

<p style="text-align: center;">Annexure Material Supply - SRFDCL</p>			
Sr No.	Description	Unit	Rate
	Civil		
1	<p>Earth Work</p> <p>Excavation in all kinds of soil for foundation pit/ trenches/ basement by mechanical or manual means including sorting out and stacking of useful materials, dressing of the sides, ramming of bottom, disposing of the excavated stuff within site or upto 1 km from site including for all lifts, for all kind of soil, necessary shoring and strutting, etc. complete as directed by Engineer in Charge. Note: Quoted rate shall not be inclusive of backfilling the trenches/ pits/ zari (The back filling shall be measured and paid in relevant tender item). (For all civil, plumbing, electrical and infra structure works).</p> <p>a) upto 1.5 Mt. Depth</p>	Cum.	
	from 1.5 to 3.0 mtrs Depth	Cum.	
	from 3.0 to 5.0 mtrs Depth	Cum.	
2	Filling/Backfilling with available selected/approved excavated earth the quantity of earth stacked any (excluding rock and black cotton soil) in foundation, trenches, plinth & plot etc, in layers not exceeding 15 cm in depth, including breaking the clods, watering to optimum moisture content, ramming and compacting by mechanical means of suitable type of vibrator, including freight, transportation, loading, unloading, screening, passes etc. all complete as instruction & directions of the Engineer-in- charge (Consolidated measurements of fill shall be paid for under this item). The rates shall include for all leads and lifts including transporting using mechanical / manual means within the project area.	Cum.	
3	Supplying and Filling in foundation, plinth with murrum or selected soil brought from outside in plinth and sides of foundations or areas as instructed by engineer in charge, in layers not exceeding 15 cm in depth with optimum moisture conditions to give at least 95% of the maximum dry density (proctor density) including watering, ramming and compacting using mechanical vibrator (static / pneumatic) of required capacity, including freight, transportation, loading, unloading, screening, passes etc. all complete as directed by the Engineer-in-charge (Consolidated measurements of fill shall be paid for under this item). The rates shall include for all leads and lifts including transporting using mechanical / manual means within the project area.	Cum.	
4	Filling in foundation and plinth with good quality river sand under floors including watering, ramming, consolidating and dressing complete for all lead and lift as directed by engineer in charge.	Cum.	
5	Spreading and Leveling of available excavated earth (client's earth) in required depth as per suggestion of client as directed by the Engineer-in-charge. Item shall be executed only after approval of client. (Consolidated measurements of fill shall be measured and paid under this item). (for all civil, plumbing, electrical and infra structure works).	Cum.	
6	Rolling and consolidating of spreaded excavated earth (client's earth) in layers not exceeding 30 cm. in depth with optimum moisture conditions to give at least 95% of the maximum dry density (proctor density) including watering, ramming and compacting with power roller 8 tonne to 12 tonne etc. all complete including 95% proctor density test as per requirement and suggestion of client as directed by the Engineer-in-charge (Consolidated measurements of fill shall be measured and paid under this item). (for all civil, plumbing, electrical and infra structure works).	Cum.	

7	Disposing of the surplus excavated earth and/ or debris etc. including loading at site, transporting by mechanical or manual means & disposal, unloading, spreading and dressing and compacting with required capacity of roller as approved by engineer in charge beyond the initial lead of 50 m and lifts, etc complete. (Item shall be executed where disposal of earth is not included in relevant items) a) upto 5.0 Kms	Cum.	
	b) From 5.0 to 10.0 Kms	Cum.	
8	Backfilling behind Retaining Wall with FM-3 material laid in 2 m adjacent to wall from selected borrow area at OMC to 95 % proctor density by using vibratory roller for compaction as per the specifications, drawings and as directed by the Engineer.	Cum.	
9	<p>Providing and injecting Chemical emulsion for PRE - CONSTRUCTIONAL anti-termite treatment and creating a chemical barrier on the top surface of plinth filling, junction of inside wall and floor, on top of damp proof course (DPC) or on masonry at level of plinth filling as per IS 6313 (Part- 2)-1981 using chemical like chloropyripos emulsifiable, Biflex TC, lindane (IS 8944-1978) 20EC mixed with water in 1:19 ratio (1 liter chemical : 19 liters of water). The emulsion is spread at 5 liters / sqm on top of plinth filling, top of damp proof coarse and 1 liter / linear meter along the junction of wall and floor at all stages mentioned below, all as per specification and directions of Engineer-in-charge. Plinth area of building at ground floor only shall be measured.</p> <p>A1) Bottom surface and the sides of the excavation made for masonry foundations at the rate of 4 liters/sqm (wherever applicable)</p> <p>A2) At the rate of 7.5 liter/ sqm to the backfill at the depth of 500mm below the original ground level. The soil in the immediate contact with the vertical surface of RCC column/ Masonry shall be treated</p> <p>B) Top surface of the plinth filling at the rate of 5 liter/sqm of internal plinth area etc. complete</p> <p>C) At the rate of 7.5 liter/ sqm to the internal vertical surface from original Ground level to top of the earth filled in the plinth..</p> <p>D) At the rate of 7.5 liter/ sqm to the external vertical surface below finished Ground level to the full depth of the filling complete.</p>	Sqmt.	
10	Filling with selected sand in the trenches of children play area or at any other location including ramming and compacting, freight, transportation, loading, unloading, screening, passes etc. all complete as per the drawing and as directed by the Engineer in charge (Consolidated measurements of fill shall be paid for under this item).	Cum	
11	Boring pile holes in any kind of soil cast in situ single under reamed piles of 300 mm diameter. The rate shall include boring in all type of soil, getting out the soil, disposing of surplus excavated soil as directed with all lead and lift, all material, labour, equipments i.e. necessary tremie pipe, funnel, tripod, crane etc. for complete the work as directed by engineer in charge. Rate shall be exclusive of under reaming, concreting and reinforcement.	Rmt	
12	Extra for under reaming inside the bore holes for under reamed piles of following diameter in boring of piling work as per item of boring work. Size of bulb shall be as per drawing and according to dia of pile. Only under reaming charges shall be paid and number shall be considered for payment (I) 300 mm.	Nos.	

13	2.0 PCC and RCC Work Providing and laying Plain Cement Concrete of grade M15 including compaction, finishing top surface to the level curing including cost of formwork (if necessary) etc. complete as per specifications and directions as per Engineer-in-charge. In foundations, plinth, sub base of floors etc. (for all civil, plumbing, electrical and infra structure works).	Cum.	
14	Providing and laying of Dry Lean Concrete (DLC) of M15 grade below concrete pavement, cycle track and footpath and compacting the same with 8 to 10 Tone vibratory roller as per the specifications and as per drawing and as directed by the Engineer. Rate shall include cost of formwork if any.	Cum.	
15	No Fine concrete behind weep hole Providing and laying no fine concrete block of size 600mm x 600mm x 450mm confirming to IS 12727 in 1:8 (1Cement : 8 coarse aggregate) behind retaining wall at weep hole location and as drainage channel including centering, shuttering, laying, all material, labour etc. complete as per detail drawing and as directed by engineer in charge.	Nos.	
16	Construction of unreinforced, dowel jointed, M25 grade plain cement concrete flooring (broom finish) for cycle track, footpath, side walk, central verge, parking etc. as per Specifications and in conformity with the lines, grades and cross sections shown on the drawings. The work shall include furnishing of all plant and equipment, materials and labour and performing all operations in connection with the work, as approved by the Engineer. The unit rate also includes full costs of contraction, expansion, construction and longitudinal joints. It shall also includes joint filler, keys, caulking rod, debonding strip, sealant primer, joint sealant, channel shuttering, dowel bar and tie rod. And it shall also includes cutting and making of groove in cement concrete floor as per the drawing. For construction of concrete flooring TRIMIX vacuum dewatering system shall be used. (Sample to be approved)	Cum.	
17	Providing and laying in position machine mixed, machine batch, machine vibrated design mix cement concrete for reinforced cement concrete work of M25 grade using graded black trap stone aggregates of maximum 20mm nominal (down graded) size obtained from approved quarry including fine aggregates conforming to latest IS 383 with minimum cement content for durability shall be followed as per approved design mix and latest IS 456 (whichever is higher) for all elements of any shape and size, at all places and heights/ depths including transporting by agitator mixer, laying of concrete to site by any means like pumping or tower crane, vibrating, finishing and curing etc., and including Admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, to improve workability without impairing strength and durability as per direction of Engineer-in-charge. Rate shall be inclusive of providing grooves, drip moulds, ghisis, pockets, cut-outs etc. and labour for insert sleeves if any wherever required while casting. Rate also to include lift charges and scaffolding for all heights / depths from FFL / GL. Including the cost of centering, shuttering for all height and lift but excluding the cost of reinforcement.	Cum.	

