	m2	2,200.00			
53	Painting 2 coats of acrylic exterior emulsion and 2 coat wall putty for outside walls having approved quality and colour, over a priming coat after rubbing with sand paper and properly cleaning the surface etc complete (Asian Ultra Protek or equivalent).	m2	500.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
54	Painting 2 coats of acrylic interior emulsion and 2 coat wall putty for inside walls having approved quality and colour, over a priming coat after rubbing with sand paper and properly cleaning the surface etc complete .	m2	1,400.00			
55	Supplying, fabrication and fixing of SS handrail of height 120cm, top rail shall be 2" dia section 2" x 1" rectangular vertical posts, 3/4" vertical mid posts and 1" x 1/2" rectangular horizontal section connecting mid posts all as per drawings. All sections shall be of gauge thickness 16(+/-) 304 grade with mat finish, tig welded. For court Yard, Ramp, Mezannine floor areas	Rm	30.00			
56	Supplying and laying first class Mangalore pattern tiles over, slope sunshades including plastering in CM 1:4, adding water proofing compound, Providing reaper of size 5x2.2 cms including charges for scaffolding, lifting, fixing, curing, etc. complete.	m2				
57	Water proofing using crystallization method for toilet walls after chipping and hacking the surface free of dust, dirt films, laitance, efflorescence, loose particles of concrete, cleaning, acid washing and cleaning with water to clear and hacking the surface free of dust, dirt films, laitance, efflorescence, loose particles of concrete, cleaning, acid washing and cleaning with water to clear all the acid material and applying the water proofing material as per manufacturers specification. (Minimun 10 Years Warranty to be submitted).	m2	120.00			
58	Supplying and fixing rolling shutter made of mild steel laths (18 gauge) interlocked together to the entire length and jointed together at the end by the end locks mounted on specially designed pipe shaft with springs & brackets, side guides and arrangements with push and pull operation, etc, complete, including cleaning the steel surface, applying one coat of zinc rich primer and over coating with two coats of corrosion resistant enamel paint. The pipe shaft shall be of B- class material. The guide chanel shall be of 16 guage and the cover shall be of 18 guage. (gear operated)	m2	20.00			
59	Ornamental work in ferrocement over Carporch all as per drawing, including fittings, labour charges etc complete.	nos	100.00			
60	Ornamental Work for windows all as per drawing provided.	nos	12.00			
61	Providing paving concrete block (80mm Thick, M30) with 50mm base 6mm metal laying and compressing by machine correct level and slope etc. complete.	m2	800.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
62	Providing and laying approved quality colored concrete paving tiles (Ultra or equivalent) over cement mortar 1:5 20mm thick and pointing the joints with water proof tile joint filler to match the tile etc. complete for car porch and store front (including cost of cement).	m2	60.00			
63	Providing natural stone (approved quality) wall cladding at all heights. The rate shall be including cost of adhesive, sealant (polish) labour charge, scaffolding charges etc. complete at all height - for required areas (The price of natural stone shall not exceed Rs.140/- per square feet).	m2	10.00			
64	Providing Textured finish on new plastered surface of approved colour after cleaning the surface etc.Complete.	m2	10.00			
65	Providing border 100mm wide and 15mm thick in cement mortar 1:3.but including all materials labour etc. complete	Rm	150.00			
66	Providing border 75mm wide and 15mm thick in cement mortar 1:3.but including all materials labour etc. complete	RM	200.00			
67	Providing grooves in plastering of 1/2" depth and 5cm width but excluding cost of cement. including all materials labour etc. complete	Rm	200.00			
68	Providing grooves in plastering of 1/2" depth and 10cm width but excluding cost of cement. including all materials labour etc. complete	Rm	200.00			
69	Providing grooves in plastering of 1/2" depth and 15cm width but excluding cost of cement. including all materials labour etc. complete	Rm	200.00			
70	Providing and fixing Pre-cast Concrete Kerbs- 300 MM height X 150 MM thick., including required excavation, concrete base, etc.	Rm	300.00			
71	Providing 70mm thick Aerocon partition of approved brand (OP rooms & Manager's cabin) as per drawing provided.	m2	160.00			