18	Supplying, erecting, placing, lowering in position by suitable method HYSD (TMT) Fe 500 Reinforcement confirming to IS 1786 of all categories of RCC works as per design at all levels including transporting steel to the work site, handling, decoiling, cutting, bending, cranking, fabricating to required shape, placing in position and tieing / binding the system with 18 gauge annealed (with two strands) wires, welding if necessary etc. complete as per specifications and as directions by the Engineer-in-charge. Measurement will be made on the length basis and converted into weight by using standard co-efficient (rolling margin's and wastage shall not be paid). The quoted rate should be inclusive the cost of Binding wire, laps, chairs, hooks for lifting, spacers etc and the same will not be measured and paid separately.	tonne	
19	Providing and laying in concrete joint 225 mm wide PVC water stop of approved make and as per specification as shown in the drawings. Rate shall also include fixing arrangement as per drawing.	Rmt.	
20	Providing and fixing in 25mm expansion joints, SILFLEX/Capcell HD 100 Supreme or equivalent (Polyurethane foam filler) of the best quality, including in all shapes and all levels etc. complete as directed by Engineer in-Charge and as per specification.	Sqmt.	
21	Providing and filling the expansion joints for 25 mm width & 12 mm depth, with Polysulphide sealant with application of primer including scraping / removing the expansion filler materials from joints, cleaning, repairing of the edges with epoxy mortar of approved color and make, fixing of abro tapes on the edges to prevent the adjoining surface, etc. complete as directed by Engineer-in-Charge. The contractor should furnish a guarantee of 10 years as directed.	Rmt.	
22	Providing and laying 100 mm dia PVC pressure pipe of 500 mm length and 6 kg/cm ² for drainage arrangement/ Weep hole behind RCC retaining wall as per specification and as shown in the drawing with geosynthetic filter and SS 316 mesh of 30x29 of approved quality and specification etc complete.	Nos.	
23	R.C.C. Coping (280mm width) Providing and laying in position machine batched, machine mixed and machine vibrated design mix fair finish, smooth and exposed finish cement concrete of M25 grade with minimum cement content 360 Kg per cum of concrete work for RCC coping of size 280 mm width and 110 mm depth as per the drawing on retaining wall, staircase wall, Boundary wall. Coping shall be casted with fair finish exposed surface using expose type shuttering like laminated ply or steel sheet as per pattern (plain and curvature surfcae), laying of concrete to site by any means like pumping, finishing and curing etc. and including 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 Engineer-in-charge. Rate shall be inclusive of rendering and immediate finish on all expose surface of coping, providing grooves, drip moulds, ghisis, pockets, chipping out old concrete as required, etc. and labour for insert sleeves if any wherever required while casting. Rate also to include lift charges and scaffolding for all heights / depths from FFL / GL and cleaning of both side wall face & clearing of all loose material as well. Rate shall be exclusive of reinforcement and same shall be paid in relevant tender item. (Sample to be approved). Before repeatation of shuttering, contractor shall take prior approval of engineer in charge. At every repatation, shuttering material shall be clean properly.	Rmt.	

24	<p>Cutting and making of groove on RCC surface at specified distance as per the drawing by mechanical saw. Groove/sawed joints shall be made of 6 mm width and 25 to 50 mm depth as shown in the drawing. The sawing operation should be carried out as directed by Architect and Engineer-in-charge. The rate shall be inclusive of labour, grooves, machinery cost and clearing of all debris & loose material from the site (Sample to be approved)</p> <p>A) RCC Wall</p>	Rmt.	
25	<p>3.0 Formwork</p> <p>Extra for Providing and fixing formwork for exposed concrete surfaces (vertical or horizontal surface or any shape) in desired pattern and size as per drawing and specifications using film faced/ laminated shuttering plywood or steel formwork for RCC elements as specified below including neat cleaning the exposed concrete surface, rendering (if required), as directed by the engineer- in-charge. Rate shall be applicable for all levels, all places and all shapes. The contractor shall submit shuttering pattern including tie-rod hole position based on architectural conceptual design with control line. Item shall be executed only after shuttering pattern approved by engineer in charge. Same kind of shuttering material should be only used for standard and residual sizes.</p> <p>Concrete surfaces shall be finished smooth fair faced</p> <p>where indicated as such on the drawings. These areas shall be entirely free from honey combing, stains, fins, lipping, nail or screw marks, raised grain marks, air holes or any other imperfections. They shall also be of even texture throughout. Note: Mock up for all exposed work to be got approved from architects in all respect prior to concrete production. Architect reserves right to reject part or all work of sub standard or not in confirmation to sample approved as per mock up. Contractor shall get prior approval for reuse the shuttering material for repetition.</p> <p>Rate shall included cost of tie rod and grouting with non shrink grout of approved make.</p>	Sqmt.	
26	<p>4.0 Brick Work</p> <p>Providing and laying Brick masonry works in foundation & Plinth using common burnt clay building bricks confirming to IS 1077-1986 having crushing strength not less than 35 kg/Sq.cm in any shape cement mortar 1:5 (1 cement : 5 coarse sand) in any shape and all depth including curing, scaffolding racking / flush jointing etc. complete, as per drawing / specification and / or as directed by Engineer in Charge. For all civil, plumbing, electrical & infrastructure works</p>	Cum.	
27	<p>Providing and laying Brick masonry works in Superstructure using common burnt clay building bricks confirming to IS 1077-1986 having crushing strength not less than 35 Kg/Sq.cm., for all floors / all heights / all levels in any shape, in any position, in CM 1:5, including curing, scaffolding, racking / flush jointing etc. complete, as per drawing, specification and / or as directed by Engineer in Charge for all civil, plumbing, electrical & infrastructure works.</p>	Cum.	
28	<p>Providing and laying Half brick masonry work, (115mm thick) using common burnt clay conventional building bricks confirming to IS 1077-1986 having crushing strength not less than 35 Kg/cm², with out reinforcement in cement mortar 1:4 (1 cement : 4 course Sand) for all floors / all heights / all levels, in any shape, in any position, including curing, scaffolding, etc. complete, as directed (for all civil, plumbing, electrical and infra structure works).</p>	Sqmt.	

29	<p>Providing and fixing in position frames/ shutter for any type of aluminium work like aluminium door, composite door- window, window (sliding, openable, side hung, top hung, fixed etc.), casement window, aluminium partition, aluminium fixed louvers, fixed window with any type of aluminium sections of make Jindal/ Indal/ Hindalco as per approved make having minimum 50 micron pure polyester powder coating of approved shade, texture & colour of approved make for all floors/ all levels/ all heights/ all shapes/ all sizes including cutting, bending, crimping, fabricating in best workmanship manner etc as per the drawing, specification and as directed by Architect or Engineer-in-Charge.</p> <p>Rate shall be inclusive of providing aluminium sections (conventional sections for partition and wooden flush doors and Euro-profile for casement window-door/ sliding windows - doors), cutting, fabrication, erection and fixing to the best workmanship manner, including:</p> <ol style="list-style-type: none"> 1) Sheet metal screws and casted solid aluminum corner cleats fixed with external bytts with a spring for rapid and secure joint assembly for casement and sliding shutter and frame; 2) Glazing clips for receiving infill panel; 3) Best quality wool pile where ever shutter touches the frame and compatible microwave cured EPDM rubber; 4) Dash Anchor fasteners of HILTI HRDUGT or equivalent for fixing the frame assembly to the RCC or masonry surfaces. Minimum 1 anchor fastener shall be used for every 600 mm length of section for stability of frame. 5) 10mm GI tie rod for connecting vertical stile at top and bottom for aluminum door shutter and 4mm thick solid aluminium corner cleat of full thickness of section for connecting style and horizontal rails; 6) providing and fixing packing at every 600mm c/c of average 6 mm compact sheet of width (equal to section width less 30mm for backer rod and sealant); 7) Filling the gap between wall and frame on both sides (outside and inside) with polyethylene baker rod of avg. 10 mm thickness of approved make and color and then sealing the remaining gap with neutral grade G/M (Glazed & Metal) weather silicon sealant of approved make and color. 	Kg	
30	<p>Providing and fixing glazing with toughen glass of specified thickness in aluminium door, window, ventilator shutters and partitions etc. Including EPDM rubber on the periphery of the glass, snap beading, glazing clips, neutral cure weather Silicone sealant of Dow corning 789 of approved shade etc. complete for all height / all levels / all floor in all shapes as per the architectural drawings and directions of engineer-in-charge. Installed area of glass shall be measured and paid and without any wastage. In case of half round/ round shape windows, rectangular/ square area shall be measured and paid.</p> <p>a) 6 mm thick fully tampered glass</p>	sqm	
	b) 8 mm thick fully tampered glass	sqm	
31	<p>Providing and fixing 6 mm thick wired glass of approved make and specified thickness in frame work with necessary cutting of glass as per approved shop drawing & specifications including providing and fixing EPDM quality rubber on the periphery of the glass, snap beading, glazing clips, neutral cure weather Silicone sealant of Dow corning 789 etc. complete etc. complete for all floors, all levels, all heights and in all shapes as per the directions of Architect/ Engineer-in-charge. Actual installed area shall be measured and paid. In case of half round/ round shape windows, rectangular/ square area shall be measured and paid</p>	sqm	

32	<p>Providing and fixing solid core flush type door shutter (non decorative) of approved manufacturer like Kit, Anchor or equivalent (Battens should be chemically treated & kiln seasoned & binding agent should be phenol phormaldihide) and of required size, as per approved drawing, design and direction. The rate shall also include external lipping of maximum size 10 mm X 42 mm thickness for single shutter and 25 mm x 42mm thickness for double shutter of seasoned teak wood equivalent to best quality Ghana teak all around and 2 coats of synthetic enamel painting including 1 coat of wood primer & lapi/ oil and water finished polishing or lacquer polishing to lipping, all as per approved drawing, design & direction, etc. complete, sample to be got approved by the Architect or Engineer-in-charge. Measurement including lipping shall be considered for payment. The flush door thickness shall be any of the following: (Marine treated). Necessary hardware like hinges, pivot, handle, tower bolts, locks etc shall be separately measured and paid in the relevant tender items.</p> <p>a) 32 mm thick</p>	Sqmt.	
33	<p>Providing and fixing 1 mm thick Laminate sheet of approved make and shade, texture on Non decorative flush door, any ply surface etc with necessary nails, screws, adhesives as per drawings and approved sample. Laminate shall be either glossy or Swede finish. The rate shall be for all heights, all floors, all places etc complete as directed by engineer in charge. Actual laid area shall be measured and paid without considering any wastage.</p>	Sqmt.	
34	<p>Providing and fixing Compact Sheet of any size, any shape, any color and texture of make Greenlam, Sundek, Vir, Bloom, Formica as per approved make in aluminium frame and shutter work with necessary cutting of sheet, single side, double side coloured as per drawing & specifications including providing and fixing EPDM quality rubber/ silicon sealant/ 3M tape/ screwing on the periphery of the sheet as per the required thickness etc. complete at all floors/ all levels/ all heights as per the drawing & directed by EIC. Cut edges of the compact sheet shall be provided with masking tape. Actual installed quantity shall be measured and paid. Rate shall be inclusive of all type of wastage.</p> <p>a) 6 mm thick Compact sheet</p>	Sqmt.	
b) 8 mm thick Compact Sheet		Sqmt.	
35	<p>Providing and fixing aluminium Extruded supply air grill having 50 micron Polyester Powder coating of approved make and shade after cutting laminated/ painted flush doors as per drawing for fresh air in door on both sides. Rate shall be inclusive of the providing and fixing 3mm thick teak lipping on the cutting edge including finishing etc. complete as directed by engineer in charge. It shall be measured for both sides separately in Sqm</p>	Sqmt.	
<p>Hardware :</p> <p>General Notes for Hardware: Supplying and fixing heavy quality fixtures and fittings for doors, windows, ventilators, partition wall, cabinets with necessary screws, nails, machine pins etc. at all floor/ all levels/ all heights complete. The fittings and fixtures hardware as described in items or of make approved by Architect. Sample shall be approved before execution. As per description, SS hardware shall be of 304 grade or 316 grade according to approved make. The fixture & fastenings shall be provided as under :</p>			