72	Providing and fixing suspended false ceiling which includes providing and fixing GI perimeter channel along with the perimeter of the ceiling, screw fixed to brick wall/partition with the help of nylon sleeves and screws at 610 mm centres. Then suspending GI intermediate channel each from the soffit at 1220 mm centres with GI ceiling angle fixed to the soffit with GI cleat and steel expansion fasteners. Ceiling sections are then fixed to the intermediate channel at 610 mm centres. Tapered 12.5mm edge MR Gyp board (Moisture Resistant) Ordinary Mfd. by S.G.L. Ltd. (India Gypsum) is then screw fixed to ceiling section with 25mm drywall screws at 230mm centres. Screw fixing is done mechanically either with screwdriver or drilling machine with the suitable attachment. Finally the boards are to be jointed and finished so as to have a flush look which includes filling and finished the tapered and square edges of the boards with jointing compound, paper tape (for all toilet ceiling).	m2	100.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
73	Supplying and installing gypsum suspended false ceiling up to any height above floor level, including fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive). Consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts. Other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size.the other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre. This shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25mm long dry wall screws @ 230 mm interval (structural steel members to provide outer wall and hanging the ceiling section).	m2	400.00			
74	Painting 2 coats of acrylic interior emulsion and 2 coat wall putty for inside Ceiling and aerocon partition wall having approved quality and colour, over a priming coat after rubbing with sand paper and properly cleaning the surface etc. complete.	m ²	700.00			
75	Supplying and installing roller blinds in all windows (M/s. Mac, Hunter Douglas or equivalent)	m ²	60.00			
76	Providing Structural Steel Deck slab, beams etc including cutting, welding, grinding, cleaning the surface and applying 2 coats of epoxy enamel paint over 2 coats of zinc rich primer etc complete as per design.	m ²	35.00			
77	Providing Pergola (4.2mtr x 3.6mtr) using Hollow sections (66x33) and 12mm toughened glass all as per details provided in the drawing.	m ²	16.00			
	Total For Ground Floor					
B	FIRST FLOOR					
78	Supply, fabrication and erection of trusses, rafter, purlins (hollow sections), including cutting, welding, grinding, cleaning the surface and applying 2 coats of epoxy enamel paint over 2 coats of zinc rich primer etc. complete as per drawing (store, porch and main truss and sunshades).	m2	750.00			
78A	Supply, fabrication and erection of MS tubular stair to Mezzanine floor including cutting, welding, grinding, cleaning the surface and applying 2 coats of epoxy enamel paint over 2 coats of zinc rich primer etc. complete as per drawing.	mtr	10.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
79	Supplying and laying approved quality Mangalore pattern tiles over sloped truss roof (for main roof Truss, Porch, Store Entrance and sunshdes)	m2	825.00			
80	Applying two coats of Antifungal paint (Tilshield or Equivalent) over mangalore pattern tiles. Over main roof and sunshade areas, porch, Store entrance.	m2	850.00			
81	Providing and fixing Euro guard or equivalent Hysquare 160mm PVC gutter with all accessories etc. complete.	Rm	120.00			
82	Supplying and fixing 110mm dia PVC down water pipe (4kg/cm2) with all fittings such as shoe, offsets, clamps,etc. Bolts, nuts shall be coated with 2coat enamel paint over two coats of zinc rich primer. etc complete.	Rm	100.00			
	Total For First Floor					
C	PLUMBING AND SANITARY WORKS					
83	Supplying, Fixing testing and commissioning at site white vitreous china Urinal (61x39x37 cm) with Battery Sensor and partition including fixing to wall with brass screws. (Jaguar make).	nos	2.00			
84	Supplying, Fixing, Testing and Commissioning at site Wall Mounting type water closet with P or S trap & its all fittings like rag bolts, solid plastic Seat cover etc and Concealed flushing cistern, brass screws, nuts, and washers complete including cutting and making good the walls and floors wherever required. Etc complete.(Jaguar make).	nos	7.00			
84 A.	Supplying, Fixing, Testing and Commissioning at site Wall Mounting type water closet with P or S trap and Wash basin & its all fittings like rag bolts, solid plastic Seat cover etc and Concealed flushing cistern, brass screws, nuts, and washers complete including cutting and making good the walls and floors wherever required. Etc complete.(Jaguar make)with all accessories for Diffrently abled toilet as per drawing	nos	1.00			