36	Providing & fixing hydraulic floor spring with SS cover plate & adjustable concealed casted top pivot (two piece) and bottom strap of approved make like Dorma or as per approved make for wooden/aluminium doors of specified capacity with minimum one year guarantee. Rate shall be inclusive of cutting of floor neatly, grouting the floor spring & cleaning / polishing the floor & maintaining in good working condition up till defect liability period. In case of Aluminium shutter bottom arm of floor spring & top pivot shall be firmly fixed in the aluminium members using required size of teak wood by making rabbet in the wood. a) Hold open having weight up to 100 kg and width 1200mm - Floor Spring of Dorma BTS-75V with std. spindle and cover plate.	Nos.	
37	Providing & fixing hydraulic rack and pinion door closer with screws to pivoted/ hinged door of approved make like Dorma or equivalent for specified door width with minimum one year guarantee. All adjustment screws face fixed, silver finish. Rate shall be inclusive of fixing with using the template as per supplier's specification & maintain in good working condition up till defect liability period. a) with standard arm and with two independent closing valves and latching speed adjustable by arm without mounting back plate up to 1100 mm door width - TS 68	Nos.	
	b) with hold open arm without mounting back plate up to 1200 mm door width - TS 71 HO	Nos.	
38	Providing & fixing dead lock with 60/70 mm standard Europrofile Pin Cylinder/ Half pin cylinder of Dorma, Kich, Dorset make with both side key /one side key -one side knob with one pair of rose for wooden /aluminium doors with necessary ss Phillips head screws etc .complete as per drawing and sample approved by Architect /EIC. Rate shall be for all heights, all floors and all places.	Nos.	
39	Providing & fixing 19mm diameter SS 304 satin (brush) finish powder coated Mortise handle in pair of KICH or equivalent with necessary SS Phillips head screws etc. complete, as per drawing for wooden/metal/glass doors as approved by Architect and Engineer-in-charge. Rate shall be for all heights, all floors and all places.	Pair	
40	Providing & fixing Mortice lock (9"body) with 60 /70mm standard Europrofile Pin Cylinder of Dorma, Kich, Dorset make with both side key /one side key - one side knob with one pair of rose (Escutcheous) for wooden /aluminium doors with necessary SS Phillips head screws etc complete as per drawing and sample approved by Architect /EIC. Rate shall be for all heights, all floors and all places	Nos.	
41	Providing & fixing SS 304 satin (brush) finish push-pull pair of handle square/ rectangle shape in pair of Dorma, Dorset, Kich (SS316) or equivalent with necessary screws etc. complete, as per drawing as approved by Architect and Engineer-in-charge. Rate shall be for all heights, all floors and all places. a) 200 mm long x 19mm dia	Pair	
	b) 300 mm long x 22 mm dia	Pair	
	b) 450 mm long x 25 mm dia	Pair	
42	Providing & fixing of specified height (minimum rod size shall be 10mm) or SS 304 brush finish Tower bolt of Hafele, magnum, Kich (SS316), Doorset or equivalent in wooden doors/ aluminium doors with necessary screws etc complete as approved by Architect and Engineer-in-charge a) 300 mm x10 mm rod size	Nos.	
	b) 200mm x10 mm rod size	Nos.	
43	Providing and fixing indicator bolt of Kich, Hafele or equivalent for toilet door with necessary screws and etc. complete as approved by the Engineer-in-charge.	Nos.	
44	Providing & fixing of specified height (minimum rod size shall be 10mm) or SS 304 brush finish Baby latch of Hafele, magnum, kich (SS316), dorset or equivalent in wooden doors/ aluminium doors with necessary screws etc complete as approved by Architect and Engineer-in-charge.	Nos.	

45	Providing & fixing SS-304 grade or satin nickel plated brush finish brass butt hinge of specific size with necessary screws etc. complete of Dorma, Hafele, Magnum, EPPW, Kich (SS316) make and sample as approved by Architect and Engineer in Charge. a) 100 x 75 x 3 mm - with ball Bearing	Nos.	
46	Providing & fixing SS brush finish solid Door Stopper of EPPW, magnum, Kich or equivalent with necessary screws etc. complete as approved by Engineer-in-charge in Charge.	Nos.	
47	Providing & fixing 10" long (minimum rod size shall be 15mm) "J" type satin nickel finish nickel plated brush finished brass or SS brush finish Aldrop of EPPW, Arch, Magnum or equivalent with necessary screws, pins, bolts etc. complete as approved by Engineer in Charge.	Nos.	
48	Providing & fixing 8" long (minimum rod size shall be 12mm) satin nickel finish brass or SS 304 brush finish round Tadi of EPPW, Arch, Magnum make with necessary screws, pins, bolts etc. <u>complete as approved by Engineer in Charge.</u>	No.	
49	Providing and fixing SS 304 grade kick plate of size 1200mm x 300mm x 1.2mm for disable toilet door of Dorma or equivalent including fixing etc complete as directed by engineer in charge.	No.	
50	Providing & fixing 25mm diameter (1.5mm thick) SS 304/316 satin (brush) finish Disabled Grab Rails/ handle of 600mm long of approved make with necessary SS 304 grade screws etc. complete as per drawing as sample approved by Architect/ Engineer-in-charge. Rate shall be for all heights, all floors and all places.	No.	
51	Providing and fixing Pivot in floor with 3mm fixing plate for aluminium / wooden doors of Dorma, Magnum or equivalent approved make as per drawing and as per architect and engineer in charge. (only to be considered where pivot door without floor spring)	No.	
52	SS Plate Signs : Providing Making and fixing SS plate signs on 2mm thick ISI Brushed S.S. Grade 304 plate with acid etching and duco painting. All plates will be made in CNC Water Jet Cutting, with all edges smoothen and all corner to be cute round. Acid etching should be done 0.3mm deep and Use ICI duco paint for colour infill of approved colour. The plate will be fixed on wall with the stud/ fastener/ adhesive tape of 3M, jointing sealant as per design as per specification and approved by Architect or Engineer in charge. The rate shall be inclusive of scaffolding, drilling, fasteners/ adhesive material etc. at all heights as directed by engineer in charge. Only elevation area shall be measured and paid. The contractor should submit the drawings based on concept design and do the sampling and get it approval before execution.	Sqmt.	
53	ACP sheet signage on Existing Pole/ New Pole: Providing, Making and fixing 4 mm thick ACP sign of any shape and size and of approved make to be cut on CNC router cutting and smoothen all corners and edges. Matter shall be cut in 3M High intensity prismatic Reflective vinyl ASTM Type 4 and paste on it as per design and detail and as per manufacturer's specifications. UV stabilized lamination shall be done on it. The ACP sheet shall be fixed with clamp and angle on new or existing MS Pole as per drawing with backing ACP sheet. Content of sign shall be letters (In Gujarati & English), graphics / maps, signs etc. in any colour as per design, drawing and approved by Architect and Engineer. All side of box shall be covered with fresh ACP sheet, but only one side elevation area shall be measured and paid in sqmt. Cost of MS Pole and Civil works shall be paid as per relevant tender items. The rate shall also include cost of scaffolding, drilling, fabrication, finishing, self adhesive tape of 3M, backing ACP sheet etc at all height and all lead, angle, fixing charges, etc. The contractor should submit the drawings based on concept design and do the sampling and get it approved before execution.	Sqmt.	