85	Supplying, Fixing, Testing and Commissioning at site Counter Top Wash Basin with accessories Flexible Connection tube, 32 mm C.P. brass waste coupling of standard pattern, and union, with grid drain W/Overflow hole including cutting and making good the walls wherever required complete. (Jaguar Make).	nos	7.00			
86	Supplying, Fixing, Testing and Commissioning at site Counter Top Wash Basin with bottom shelf, accessories Flexible Connection tube, 32 mm C.P. brass waste coupling of standard pattern, and union, with grid drain W/Overflow hole including cutting and making good the walls wherever required complete. (Jaguar Make).	nos	3.00			
87	Supplying & installing/fixing Urinal partitions (Vitra or equalent) including all fittings, screws etc.complete.	nos	1.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
88	Supplying, Fixing, testing and commissioning at site in position Deep Seal UPVC fabricated Multi floor trap (7"), with suitable supporting on GI slotted rails (1.6mmthick) full threaded rod, anchor fasteners etc. complete in all respects. 50/75 mm dia outlet (jaguar make).	nos	12.00			
89	Supplying, Fixing, best quality Mirror (600x450mm) of approved make, 5 mm thick glass with 100% silver Mirror with anti crack filling etc complete.	nos	11.00			
90	Supplying, Fixing, testing and commissioning Pillar tap (Tall body) for Table top wash basins with all accessories including angle valve.(jaguar make).	nos	10.00			
91	Supplying, Fixing, Testing and Commissioning at site ablution Health Spray Faucet with wall hook and 1.2 mtr. Chrome plated PVC hose pipe, etc. complete in all respects. With angle valve (jaguar make)	nos	7.00			
92	Supplying, Fixing, Testing and Commissioning Angle valves as per the specification and drawings to the satisfaction of the project manager (Wash Basin).(jaguar make)	nos	20.00			
93	Supplying, Fixing, testing and commissioning at site 40mm dia Poly Propeline Bottle Trap For Wash Basin of approved make complete (jaguar make)	nos	10.00			
94	Supplying, Fixing at site CP Towel ring with CP flanges, fixed with SS screws complete. (Kohler make)	nos	7.00			
95	Supply and fixing at site Soap dish (C room, toilet, wash & OP)	no.	17.00			
96	Providing drain pipe from court yard (53mm dia concealed)	Rm	30.00			
97	Supplying, Fixing at site Long Body Tap, fixed with SS screws complete. (Jaguar make)	nos	7.00			
98	Supplying, Fixing, testing and commissioning at site 150x150 mm square C.P. cast brass or stainless steel anti cockroach grating cover SS (304) of matching size of UPvc fabricated floor trap / multi inlet trap complete in all respects	nos.	10.00			
99	Supplying, Fixing, testing and commissioning at site SDR-11 grade CPVC pipes confirming to ASTM D:1785 & CPVC fittings suitable for solvent welded joints, including all necessary fittings like Tee, Elbow, Adaptors, etc, Chasing and making good the walls wherever required, providing necessary brass ended terminal fittings testing the entire pipe- work for a pressure not less than 5kg/cm2 to the satisfaction of project engineer (INTERNAL HOT AND COLD Water Supply)					
a)	¾ "(20mm) dia. (Internal / Concealed)	Rmt	50.00			
b)	1"(25mm) dia. (Internal / Concealed)	Rmt	50.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
c)	1¼"(32mm) dia. (Internal / Concealed)	Rmt	75.00			
100	Supplying, Fixing at site in position uPVC Pipes (as per ASTM D – 1785 sch-40) of approved make For Cold Water Supply, complete with all necessary (ASTM D – 2466/2467) fittings (elbows, unions, tees, reducers, couplings, nipples etc) (External / Inshaft)					
a)	¾" (20mm) dia	Rm	30.00			
b)	1" (25mm) dia	Rm	30.00			
c)	1¼"(32mm) dia	Rm	40.00			
e)	53mm dia. (Internal / Concealed)	Rm	30.00			
f)	75mm dia. (Internal / Concealed)	Rm	60.00			
g)	110mm dia. (Internal / Concealed)	Rm	70.00			
	Total For Plumbing and Sanitary Works					
D	<u>SUMP TANK & SEPTIC TANK</u>					
101	Providing septic tank and upflow chamber with 230mm brick masonry using best quality bricks in CM 1:4 and plastered with CM 1:3 both inside and outside by using water proofing compound including necessary excavation, PCC, RCC all as per specification and drawing, providing and fixing CI manhole Frame and cover of not less than 100kg and also fixing CI steps if necessary, providing and fixing vent pipe of 110mm dia, 6inch long, 2 nos. with PVC vent cowl all as directed by the Architect.					
	Septic tank size 4.6x2.3x1.3 and upflow chamber of size 2.2x2.2x1.3	Each	1.00			
102	Providing soak pit and filling graded materials and sand all as per drawing including excavation etc complete and as directed by the Architect.					
	Size 1.2x1.2x1.7	Nos	1.00			
103	Construction of RCC sump tank of size 3x 2 x 1.65 mtr using 1:1.5:3 mix, waterproofing using crystallisation method, plastered with CM 1:4, 12mm thk with neat cement flushing coat including labour charges for curing, Providing 60x60 C.I manhole cover weighing not less than 100 kg (3 nos), reinforcement, formwork etc. complete.	Each	1.00			
104	Construction of manhole 60x60cms size up to an average depth of 50 cms with 230 mm brick masonry using best quality bricks in cm 1:4 for constructing over 100mm thk PCC 1:3:6 mix using BG metal of size 25mm and down,smooth plastered internally with CM 1:3, 12mm thk, making necessary benching and channeling in PCC 1:2:4 and finished with neat cement slurry and external plastering with cement mortar 1:4 finish including earth work excavation to required depth, bailing out water from the pit, strutting, refilling the sides of manholes with excavated earth as directed, providing CI manhole frame and cover weighing not less than 100 kg.	Nos	3.00			
105	Providing Overhead Water tank 5,000 liters (2nos)	Ltr	10,000.00			
106	Supply, erection and commssioning mechanical equipment of ETP Plant.					
a	Bar screen 1 m X 0.5 m x 0.5 m	Ltr	250.00			
b	Oil & grease trap - 1 m x 1 x 1 m	Ltr	1,000.00			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
c	Anaerobic up flow filtration tank - 0.5 m x 0.8 m x 1.5 m	Ltr	1,300.00			
	Retention time 1 hour	Ltr	750.00			
d	Clarifier tank -0.5 m x 0.8 m x 1.5 m	Ltr	1,300.00			
	Retention time 1 hour	Ltr	750.00			
e	Sand filter - 1	1	1.00			
f	Carbon filter	1	1.00			
g	Soak pit - 1 m x 1m x 1.5 m	Ltr	1,500.00			
	Total For Sump Tank and Septic Tank					
E	<u>ELECTRIFICATION</u>					
	PART-1 POWER SUPPLY					
107	Supply and fixing meter box and tested CT meter with all KSEBL requirements.	No	1			
108	Supply, unloading and installation of 35 KVA DG set (new version)including exhaust piping upto above the roof, etc.. Complete	No	1			
109	Fabrication, supply, erection and commissioning of panel board as per the given requirements with self standing cubicle construction dust and vermin proof having gasketed hinged door for each cubicle, bus bars with colour coded heat shrinkable sleeves, fabricated out of 14 SWG CRCA sheet, fully powder coated and to meet all standards including earthing provision, identification plates etc.. Complete. Busbar 3x40x6mm Alu bus and 1x25x6 Nu.					
	Incomer					
	100A COS					
	Outgoings					
	63A 4P MCCB -5 nos.					
	Panel shall be with phase indication lamps and MFDM of V, A, PF, etc..	No	1			
110	Supply and laying of aluminium conductor PVC insulated PVC sheathed armoured power cables for working voltage upto 1100V. (Makes: Gloster/Polycab/Havels)					