54	<p>ACP sheet signage on Existing Pole/ New Pole for Vehicular Signages:</p> <p>Providing, Making and fixing 4 mm thick ACP sign of any shape and size and of approved make to be cut on CNC router cutting and smoothen all corners and edges. Matter shall be cut in 3M High intensity prismatic Reflective vinyl ASTM Type 4 and paste on it as per design and detail and as per manufacturer's specifications. UV stabilized lamination shall be done on it. The ACP sheet shall be fixed with clamp and angle on new or existing MS Pole as per drawing. Content of sign shall be letters (In Gujarati & English), graphics / maps, signs, arrows, etc. in any colour as per design, drawing and approved by Architect and Engineer. All side of box shall be covered with fresh ACP sheet, but only one side elevation area shall be measured and paid in sqmt. Cost of MS Pole and Civil works shall be paid as per relevant tender items. The rate shall also include cost of scaffolding, drilling, fabrication, finishing, self adhesive tape of 3M, back and sides plain acp sheet, , angle, fixing charges, etc at all height and all lead. The contractor should submit the drawings based on concept design and do the sampling and get it approved before execution.</p>	Sqmt.	
55	<p>ACP sheet signage mounted on wall/door/hung from ceiling:</p> <p>Providing, Making and fixing 4 mm thick ACP sign of any shape and size and of approved make to be cut on CNC router cutting and smoothened at all corners and edges. Matter shall be cut in 3M High intensity prismatic Reflective vinyl ASTM Type 4 and paste on it as per design and detail and as per manufacturer's specifications. UV stabilized lamination shall be done on it. The ACP sheet shall be fixed or hanged with necessary SS studs, SS fasteners, self adhesive tape of 3M, SS rod, SS chain, clamp on RCC or brick wall. Backing acp sheet shall be fixed with SS Studs on the wall as per drawing. Pasting of vinyl must be accurate as per the design on the approved size ACP without any kind of bubbles. Content of sign shall be letters (In Gujarati & English), graphics / maps, signs, arrows, etc. in any colour as per design, drawing and approved by Architect and Engineer. The rate shall also include cost of scaffolding, drilling, fabrication, finishing, adhesive material, backing ACP sheet, etc at all height and all lead. The contractor should submit the drawings based on concept design and do the sampling and get it approved before execution.</p>	Sqmt.	
56	<p>Map Sign:</p> <p>Providing, making and fixing Backlit Modular system signage of Vista, Co-sign or as per approved make system for Direction Signs as per concept drawings. Modular sign using Aluminium extrusions (Alloy 6060) with Anodizing (Thickness 15-20 microns) according to ISO:9001-2008 product with Premium grade Anodizing as per Qualanod and Qualicoat International standards and warranty as per manufacturer's specifications. Sections can be used to create totems upto 6m with variable depths as per requirement. Providing, Making and fixing 4 mm thick ACP sign of any shape and size of Flexi bond or as per approved make to be cut on CNC router cutting and make all corners and edges smooth with matter and graphic as per the concept design and manufacturer's specifications. Protective coating shall be applied over the surface of ACP. The Rate shall include all civil work related to foundation, fixing and ACP with printed matter (both side), protective coating (both side), co-sign profile, finishing good etc. for all height all level. Only one side elevation area shall be measured and paid in sqmt. The contractor should submit the drawings based on concept design and do the sampling and get it approved before mass production. The contractor shall submit the drawings based on concept design and do the sampling and get it approval before execution.</p>	Sqmt.	

57	Vinyl Stickers: Providing, Cutting & pasting of vinyl stickers of approved make and shade with digitally printed graphic/ letter as per design and as directed by engineer in charge. Pasting of vinyl must be accurate as per the design on the approved size ACP without any kind of bubbles. The rate shall also include cost of scaffolding, drilling, fabrication, finishing, adhesive material etc at all height and all lead. Only elevation area shall be measured and paid in sqmt. The contractor should submit the drawings based on concept design and do the sampling and get it approval before execution.	Sqmt.	
58	SS signage: (For names in Entrance) Providing & Fixing SS Coating Letters (Gujarati/English Letters as per drawing) signages with backlit of color as per shade approved by architect in SS - 304 satin/brush finish plate of Height as below and 2" Embossed complete in accordance to the drawings and instructions provided by the Architect and/or Engineer - in - Charge. The rate shall be for a complete item including fixing at any location as per drawing including providing special arrangement for scaffolding fixing on a finished side to the satisfaction of Engineer - in - Charge. a) 600 mm height	Nos.	
	b) 150 mm height	Nos.	
59	7. Plaster Work Providing and applying average 10 mm thick single coat mala finish smooth plaster in CM 1:3 (1 cement : 3 coarse river sand), on ceilings, stair soffits etc. as per instructions of EIC at all floors/ all levels/ all heights/ all shapes including dense hacking to concrete surface, scaffolding, curing, making grooves (at junction of slab & beam, two different materials like brick & concrete surfaces, periphery of openings, below sills, above lintels, above skirting - horizontally or vertically), forming pattas including applying neat cement slurry on RCC Surface etc. complete as per drawing/ specifications and/ or as directed by the Engineer-in-charge. for all civil, plumbing, electrical & infrastructure works.	Sqmt.	
60	Providing and laying average 20mm thick double coat mala finish plaster for internal/external wall consisting of average 15mm thick wired finished backing coat of CM 1:4 (1 cement : 4 coarse sand) and average 5- 6mm thick uniform coat using steel trowel, in CM 1:3 (1 cement : 3 sand) on brickwork / RCC work / blocks/ sills/ soffits/ jambs/ chhajjas at all floors/ all levels/ all heights/ all shapes and for all sizes with necessary scaffolding, curing, making drip moulds, grooves (at junction of slab & beam, two different materials like brick & concrete surfaces, periphery of openings, below sills, above lintels, above skirting - horizontally or vertically), forming pattas, closed hacking to RCC surface as per specifications and direction of Engineer - in - charge. for all civil, plumbing, electrical & infrastructure works.	Sqmt.	
61	Providing and applying 20 mm thick inside cement plaster with water proofing agent on inside of sump consisting of 12 mm thick backing coat of CM 1:3 (1 cement : 3 sand) and 8 mm thick finishing coat of CM 1:1 (1 cement : 1 sand) etc. complete including necessary curing, scaffolding required if any etc. complete.	Sqmt.	
62	Providing and laying average 20 mm. thick Sand faced cement plaster on masonry work / RCC wall up to any height and for all shapes consisting of first coat (backing coat) average 12-15 mm. thick with CM 1:3 (1 cement: 3 coarse sand) rough wired finish and second coat of average 8 mm. thick uniform grained textured by using sponge, in CM 1:1 (1 cement: 1 sand), including scaffolding, hacking to RCC surface, forming grooves, drip moulds, pattas, curing etc. complete as directed by engineer-in-charge. (Sample to be approved before mass production/ construction/ purchase)	Sqmt.	

63	Extra for providing rendering to achieve exposed finish on plastered wall in cement mortar with use of white cement in required proportion to match the existing shade of concrete as per pattern approved by Architect and EIC, at all heights, all places and as per the directions of the architect and engineer-in-charge.	Sqmt.	
64	Extra for providing and mixing waterproofing material/ admixture in cement plaster work/ concrete floor work of approved make in proportion recommended by the manufacturers etc complete as directed by engineer in charge.	sqm per bag of cement used	
65	Providing & fixing G.I. Hexagonal chicken wire mesh of size 20 mm x 20mm and 22 gauge at the junction of dissimilar surfaces of brick / block masonry wall and RCC column / beams @ 100mm on each side of surfaces including necessary "U" nails / screws / washers with cleats for fixing, overlaps, scaffolding at all floors / all levels / all heights / all shapes etc. complete as per drawing / specifications and direction of Engineer-in-charge. For civil, plumbing, electrical & infrastructure works.	Sqmt.	
66	<p>Providing and carry out waterproofing treatment to sound concrete surface of toilets, sunken slabs, corridors, wet areas etc. after proper surface preparation to remove loose dust, dirt etc., repairing of cracks (if any) using polymer modified mortar, carry out cementitious injection grouting at leakage points modified with Plasticized Expansive Grout Admixture @ 225 gms per bag of cement, carry out 50 mm thick cement mortar (1:3) vatta/ corner modified with Styrene Butadine Polymer bonding agent at dosage of 2.5 Ltr per 50kg cement, Pre-dampening concrete surface, mixing and application of two coats of Elastomeric Polymer modified cementitious waterproofing coating by incorporating 45 gsm glass fibremesh between 1st and 2nd coat using suitable brush or roller as per coverage etc. complete including all tools and tackles as per manufacturer's specification.</p> <p>Cured Polymer modified cementitious waterproofing coating shall comply with ASTM D4060, ASTM D4541, ASTM D638, ASTM C836 and possess below properties: Mixed density: 1.68 g/cc, Adhesion to concrete-> 1 N/mm², Non-toxic, Static crack accommodation-1 mm</p> <p>Water proofing system shall be executed by only approved applicator of approved brand and under strictly supervision of technical fellow of manufacturer. The rate includes giving 10 year guarantee for waterproofing on a Rs.100/- stamp paper in approved proforma.</p>	Sqmt.	
67	Providing 18 to 20 mm. thick water proof cement plaster in double coat on brick/ block masonry or RCC, at all heights, finished even and smooth or wired finish in CM 1:3 (1 cement : 3 sand), including providing and mixing water proofing materials of approved make and as approved by the Architect and Engineer-in-charge, in cement mortar in proportion recommended by the manufacturer and leaving the surface finished including necessary scaffolding, curing etc complete as directed by engineer in charge including furnishing a guarantee bond for 10 years. (for all civil, plumbing and electrical works)	Sqmt.	
68	Providing & laying china mosaic flooring for plain and curved surfaces, comprising of 20 to 25 mm. size broken pieces of ceramic/glazed tiles (one or more colours, as directed), laid over cement mortar 1:6 bedding including applying cement slurry at the rate of 2.75 kg per sq.m. , on plain or sloped surfaces. and filling joints with white cement. The flooring shall be tampered to bring the mortar cream up to the surface, including rounding of the junctions and extending them upto 15 cm. along the parapet wall. The rate shall include bands, if different colour is used, any pattern or design as per drawing and direction, curing, cleaning with water and oxalic acid, etc. complete as directed by engineer in charge. (Wall to wall measurement will be considered only including vata upto required height.)	Sqmt.	