a	2 x 4 sq.mm	Mtr	100			
b	2 x 6 sq.mm	Mtr	100			
c	4 x 10 sq.mm	Mtr	60			
d	4 x 16 sq.mm	Mtr	30			
e	3.5 x 25sq.mm	Mtr	60			
f	3.5 x 35sq.mm	Mtr	60			
g	3.5 x 50sq.mm	Mtr	IR			
111	Supply and fixing cable glands for the cables mentioned above and giving termination, gland earthing etc. complete.					
a	2 x 4 sq.mm	No	5			
b	2 x 6 sq.mm	No	4			
c	4 x 10 sq.mm	No	4			
d	4 x 16 sq.mm	No	2			
e	3.5 x 25 sq.mm	No	3			
f	3.5 x 35 sq.mm	No	2			
g	3.5 x 50 sq.mm	No	IR			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
112	Supply, installation, testing and commissioning of 63A TPN isolator for AC unit on suitable enclosure near to the ac odu and giving connection including earthing etc.,complete.	No	1			
113	Supply,providing efficient pipe earthing using 38mm dia, 2.5mm long B class GI pipe with necessary earth pit pipe connection including filling the pit with charcoal salt etc.cement concrete or equivalent construction, concrete cover etc.including civil work and Cu.strip connection at the top etc.complete as required.	No	5			
114	Lightning arrestor system: 1 meter length Aluminium Air Terminal Rod with one end pointed and threaded at other end Insulated Base Stainless Steel Connector for Connecting 8mm Aluminium Conductor to Air Terminal Rod 10mm Dia copper coated conductor - Coating Thickness 100 Microns for ring earthing and connection to Earth rods. UL listed Copper Bonded Earth Rod of 17.2 mm Dia and 3 meter length with copper bonding thickness of 254 microns minimum, Stainless Steel Connector for Connecting 10 mm Dia Copper Bonded Conductor to 17.2 mm Dia Earth Rod Earth enchancing compound -25 kg bag Earth Inspection Pit - 300 x 300 tested for 5000 kg Load, etc.. complete (Axis Make)	Set	1			
115	Supply and fixing copper earthing with					
a	No.10 SWG	Mtr	100			
b	25x3 cu.flat	Mtr	20			
Sub Total of Part 1						
PART-2 (WIRING)						
116	Supply installation and testing of 3 phase 8 way ETPN MCB DB, double door, dust tight, vermin proof with copper busbar and 63A 4 pole MCB with ELCB 30mA sensitivity as incoming and 6A/16A MCB 24 nos as outgoing. (Makes: Schneider/Legrand/ABB Elegant) (LDB)	No	1			
117	Supply installation and testing of 3 phase 8 way ETPN MCB DB, double door, dust tight, vermin proof with copper busbar and 63A 4 pole MCB with ELCB 100mA sensitivity as incoming and 6A/16A MCB 24 nos as outgoing. (Makes: Schneider/Legrand/ABB Elegant) (PDB)	No	1			
118	Supply, installation and testing of 3 phase 6 way MCB VTPN DB, double door, dust tight, vermin proof with copper busbar and 63 A 4 pole MCB as incoming and 32A TP MCB 6 nos as outgoing. (Outside loads)	No	1			
119	Supply, installation and testing of 1 phase 18 way MCB DB, double door, dust tight, vermin proof with copper busbar and 32A DP MCB with ELCB 30mA sensitivity as incoming and 6A MCB 12 nos as outgoing.(UPS circuits) (Makes: Schneider/Legrand/ABB Elegant)	No	1			
120	Supply, installation and testing of 1 phase 18 way MCB DB, double door, dust tight, vermin proof with copper busbar and 32A DP MCB with ELCB 30mA sensitivity as incoming and 6A MCB 12 nos as outgoing.(Yard lighting) (Makes: Schneider/Legrand/ABB Elegant)	No	1			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
121	Supply and wiring light points in concealed using 1.5sq.mm PVC insulated FRLS copper wire through recessed 20mm dia 1.5mm thick PVC conduit along RCC and walls, with 1.0 sq.mm copper wire for continuous earth with all specials such as bends, junction box etc., including supply and fixing 3 plate ceiling rose, 5A modular type switch fitted in 16 SWG MS box, chipping and refilling the wall as required etc. complete, (including exhaust fan points) such that: (Metel box base/face plate and switches are Schnedier/LegrandPanasonic make)					