69	<p>Providing and laying in position of size upto 100 mm x 100 mm mosaics tiles of Picolo or equivalent approved make of required surface finish (Glossy / Matte / Satin) for curved surface etc. of approved make and shade as per design and drawing. Tile is to be fixed over 12 to 15 mm thick wired finish plaster in cement mortar 1:4 (1 cement : 4 coarse sand) with keeping a groove of (3mm width). Tile shall be fixed with cement base tile adhesive 3 mm thickness behind the tiles including filling the grooves with cementitious grout and pigment of approved shade etc. complete as approved by architect and directed by engineer-in-charge. Rate shall be inclusive of 12 to 15 mm thick wired finish plaster in cement mortar 1:4, cement base tile adhesive ,cementitious grout and pigment, and protection of flooring until the handling of the project by covering the joints with abrotaps, plastic sheet and plaster of Paris etc. complete. (Sample to be approved before mass production/construction/purchase)</p> <p>1)light shade</p>	Sqmt.	
70	<p>Providing and laying in position of size upto 100 mm x 100 mm mosaics tiles of Picolo or equivalent approved make of required surface finish (Glossy / Matte / Satin) for curved surface etc. of approved make and shade as per design and drawing. Tile is to be fixed over 12 to 15 mm thick wired finish plaster in cement mortar 1:4 (1 cement : 4 coarse sand) with keeping a groove of (3mm width). Tile shall be fixed with cement base tile adhesive 3 mm thickness behind the tiles including filling the grooves with cementitious grout and pigment of approved shade etc. complete as approved by architect and directed by engineer-in-charge. Rate shall be inclusive of 12 to 15 mm thick wired finish plaster in cement mortar 1:4, cement base tile adhesive ,cementitious grout and pigment, and protection of flooring until the handling of the project by covering the joints with abrotaps, plastic sheet and plaster of Paris etc. complete. (Sample to be approved before mass production/construction/purchase)</p> <p>1)dark shade</p>	Sqmt.	
71	<p>Providing and laying 600mm x 600 mm vitrified tiles of required surface (Matt, Satin, Glossy, Non skid, Rustic) and shade as per design in floor with residue and skirting of desired colors and size of first quality over a minimum 20 mm. thick cement mortar 1:3 bedding on 40 mm wired finish screed 1:2:4 and laid to proper slope and level. Finishing to be done with flush pointing / grooves filling with epoxy grout as per architect's descretion including curing and cleaning with mild oxalic acid etc. complete as directed by Architects and Engineer-in-charge. Rate shall be inclusive of protection of flooring until the handling of the project by covering the joints with abrotaps, platic sheet and plaster of paris.. (Sample to be approved before mass production/construction/purchase)</p>	Sqmt.	
72	<p>Providing and laying in position size upto 600 mm x 600 mm vitrified wall tiles of required surface finish (Matt, Satin, Glossy, Non skid, Rustic) for dado, risers of steps etc. of approved make and shade as per design and drawing. Tile is to be fixed over 12 to 15 mm thick wired finish plaster in cement mortar 1:4 (1 cement : 4 coarse sand) with keeping a groove of width as per drawing. Tile shall be fixed with 1:1 cement sand mortar of average 6 mm thickness behind the tiles including filling the grooves with white cement and pigment of approved shade etc. complete as approved by architect and directed by engineer-in-charge. Rate shall be inclusive of 12 to 15 mm thick wired finish plaster in cement mortar 1:4 and maintaining the tile work until the handling of the project. (Sample to be approved before mass production/construction/purchase)</p>	Sqmt.	

73	Providing and laying cement concrete pavement (IPS) of average 50mm thickness with 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 6-12mm nominal size) in alternate panel of approx. 1.5 meter in any direction, including finishing with a floating coat of neat cement and false grid marking of 300mm X 300mm square with string, etc., complete pavement / flooring in required gradient as per drawing/ specification and/ or as directed by Engineer in Charge etc. complete for all places/ all levels/ all heights.	Sqmt.	
74	Providing & fixing 2.5 cm wide roughened strip to form antiskid surface on any type Flooring including granite as per drawing, specification and/ or as instructed by Architect and Engineer in Charge including forming straight deep two number gishi (groove), 6 mm. Wide & 4mm deep & roughened strip by chisel in between as per sample approved by Architect including polishing on two sides of the roughened area and in grooves as per drawing for all places/ all levels/ all heights etc. complete as directed by engineer in charge.	Sqmt.	
75	<p>Providing and fixing Embossed tiles which are detectable and act as warning tiles for disabled people of Vyara make or Equivalent in footpaths, pedestrian ways etc., as specified in the drawing and as approved by the Engineer- in-charge 300mm in floor including average 45 mm thick cement mortar bedding in 1:6 laid, embossed such that LINE specifying direction, and Embossed Dots specifying Danger of 30mm of High Strength and high wear resistant Cement Concrete Tiles with high finish with</p> <p>-wear resistant aggregates colour coordinated aggregates in face mix.</p> <p>-Colours specified by the architects, using UV resistant colour pigments from Lanxess.Tiles must confirm to IS 13801: 1993</p> <p>The Tiles will be made using wear resistant materials in the face mix as specified by the architects. The Tiles must be cured in controlled environment to ensure efflorescence free material. The Tile Should have minimum average 4.5MPa KG/cm² compressive strength at 28 days. The rate shall be inclusive of protecting the flooring by plaster of paris and plastic and/or bubble top sheets, complete etc, as per the satisfaction of EIC (Sample to be approved before mass production/construction/purchase)</p>	Sqmt.	
76	<p>Rough kota Stone (River Wash)</p> <p>Providing & laying average 25 mm (25 to 30 mm) thick machined cut Green Rough Kotah stone of approved quality, selected and sorted for uniform color & texture, in floor, otta, sill, skirting, tread, riser etc., in required sizes up to 600 mm. as per design normal pattern (straight or staggered joint with square or rectangular shaped stone) and drawings (with grooves of 10mm wide or without grooves). Kota stone is to be laid over cement mortar 1:6 bedding of average 40 mm thickness with joints, pointing and finishing and filling the grooves with CM 1:2 as sample approved, including curing and cleaning with wire brush to remove excess cement on the sides of stone up to the satisfaction of the Architect & Engineer-in-charges etc. complete. (NO WAXING WILL BE PERMITTED). (Sample to be approved before mass production/construction/purchase)</p> <p>a) Upto 600 mm X 600 mm (River Wash)</p> <p>b) Upto 900 mm x 600mm (River Wash)</p> <p>C) Upto 1200 mm x 300 mm (River Wash) for tread and riser with champhering and edge polishing on exposed edges</p>	Sqmt.	

77	<p>Providing & laying average 40 mm (30 to 40 mm) thick machined cut Green Rough Kotah stone of approved quality, selected and sorted for uniform color & texture, in floor, otta, sill, skirting, tread, riser etc., in required sizes up to 600 mm. as per design normal pattern (straight or staggered joint with square or rectangular shaped stone) and drawings (with grooves of 10mm wide or without grooves). Kota stone is to be laid over cement mortar 1:6 bedding of average 40 mm thickness with joints, pointing and finishing and filling the grooves with CM 1:2 as sample approved, including curing and cleaning with wire brush to remove excess cement on the sides of stone up to the satisfaction of the Architect & Engineer-in-charges etc. complete. (NO WAXING WILL BE PERMITTED). (Sample to be approved before mass production/construction/purchase)</p> <p>a) Upto 600 mm X 600 mm (River Wash)</p>	Sqmt.	
	b) Upto 900 mm x 600mm (River Wash)	Sqmt.	
	C) Upto 1200 mm x 300 mm (River Wash) for tread and riser with champhering and edge polishing on exposed edges	Sqmt.	
78	<p>Polished kota Stone</p> <p>Providing & laying average 25 mm (25 to 30 mm) thick machined cut Green Polished Kotah stone of approved quality, selected and sorted for uniform color & texture, in floor, otta, sill, skirting, tread, riser etc., in required sizes up to 600 mm. as per design normal pattern (straight or staggered joint with square or rectangular shaped stone) and drawings (with grooves of 10mm wide or without grooves). Kota stone is to be laid over cement mortar 1:6 bedding of average 40 mm thickness with joints, pointing and finishing and filling the grooves with CM 1:2 as sample approved, including curing and cleaning with wire brush to remove excess cement on the sides of stone up to the satisfaction of the Architect & Engineer-in-charges etc. complete. (NO WAXING WILL BE PERMITTED). (Sample to be approved before mass production/construction/purchase)</p> <p>a) Upto 600 mm X 600 mm</p>	Sqmt.	
	b) Upto 900 mm x 600mm	Sqmt.	
	C) Upto 1200 mm x 300 mm for tread and riser with champhering and edge polishing on exposed edges	Sqmt.	
79	<p>Providing & laying approved quality machine cut mirror finished granite of approved shade, thickness 18-20 mm., in flooring, otta, sill, skirting, dado etc. as per drawing in required sizes (not exceeding 2100mm(L) m. x 750 mm(B).) and shapes, including average 45 mm thick cement mortar bedding in 1:6 laid and jointed with white cement and matching pigment including rubbing, re- polishing after fixing to remove any undulation between the joints (if required) with different grades of Emery, refilling of open joints, curing, daily cleaning and mopping, as directed for at least 15 days or up to the satisfaction of the EIC (Only finished work will be measured.) etc. all complete as per approved sample by Architect, drawings and instruction of EIC. at all floors / all levels / all heights and all shapes. The rate includes machine cut edges of uniform thickness, rounding and double thickness of granite at edges as per drawing, champhering, and mirror polishing of edges. The rate shall be inclusive of protecting the flooring by plaster of paris and plastic and/or bubble top sheets.</p> <p>(Sample to be approved before mass production/construction/purchase)</p>	Sqmt.	

80	<p>Providing & laying approved quality machine cut flame finished granite of approved shade, thickness 18-20 mm., in flooring, otta, sill, skirting, dado etc. as per drawing in required sizes (not exceeding 2100mm(L) m. x 750 mm(B).) and shapes, including average 45 mm thick cement mortar bedding in 1:6 laid and jointed with white cement and matching pigment including rubbing, re- polishing after fixing to remove any undulation between the joints (if required) with different grades of Emery, refilling of open joints, curing, daily cleaning and mopping, as directed for at least 15 days or up to the satisfaction of the EIC (Only finished work will be measured.) etc. all complete as per approved sample by Architect, drawings and instruction of EIC. at all floors / all levels / all heights and all shapes. The rate includes machine cut edges of uniform thickness, rounding of edges, champhering and mirror polishing of edges. The rate shall be inclusive of protecting the flooring by plaster of paris and plastic and/or bubble top sheets. (Sample to be approved before mass production/construction/purchase)</p>	Sqmt.	
81	<p>Grass Paver block Providing and laying shot blasted interlocking/ Non- interlocking grey grass paver blocks of high density 80 mm thick M-40 grade for areas as mentioned in the drawing including providing and laying 50 to 80 mm thick average bedding layer of coarse sand below paver block as per required grading and specification and 40 mm thick average FYM Soil filling as required and Specification and also including Supplying and Planting Specified Carpet lawn as required and Specification and also included vermicompost manure as per specification and Laid paver block shall be mechanically compacted. The work of the paving blocks shall be executed in line and level by skilled mason of flooring work only. Cutting of paver block by machine cut only and laying to be done by skilled flooring mason. The Finished surface of the Paver Block shall have Coarse Sand Texture Finish. Paver blocks shall be compacted and shall be re-laid if necessary.</p>	Sqmt.	
82	<p>Paver Block - Heavy duty Providing and laying shot blasted interlocking/non interlocking paver blocks of high density 80 mm thick M-40 grade for footpath, parking areas, service lanes, road junctions and other areas as mentioned in the drawing. Including providing and laying 50 to 80 mm thick average bedding layer of coarse sand below paver block as per required grading and specification. Laid paver block shall be mechanically compacted. The work of the paving blocks shall be executed in line and level by skilled mason of flooring work only. It should be laid in such a way that the no cutting of the paver block to be necessary. Cutting of paver block by machine cut only and laying to be done by skilled flooring mason. The Finished surface of the Paver Block shall have Coarse Sand Texture Finish. Paver blocks shall be compacted and shall be re-laid if necessary.</p>	Sqmt.	
83	<p>Providing and fixing 60 mm M 30 grade thick abrasion resistant shot blasted interlocking / non interlocking or Brick type paver blocks of approved make and colour as per design including average 50 mm coarse sand bedding over compacted sub-base (in required slope and of specified thickness). Sample to be approved by the Architect & Engineer-in-charge. Rate shall be exclusive of sub-base.</p>	Sqmt.	

84	<p>Providing and fixing shotblasted Solid Concrete Cobble Sett in "Beganit Design" having thickness - 60mm with undulated surface, colours specified by the architects of approved make as per design including average 50 mm coarse sand bedding over compacted sub-base (in required slope and of specified thickness). Sample to be approved by the Architect & Engineer-in-charge. Rate shall be exclusive of sub-base.</p> <p>1) 50 mm thick coarse sand shall be laid as cushioning layer for arranging the blocks. Joints of the blocks shall be filled with the sand</p> <p>2) The blocks shall be laid properly on the prepared sub- base as per manufacturer's specification and as per Architect and Engineer-in-charge's instruction.</p> <p>3) Grade - M 30, Thickness of stone- 60mm, Using UV resistant colour pigments from Lanxess & Premier Shield integral and topcoat treatment for satin finish, water and oil repellence, reduction of algae, moss and efflorescence formation</p>	Sqmt.	
85	<p>Providing & laying average 25 mm (25 to 30 mm) thick machined cut Black basalt stone (River Wash) of approved quality, selected and sorted for uniform color & texture, in floor, otta, sill, skirting, tread, riser etc., in required sizes up to 600 mm. as per design normal pattern (straight or staggered joint with square or rectangular shaped stone) and drawings (with grooves of 10mm wide or without grooves). Stone is to be laid over cement mortar 1:6 bedding of average 40 mm thickness with joints, pointing and finishing and filling the grooves with CM 1:2 as sample approved, including curing and cleaning with wire brush to remove excess cement on the sides of stone up to the satisfaction of the Architect & Engineer-in-charges etc. complete. (NO WAXING WILL BE PERMITTED). (Sample to be approved before mass production/construction/purchase)</p> <p>Basic rate of stone - Rs 2000 / sqmt</p>	Sqmt.	
86	<p>Extra for providing and grouting grooves of size 3 mm to 12 mm width and 6 mm depth in floor or dado at location as per drawing and as per architect in charge of size 300mm x 300mm with PVC spacer and ready-mix matching colour polymer based cementitious grout of BAL or equivalent of approved shade. Rate shall be inclusive of cleaning the grooves, protecting the edges before filling and cleaning the tiles on completion etc. all complete as per detailed specifications and instructions of Engineer in charge . Rate shall be paid for actual area of floor/dado grouted.</p>	Rmt	
87	<p>Chhaaroo finish</p> <p>Providing and laying brick bat chhaaroo and screed GSB respectively in (80:20) ratio over subbase including spreading in uniform layer of 200mm thickness consolidating with plate compactor or 10 ton roller watering and finishing in level and slope as shown in the drawing or as directed by engineer in charge.</p>	Cum	

88	<p>10. Structural Steel</p> <p>Structural steel work in riveted, bolted or welded in built up sections including supplying, fabricating, cutting, assembling, hoisting and fixing in position at all heights of all shapes and size with all leads and lifts of YST 310 grade as per latest IS 4923, IS 1161, IS 806 for the work of recessed manhole cover, lighting bollard, Railing, Handrail, gate, flag fixing sleeve pole, garbage box, ladder, signage pole, street furniture, insert plate, treaded bolt and similar works etc. including cutting and welding the members as per detailed drawing and design. The rate shall include sand blasting, degreasing (wet cleaning) & preparation of rust free surface manually or mechanically, metal putty to make the surface even and smooth, 1 coat of epoxy primer of 50 to 60 micron DFT (dry film thickness) and 2 top coats of Metal PU Paint of having DFT 40 to 50 micron of approved shade of MRF or equivalent paint as per manufacturer's specification over all the surfaces of the steel sections or as specified in the drawing. (Only standard measurements will be paid for as actual cut length used at site). Shop drawings for the connection details shall be prepared for the approval of the architect. Rate shall be inclusive of CNC / laser cutting, wastage, welding, bending (shop at site), and bolting wherever necessary, in position welding of required length, anchor fastener for fixing, grinding, finishing edges, and filling the welded spots with metal putty. Rate shall be inclusive of 5 years guarantee against corrosion.</p> <p>The fabrication work shall start after approval of finished sample as per drawing by Architect. Rolled steel sections (equal and unequal angles, square or round bars, flats, angles, tees, channels, plates of different sizes etc.), bars, RHS, SHS, tubular hollow sections, threaded bolt of specified thickness & yield strength of TATA or equivalent as approved by engineer in charge & as per drawing. (Sample to be approved)</p>	Kg	
89	<p>Providing, Fabricating and fixing SS hand rail / railing, gratings, ladder, corner guard of 304 grade made out of round pipes, square or rectangle sections, angle, plate, flat in satin / brush finish including supporting fittings made out of SS 304 grade solid rods, flanges, compatible SS anchor fastener (mechanical or chemical) of Hilti or as per approved make as per manufacturer's specifications, SS connecting bolts of required size with washers, SS base plate, lath work, argon arc welding, buffing, bending and bends as per the detail drawing with best (high) quality finish & as per the a sample approved by Architect and as directed by engineer-in-charge. Rate shall be inclusive of all material, labour wastage and for all floors / all levels / all heights. Railing shall be measured in KG & paid accordingly. Actual consumable length of member shall be measured and no extra shall be paid for consumable fasteners.</p>	Kg	
90	<p>Hot dip galvanizing work confirming to IS 4579/ 2629/ 2633 with zinc of 85 micron thickness on Railing, Handrail, flag fixing sleeve pole, garbage box, Street furniture and similar works etc made from solid flat, bar, RHS, SHS, tubular hollow sections etc. as per the drawing and as instructed by engineer in charge. The rate shall include preparing the surface by shot blasting/ acid washing prior to hot deep galvanizing, labor, tools, machinery etc complete (Sample to be approved).</p>	Kg	
91	<p>Providing and fixing Thermoformed, UV protected/ UV coated one piece polycarbonate domes embossed/ transparent/ milky white with side step including fixing with brass screws/ ss anchor fasteners of HILTI or equivalent, EPDM rubber and neutral grade weather silicone sealant of DOW corning 789 or equivalent of approved color etc. complete as per manufacturer's specifications and as directed upto the satisfaction of Engineer-in-charge.</p> <p>a) Polycarbonate domes 2mm thick with 500 mm inner dia</p>	Nos.	
92	<p>Turbo AirVant (600 mm Internal Dia Approx.) Providing and Fixing Turbo air vent dome with all necessary accessories as per design and Specification or as directed and aprroved by EIC.(Sample to be approved)</p>	Nos.	

93	Providing and fixing in position, interlocking rolling shutter (with mechanical device chain and crank operation for operating rolling shutters) of approved make, of 18 gauge, 75mm wide cold rolled MS lath interlocked, including top cover, spring, axles, guide rails, tees, iron pulleys, bearings, handles, holding down bolts embedded in CC 1:2:4 including 1 coat of PU primer and 2 coats of PU paint of approved make and shade, etc. as directed by engineer in charge. (Measurements considered for payments shall be clear size of opening plus guide channels on both the sides for width and 450mm on top for drum height.)	Sqmt.	
94	Providing & applying Coal Tar Epoxy of approved make like Dr. Fixit (Pidilite), Fosroc, clean coats,Sika, two component epoxy coating in two coats as per the mixing and application procedure suggested by manufacturer on the concrete surfaces. Coverage recommended is 3.0 – 4.0 m ² Per ltr for two coat application at the coverage rate of approx. 250 - 300 micron DFT.	Sqmt.	
95	Providing and applying Hydrophobic Silane - Siloxane coating of Dow Corning, Wacker make or approved equivalent make, to exposed concrete surfaces at all heights & leads and wherever instructed by Engineer-In- Charge. The treatment shall be in two coats wet-on-wet or as recommended by approved manufacturer including preparation of surfaces by cleaning, curing, protecting, independent double legged scaffolding etc complete. The rate includes the cost of all materials, its application by specialized applicators by spray coating with airless sprayer, cleaning the substrate of all laitance, construction dust, contaminants, double scaffolding, labour etc., all complete and at all levels, leads and heights as per particular specification & directions of EIC. Guarantee Bond in the prescribed proforma shall be executed by the contractor for the satisfactory performance of the application for 10 years.	Sqmt.	
96	Providing & applying External 100% Acrylic Paint of approved make ,colour & shade of Asian or as per approved make in minimum three coats (first coat with external primer & balance two coats of paint as per manufacturer's specification) with brush on exterior sand faced plastered surfaces / mala plastered surfaces/ textured surface or as per approved make at all heights/ all floors/ all heights & all places including scaffolding to give even shades including thoroughly brushing the surfaces free from mortar dropping and other foreign matter and sand papered smooth etc complete as per the manufacture's specification & to the satisfaction of Engineer in charge Newly plastered surfaces requires minimum three coats -(first coat with exterior primer and balance two coats as per manufacturer's specifications). The rate shall also include the cost of filler for cracks on the surfaces. Actual surface area shall be measured and considered without multiplying any coefficient for payment for all places/ all levels/ all heights.	Sqmt.	
97	Providing and applying Easy clean, Washable interior 100% Acrylic paint (Premium Plastic Paint) of approved make like premium emulsion of Asian or Easy Clean Rangoli of Berger or as per approved make, color & shade in three coats (first one coat with brush and final two coats with roller), on newly dry interior plastered surface at all heights, all floors, all levels complete to give an even shade, including required coats (minimum two coats) white cement based putty of Birla white / Acrylic putty of Asian paint or as per approved make after thoroughly brushing the surfaces free from mortar dropping and other foreign matter and also including preparing the surface even and sand papered smooth etc. after applying every coat of putty. Priming coat of alkali resistant cement primer (water based) is to be applied before commencement of painting etc. complete as directed by engineer-in-charge. Sample to be approved by Architect and Engineer in charge before starting of the work. The rates shall include the cost of filler for filling the cracks on surface for all places/ all levels/ all heights.	Sqmt.	