	a 1 light point controlled by one switch (3M)	No	37			
	b 2 light point controlled by one switch (5M)	No	28			
	c 3 light point controlled by one switch (7.5M)	No	5			
	d 4 light point controlled by one switch (10M)	No	2			
	e 5 light point controlled by one switch (12M)	No	2			
	f 6 light point controlled by one switch (15M)	No	1			
122	Supply and Wiring light point in concealed and as above item No.15 such that,					
	a 2 light point controlled by 2 nos 2 way switch	No	4			
123	Supply and wiring fan points in concealed using 1.5 sq.mm flame retardant PVC insulated copper wire with 1.0 sq.mm Cu. Wire for earth as above item No.15 on metal concealed box.	No	12			
124	Supply and Wiring bell point as above item No.15 including supply and fixing of bell push.	No	1			
125	Supply and wiring 6A 3 pin socket using 1.5sq.mm FRLS insulated copper wire with 1.0 sq.mm copper wire for earth as above item No.15 including supply and fixing of 6A modular switch and 3 pin socket on metal concealed box					
	a Combined position	No	30			
	b Independent position	No	17			
126	Supply and wiring 3x6A 3 pin socket using 2.5 sq.mm FRLS insulated copper wire with 1.50 sq.mm copper wire for earth as above item No.15 including supply and fixing of 1 no 6A modular switch and 3 pin socket on metal concealed box.	No	5			
127	Supply and fixing of 20A power plug (Shuttered) with modular type 3 pin socket and switch, M.S.box and all internal connection etc., complete. (For AC)	Nos	6			
128	Supply and fixing of 20A power plug (Shuttered) with modular type 3 pin socket and switch, M.S.box and all internal connection etc., complete. (For Geyser)	Nos	3			
129	Supply and fixing of 20A DP switch with modular type 3 pin socket and switch, M.S.box and all internal connection etc., complete. (AC/Geyser switch)	Nos	11			
130	Supply and fixing of modular type 6/16A power plug with 3 pin socket and switch, M.S. box and all internal connection etc., complete	Nos	8			
131	Installation of exhaust fan using suitable metal frame work and giving connection using suitable length of copper flexible wire, earthing etc. complete	Nos	14			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
132	Installation of ceiling fan/wall fan using suspension shackle down rod and etc giving connection using 3 core flexible wire etc complete.	Nos	15			
133	Installation of ceiling /wall light fittings including giving connection using 3 core flexible wire etc complete.	Nos	120			
134	Supply and fixing 4m square tube 100X100 pole with one side arm, base plate with fixing arrangements and epoxy coating for fixing 150w led flood lights including wiring and termination etc.. Complete.	Nos	2			
135	Supply and wiring run 2 of 1.5sq.mm FRLS insulated copper wire with 1.0 sq.mm copper wire for earth through recessed 20 mm dia 1.5mm thick PVC conduit using bend, junction box etc., for wiring switch board to switch board ,(including supply and fixing of PVC pipe)	Mtr	2000			
136	Supply and wiring run 2 of 2.5 sq.mm FRLS insulated copper wire with 1.5 sq.mm copper wire for earth through recessed 20mm dia 1.5mm thick PVC conduit using bend, junction box etc., for circuit wiring from distribution board.(including supply and fixing of PVC pipe)	Mtr	1480			
137	Supply and commissioning of 3 KVA Inverter Sinewave with C10 battery,trolley etc.. Complete	E	1			
138	Supply and commissioning of 5 KVA UPS 30 minuts backup with battery, etc.. Complete	E	1			
139	Supply and fixing of 10 Litre, 2000 W storage water Heate. (V Guard / Jaguar)	E	3			
Sub Total of Part 2						
PART-3 (ELV SYSTEMS)						
140	Supply and fixing data socket outlet in the existng modular metal box	No	6			