98	Dismantling of structure. The contractor rate includes all necessary machinery, labour for dismantling, constructing of ring bund, shoring, strutting, dewatering, finishing the broken edges, etc. complete as instructed by engineer in charge including disposing of dismantled material with all lead and lift.		
	PCC/DLC	Cum	
	RCC	Cum	
	Masonry-(Brick/stone)	Cum	
	Steel Structures/ works	Kgs	
	Flexible pavement	Cum	
99	Dismantling tiled, paved floors, stone floors laid in mortar including stacking of serviceable material and disposal of unserviceable material with all lead and lifts	Sqmt	
100	Providing and fixing round sanitary dustbins for toilet. (Sample to be approved before mass production)	Nos	
101	Supply and Spreading blindage or road crust filling the gaps in metal and levelling to camber and gradient as directed (i) Murrum	Cum	
102	Construction of sub grade and earthen shoulder satisfying the requirements of minimum soaked CBR value of 7 with approved material obtained from borrow area with all lifts and lead and rolling, watering all complete as per Technical Specification.	Cum	
103	GSB: -Construction of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401	Cum	
104	WMM (Wet Mix Macadam): Providing , laying and compacting clean, crushed, graded aggregate and granular material, premixed with water, to a dense mass on a prepared subgrade/sub-base/base in accordance with the requirements of these Specifications. The material shall be laid in 100 mm layers to lines, grades and cross-sections shown on the approved drawings or as direction by the Engineer.The contractor unit rate includes furnishing all materials to be incorporated in the work including all royalties, fees, rents where necessary and all leads and lifts, all labour, tools, equipment and incidentals to complete the work to the Specifications,)carrying out the work in part widths of road where directed; and carrying out the required tests for quality.	Cum	
105	Primer Coat - Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.	sqm	
106	DBM - Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specification clause No. 504 complete in all respects.	Cum	
107	Tack Coat - Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	sqm	

108	Bituminous Concrete (Asphaltic Concrete)- Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 per cent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects	Cum	
109	Add or deduct for variance in actual quantity of bitumen and emulsion used against the specified quantity in the Technical Specifications in the items of dense grade bituminous macadam, asphaltic concrete, prime coat and tack coat.	Tonne	
110	Providing, hoisting (By manual/ mecanical means, upto 300 kg weight) and fixing exposed precast cement concrete work in M25 grade with minimum cement content as per IS 456 for elements like lintels, window sills, weather shead, shelves, moulding, cornices, coping, kerb, tree guard, bollard, sitting bench, spout, strom water channel etc including the cost of FRP or GRP moulds, exposed centering, shuttering (steel/ laminated ply), rendering, erecting and keeping in position with cement mortar 1:3 (1 cement : 3 coarse sand) and necessary scaffolding at all floors, at any height and any level in any position as specified etc. complete as directed by engineer- in-charge. Reinforcement / fibers shall be paid in relevant items.	Cum	
111	Tree Pit -Providing and making tree pit. It includes excavation upto 1200 mm depth including removal of the debris, metal and achieving the natural earth level sufficient for the growth of the trees. Size of the pit is 800 mm x 800 mm / 800 mm dia. first 600 mm depth shall be filled with Natural good soil. 700 mm dia. NP3 class Hume pipe with 500 mm height to be placed on the filled garden soil and outside area of the Hume pipe to be filled with the good quality earth. Hume pipe shall be filled with the garden soil, farm yard manure and required pesticides. etc. completed as directed by Engineer-in-Charge.	Nos.	
112	Providing and fixing Tree Guard, fabricated from 25 x 25 x 3 mm angle and 32 x 32 mm of 3.2 mm thick weld mesh as per drawing and details. Necessary provisions for the anchoring to floor shall be made in the tree guard. Tree guard shall be painted with 1 coat of epoxy primer of 50 to 60 micron DFT (dry film thickness) and 2 top coats of Metal PU Paint of having DFT 40 to 50 micron of approved shade of MRF or equivalent paint as per manufacture's specification over all the surfaces or as specified in the drawing as per the shade approved as per the drawing and specification. The rate shall also include the fixing of necessary name plate. (Sample to be approved)	sqm	
113	Providing and fixing FRC heavy duty light pole cover without frame of size 410 mm x 410 mm / 410 mm dia etc. comp. around light poles in minimum two halves as per drawing and as directed by engineer in charge.	sqm	
114	Providing and laying hot applied Thermoplastic road marking compound in approved color and shade for road marking on bituminous/ concrete road surface 2.5mm thick using fully automatic extrusion machine and using premelter for melting thermoplastic Material, including Reflectoising Glass beads @ 250 gms per sqm are, cleaning the surface of all dirt, dust, and other foreign matter, demarcation at site/ premarking, finishing and managing the traffic control etc.complete and as per specifications, detailed drawings and as directed. Thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 & finished surface to be level, uniform and free from streaks and holes. As per MORTH Specification Clause 803	sqm	

115	Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretite) or HIP (High impact polystyrene) or ABS having electronically welded micro- prismatic lens with abrasion resistant coating as approved by Engineer in charge. The glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 (+/-5) degrees to base .The reflective panels on both sides with at least 12 cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4 : 1973. The studs shall be fixed to the Road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge.	Nos.	
116	Manufacturing, testing, supplying, loading, transporting to worksite, unloading RCC NP4 class pipes with socket and spigot joint as per IS 458-2003 with ISI Mark including EPDM Rubber ring as per IS 5382-1985 etc. comp. As directed by Engineering in charge. RCC NP4 Pipe (with OPC Cement) a) 300 mm dia	Rmt	
	b) 450 mm dia. RCC NP4 Pipe	Rmt	
	c) 600 mm dia. RCC NP4 Pipe	Rmt	
	d) 1200 mm dia. RCC NP4 Pipe	Rmt	
117	Providing and fixing M.S 10 mm dia coated HDPE steps of size 375 x 150 x 25 mm, in line and level etc. complete	Nos.	
118	Lifting, relocating and refixing of existing statue on site without any damage to the statue. Lifting shall be done mechanically after dismantling the existing foundation, if any, to location as per drawing without any damage to the statue. Refixing the statue on location as per drawing and as per the instructions of engineer in charge. The rate shall be inclusive of machinery, labour and materials required for lifting and relocating. The excavation, concrete and reinforcement for foundation for new location shall be paid in relevant tender items.	Nos.	

119	<p>Providing, factory fabricating, transportation, assembling and erection in position or tensile membrane roof with steel structure, Spiral Strand Hot Dipped Galvanised Cable, etc. with all lead & lifts with following specification as under:</p> <p>i) Design, Engineering, Patterning, Supply, fabrication of Arch roof structure with Glass Fibre Silicon Fabric / Glass fibre Teflon Coated (PTFE Fabric) Membrane (including - Procurement, Import, Duties, Taxes, Fabrication, packing, transportation to site & installation). All CNC Plotting/ Cutting & all joints/ seams to be Welded under appropriate pre-stress to avoid any creep / wrinkles & water leakage - ready to install</p> <p>ii) The structure of steel members using structural steel hollow tubes of Grade YSt 310, conforming to IS-1161 and IS 4923 with latest amendments, to the required profile, curvature and shape as called for as per the drawings and specifications. This item includes preparation of fabrication shop drawings and their approval, necessary templates, adequate temporary supports, scaffolding and staging, all cutting, grinding, surface treatment, painting, welding (using automatic submerged arc welding and gas metal arc (MIG) welding wherever specified) including hexagonal black bolts & all labour, tools, plants & equipment's and operations etc required to complete the job as per drawings and specifications. Application of primer and various coats of internal and external painting in fabrication shop and final painting on site using 2 pack Zinc primer & 2 pack Epoxy paint including all touch up works after erection as</p> <p>iii) Spiral Strand Hot Dipped Galvanised Cable as per size and length with one end SS304 Grade Adjustable Socket & one end fixed socket fitting swaged end terminals - pre- stressed - ready to install. The work shall consist of the fabrication and supply of all the structural cables and fitting for the tensioned membrane structures as shown in the drawing.</p> <p>iv) The mode of measurement shall be actual plan area of tensile fabric at roof level, measured in square meter</p>	sqm	
120	Providing and Fixing the Dustbin With M.S. sheet -SAF- 01A made of Saflow or equivalent with supporting fabrication with SRFDCL logo as per the shade approved as per drawing and specification. (Sample to be approved) Basic rate - Rs 15,000	Nos.	
121	Providing & fixing ISI brushed 304 grade SS Recessed manhole cover 0.60 mt x 0.60 mt size having Heavy duty load class (35 T) as approved by architect complete to the satisfaction & as per drawing and instruction of engineer in charge	Nos.	
122	<p>ROOFING WORKS</p> <p>Providing and laying pressed clay tiles (Mangalore tile) of 20 mm nominal thickness as per approved pattern on roofs jointed with cement mortar 1:3 (1 cement : 3 coarse sand) mixed with 2% integral water proofing compound, laid over a bed of 20 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) and finished neat complete for all height all level as directed by engineer in charge.</p>	Sqm	
123	Providing and fixing in position Children Playground Equipment as per drawing and directions by engineer in charge.	Nos.	
124	ARIHANT-MAPS01 OR Equivalent	Double FRP Roller slide 2.1 ARIHANT -Code:PGSD102	Nos.
125	Triple Wave Slide 1.5 Mtr. ARIHANT-Code:PGSD46 OR Equivalent	Nos.	
126	Deluxe Slide 2.1 Mtr. ARIHANT-Code:PGSD81 OR Equivalent	Nos.	
127	Four Seater Arc swing ARIHANT-Code:PGSW01 OR Equivalent	Nos.	
128	Multi Seater See-Saw ARIHANT-Code:PGSS04 OR Equivalent	Nos.	
129	Crystal Maze ARIHANT-Code:PGSL01 OR Equivalent	Nos.	
130	Sky Rocker ARIHANT-Code:PGTH04 OR Equivalent	Nos.	
131	Flying Butterfly ARIHANT-Code:PGKD05 OR Equivalent	Nos.	
132	Circular Swing ARIHANT-Code:PGKD06 OR Equivalent	Nos.	