141	Supply and fixing TV socket outlet in the existng modular metal box	No	1			
142	Supply and fixing Tel socket RJ 11 outlet in the existng modular metal box	No	6			
143	Supply and fixing 12 modular face plate in the existing modular metal box.	No	13			
144	Supply fixing commissioning of epabx system with 3 incomer and 10/12 out goings, etc.. Complete	No	1			
	a)Digitel keyphone	No	1			
	b)Basic desktop phone	No	6			
145	Supply and fixing Surveillance system with Cameras and DVR, etc.. Complete					
	a)Dome camera IP 2mp	No	6			
	b)Bullet camera IP 2mp	No	3			
	c)16 channel NVR	No	1			
	d)24 port POE switch	No	1			
	e)Hard drive 6 TB	No	1			
	f)Camara box	No	9			
	g)CAT6 cable through 20mm pvc pipe in recess with labour	Mtr	400			
	h)RJ 45 connectors	No	18			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
	i CAT6 cable	Mtr	400			
	j 2 pair tel cable through 20mm pvc pipe in recess including labour	Mtr	300			
146	NETRACK 19" 6 U wall mounting Network Rack with front lockable toughened glass door, Rear Openable steel door, castors, levellers, size, 550W X 600D, Accessories : Fan Module-02 no, Power Dist.Unit/vertical/6soc/10-16A- 02 nos, cantilever Shelf/600D - 03 nos, Cable Manager-1 no., Mounting Hardware	No	1			
147	Supply and fixing biometric attendance system for 20 persons with all accessories and software, etc.. Complete	No	1			
148	Supply and installation of music system with 12 nos 5A speakers on ceiling with wiring and playern with pen drive, etc.. complete	No	1			
149	Supply and fixing token calling system with 2 consulting room and 1 pharmacy including disply unit with speaker, etc.. Complete	Nos	1			
Sub Total of Part 3						
PART-4 (SUPPLY OF ITEMS)						
	Make (Philips, Ledvance, CG)					
150	Supply of wall bracket light fittings suitable for led lamps of 9 w including all accessories and lamp equivalent to reputed make.	Nos	37			
151	Supply of 4 feet 20W LED Batten tube light fittings suitable for ceiling including all accessories. (Philips, Ledvance, CG)	Nos	40			
152	Supply of strip light fittings with 5w per meter including alu. chanel for fixing suitable for ceiling/cove, etc.. including suitable drive and all accessories	Mtr	20			
153	Supply of picture/spot light fittings with 3/5w led suitable for ceiling.. including all accessories. (Philips, Ledvance, CG)	Nos	4			
154	Supply of mirror light fittings with 5 w led including all accessories and lamp equivalent to reputed make. (Philips, Ledvance, CG)	Nos	11			
155	Supply of Surface/recess mounted LED down light fitting of round shaped with 15W including all accessories and lamp equivalent to Reputed makes (Philips, Ledvance, CG)	Nos	67			
156	Supply of 150W led flood light luminare for building flood lighting. (Philips, Ledvance, CG)	Nos	2			
157	Supply of 1200mm Sweep BLDC ceiling fan without regulator of CG/Orient/Atomberg/ Havells.	Nos	9			
158	Supply of 1200mm Sweep ceiling fan double ball bearing without regulator of CG/Orient/Atomberg/ Havells.	Nos	1R			
159	Supply of wall fan of Orient Wall 44.	Nos	11			
160	Supply of heavy duty exhaust fan Orient/ Almonard - 350mm dia	Nos	2			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
161	Supply of light duty exhaust fan with shutter Orient/Almonard/Ventolex- 200mm dia	Nos	9			
	Sub total of part 4					
	PART 5 (FABRICATION)					
162	Supply and installation of Perforated GI cable trays, fabricated out of 1.6 mm thick GI Sheet with suitable bends, off sets wherever required as per drawing, but without cover. of all supporting brackets made of MS angle, anchor fasteners, screws, bolts, nuts, treaded rod, etc,...The cable tray and accessories should be factory made. Make: Profab, OBO, Fixotech.					
a	200X50 mm wide	Mtr	15			
b	100X50 mm wide	Mtr	50			
	Sub total of part 5					
	PART 6 (OTHER EXPENSES)					
163	Expenses for liaison work with the KSEI for getting approval including preparation of drawings (excluding statutory fee).	LS	1			
164	Expenses for liaison work with the KSEBL for getting connection (excluding statutory fee.).	LS	1			
	Sub Total of Part 6					
	PART 7 (AIR CONDITIONING)					
165	Supply, fixing and commissioning of 1.0 Tr. 3 star rated inverter type hiwall split units with odu mounting bracket, copper piping upto 3m, V-Guard VG 400 stabiliser, control wiring, etc.. Complete	Nos	3			
166	Supply, fixing and commissioning of 1.5 Tr. 3 star rated inverter type hiwall split units with odu mounting bracket, copper piping upto 3m, indoor to out door cabling, drain piping , V-Guard VG 400 stabiliser, control wiring, etc.. Complete.	Nos	4			
167	Supply, fittings, testing and commissioning of 8.5 TR / 7.5 TR capacity ductable air cooled air conditioning unit with scroll compressor. High efficiency power full condenser unit with all standard fittings, safety devices, like HP/LP cutout, single phase preventer, overload relays. All microprocessor control with digital display, R-410 gas. Supply, fitting , testing and commissioning of 7.5 TR capacity with protected copper coil with provision of providing filter area section to house pre filter section with set of washable pre filters having efficiency of 80% down to 10 micron, double canvas connections of fire retardant quality for connecting AHU /FCU to ducting bar plenum. Brand - Carrier Midea / Trane / Toshiba / Misthubushi/Voltas	No	1			
168	Supply and providing following size hard/ soft drawn copper pipe for the extending the pipe between out door and in door unit including the pipe using rubberised form sleeve 9 mm thick, brazing, leak testing etc. (for extending length of pipe beyond standrd length supplied with the unit, size 5/8 inch or suitable 22 gauge soft drawn copper pipe insulated using 9 mm thick rubber nitrite insulation - Liquid line	Mtr	20			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
169	Supply and providing following size hard/ soft drawn copper pipe for the extending the pipe between out door and in door unit including the pipe using rubberised form sleeve 9 mm thick, brazing, leak testing etc. (for extending length of pipe beyond standard length supplied with the unit, size 1 1/8 inch - 22 gauge soft drawn copper pipe insulated using 9 mm thick rubber nitrile insulation - Suction line	M	20			
170	Supply, installation, testing of fresh air area cowl with bird screen and grille and 20 micron synthetic filter.	Nos	1			
171	Supply and fabrication conveyance and installation of angle iron frame work for mounting outdoor unit and indoor unit using suitable size MS angles/flats cut and welded to shape fixing the same on floor or wall/parapet as required including painting with two coats of enamel paint over a coat of zinc chromite primer	Kg	75			
172	Supply and installation of class 'O' type nitrile rubber 9 mm thick closed cell elastomeric insulation for thermal insulation of duct make A flex/ K flex/ equivalent	M2	30			
173	Supply, installation, balancing and commissioning of fabricated at site GI rectangular/round ducting complete with all fittings such as tees, bends, special shoots, inspection door, transformation pieces etc as per approved drawing and specification of following sheet thickness complete as required (for 0.80 mm thick)	M2	30			
174	Supply and installation of aquastic rubber insulation using in inner side of duct 10mm thick open cell elastomeric insulation for thermal insulation of duct make A flex/ K flex/ equivalent	M2	10			
175	Supply and installation of canvas set	Nos	1			
176	Supply, installation, testing and commissioning of fabricated double insulated GI plenum box with extra supporting frame work attached to FCU	Nos	1			
177	Supply and filling of R-410 gas charging	Kg	10			
178	Supply and fixing of following sizes of light gauge PVC water drainage pipe	M	20			
179	Supplying and fixing powder coated extruded aluminium supply Air grills without volumn controll dampers as per specification.	M2	2			
180	Supplying and fixing powder coated extruded aluminium Return Air grills without volumn controll dampers as per specification	M2	1.5			
181	Supply and drawing 650/1100 V grade FRLS PVC insulated stranded single core copper conductor cables conforming to IS 694 part 1 1990 in the existing surface/recess conduit as required including giving necessary connections of the following sizes 1.00 sqm 2 Run	M	30			

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
182	Supply and drawing the following size of multi-core PVC insulated & FRLS PVC sheathed 650/1100 V grade copper conductor round flexible cables conforming to IS 694 part 1 1960 in the existing surface/recess conduit as required including giving necessary connection of the following size 4 core 2.5 sq mm	M	20			
183	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel/ PVC conduit as required.4 x 6 sq. mm	M	20			
Sub Total of Part 7						
184	Supply and fixing of 20 kWp solar power generation system with supporting members, inverter, panels, lightning arrestor system, cabling, Ksebl feasibility study, etc.. Complete.	kWp	20			
Total For Sump Tank and Septic Tank						

Sl.No.	Item Description	Unit	Quantity	Rate	Amount	Remarks
ABSTRACT						
A	TOTAL COST GROUND FLOOR CIVIL WORKS					
B	TOTAL COST FOR FIRST FLOOR CIVIL WORKS					
C	TOTAL COST FOR PLUMBING & SANITARY WORKS					
D	TOTAL COST FOR SUMP TANK & SEPTIC TANK					
E	TOTAL COST FOR ELECTRIFICATION WORKS					
TOTAL						