133	Spring Rider Racer ARIHANT-Code:PGKD30 OR Equivalent	Nos.	
134	Any Play equipment as per drawing and as per architect and engineer in charge Basic rate - Rs 20,000	Nos.	
135	Dismantling, shifting and refixing in position any Children Playground Equipment as per drawing and directions by engineer in charge. The foundation and necessary supporting structure for the equipment shall be paid in relevant item. The rate is inclusive of all labour and machinary expense.	Nos.	
136	Hip twister	Nos.	
137	Chest press	Nos.	
138	Aero rider	Nos.	
139	Leg extension	Nos.	
140	Leg lift station	Nos.	
141	Forearm spinner	Nos.	
142	Providing and laying in trenches galvanized mild steel tubes (medium grade) of the following nominal bore and tube fittings (Earthwork in trenches to be measured and paid for separately) (E) 65mm (up to 10 ton)	RMT	
143	Providing and fixing gun metal gate valve with C.I. wheel of aproved quality (screwed end): 65mm nominal bore	Each	
144	Making connection of galvanized Mild steel distribution branch with galvanized mild steel main 50mm to 80mm nominal bore by providing and fixing tee including cutting and threading the pipes complete.	Each	
145	Providing and fixing in position cowl vent to pipes (C) 100mm diameter	Each	
146	Providing and fixing in position cowl vent to pipes (B) 75mm diameter	Each	
147	Providing & fixing 'P' Trap of UPVC material having a water seal not less than 50mm with necessary distance piece complete, including cost of cutting & making the walls & floors as per specifications & drawing provided at all places, all levels & all height. Make: Astral or Equivalent.	Each	
148	Providing and fixing Multi Floor Trap of UPVC material having a water seal not less than 50mm with necessary distance piece, 40mm x 40mm 50mm inlet x 110mm dia outlet multiple inlet connector piece complete, including cost of cutting floors as per specifications & drawing provided at all places, all levels & all height. Make: Astral or Equivalent.	Each	
149	Providing & fixing Nahni Trap of UPVC material having a water seal not less than 50mm with necessary distance piece complete, including cost of cutting & making the walls & floors as per specifications & drawing provided at all places, all levels & all height. Make: Astral or Equivalent.	Each	
150	Providing, Fixing, testing & commissoning 6 kg/ sq. cm SWR UPVC Pipe Selfit ISI marked brand as per IS 13592 complete including solvent cement jointing & hydraulic testing the joints & pipes as mentioned in the sepcification etc. and making connection with downtime wherever required to satisfaction of engr / arch with proper care, protecting fittings & pipes till the final handing over etc as directed by E-I-C complete as per specifications & drawing provided for all places, all heights & all levels. [A] 75 mm OD (Type B)	RMT	
	[B] 110 mm dia OD (type B)	RMT	
151	Providing and fixing water closet squatting Pan (Indian type W.C. Pan) size 580mm (Earthwork, bedconcrete, foot rest and trap to be measured and paid for separately) (A) Vitreous China. (I) Long pattern = White colour	Each	
152	Providing and fixing 100mm size P or S trap for water closet squatting pan including jointing the trap with the pan and soil pipe in cement Mortar 1:1 (1-Cement : 1-Fine sand) (A) Vitreous China.	Each	

153	Providing and fixing in Cement Mortar 1:3 (1-Cement: 3- coarse sand) a pair of white vitreous China 250mm x 130mm x 30mm foot rest to long pattern squatting pan water closet.	Each	
154	Providing and fixing 12.5 Litres low level flushing cistern with a pair of C.I. or Mild brackets, complete with fittings such as lead valveless siphon, 15mm nominal size brass ball valve with polythene float, C.P. brass handle unions and couplings for connections, with inlet, outlet and overflow pipes, 40mm dia. porcelain enamelled flush bend including cutting holes in walls and making good the same connecting the flush bend with cistern and closet (overflow pipe to be measured and paid for separately) (A) Vitreous China (I) In white colour	Each	
155	Providing and fixing G.I. inlet connection for flush pipe with W.C. Pan	Each	
156	Providing and fixing wash down water closet (European type W.C pan) with integral P or S trap including jointing the trap with soil pipe in cement mortar 1:1 (1 cement : 1 fine sand) (seat and cover to be measured and paid for separately) (A) Vitreous China (I) Long pattern white colour.	Each	
157	Providing & fixing white colour china vitreous 12.5 lit. low level flushing cistern with a pair of C.I. or mild steel brackets etc. complete with fittings such as lead valve less siphon 15mm nominal size brass ball valve with polythene float, C.P. Brass handle unions and couplings for connections with inlet, outlet & overflow pipe 40mm dia porcelain enamelled flush bend including cutting holes in walls & making good the same, connecting the flush bend with cistern & closet. (Overflow pipe to be measured and paid for separately).	Each	
158	Providing and fixing plastic seat & cover for wash down water closet with C.P brass hinges and rubber buffers. (B) Black plastic seat & cover.	Each	
159	Providing and fixing G.I. inlet connection for flush pipe with W.C. Pan	Each	
160	Providing and fixing wash basin with single hole for pillar tap with C.I. or M.S. brackets painted white including cutting holes and making good the same but excluding fittings. (A) Vitreous China: (ii) Flat Back wash basin 550mm x 400mm size. (i) In white colour.	Each	
161	Providing and Fixing Vitreous china Under Counter Wash Basin in white colour of approved or equivalent make and size. All junctions shall be sealed with silicon sealant. Rate quoted shall inclusive of required drilling, cutting to the size for embedding the wash basin (area of opening shall not be deducted for payment), providing SS pins, anchors, clamps, finishing junctions with plaster, etc. complete as per drgs and specifications and as directed by the Engineer -in - charge. Make: Hindware - Zen - 10049 or Equivalent	Each	
	Providing and fixing C.P brass waste for wash basin or sink (B) 40 mm diameter.	Each	
162	Providing M.I. fisher union for wash basin (B) 40mm diameter	Each	
163	Providing and fixing 600 mm x 450 mm bevelled edge mirror of superior glass mounted on 6 mm thick A.C sheet or plywood sheet and fixed to wooden plugs with C.P brass screws (B) 600 mm x 20 mm size.	Each	

164	Providing & fixing Handicap toilet set with European Closet & wash basin & all handicap requirement with dual flush tank, seat & lead (heavy duty) including C.I. Brackets, C.P. brass hinges, M.S. / C.I. painted brackets, Waste Coupling, 32mm size bottle trap etc. all Internal fittings complete with grab rails etc. rubber buffers, C.P nuts, bolts etc making holes in walls & floors, & finishing for ready to use. The rate includes all necessary connection charges as per product detail to the satisfaction of engr. incharge where required & the final handing over etc. complete as per specifications, drawings and as directed by the Engineer-in-charge. Make: Hindware - Matrix - Set 2 or Equivalent	Each	
165	Providing and fixing Polytuf Jet Spray 1.5 Meter Tube.	Each	
166	Providing and fixing PTMT Screw down Stop Tap. (A) 15mm diameter. Make: PolyTUF or Equivalent	Each	
167	Providing and Fixing PTMT Screw Down Bib Taps (1) 15mm diameter. Make: PolyTUF or Equivalent	Each	
168	Providing and fixing PTMT pillar tap, capstan head, screw down high pressure with screws, shanks and back nuts. (i) 15mm diameter. Make: PolyTUF or Equivalent	Each	
169	Providing and fixing urinal of approved quality including connecting the urinal with waste pipe, trap etc. complete (A) White earthenware flat back or corner type size 430 mm x 260 mm x 350 mm	Each	
170	Providing and fixing in position Vitreous China White Urinal Partitions of approved make and quality, including making holes in the wall, fastening the partitions to the wall with rawl plugs, SS screws, and grouting and finishing the walls to the required finish. Make: Hindware or Equivalent	Each	
171	Providing and fixing PTMT bottle trap with necessary coupling of approved quality for washbasin. (1) 38/40 mm. Make: PolyTUF or Equivalent	Each	
172	Providing and fixng gun metal check or nonreurn full way wheel valve. [B] 20 mm diameter	Each	
	Providing and fixng gun metal check or nonreurn full way wheel valve. [C] 25 mm diameter	Each	
	Providing and fixng gun metal check or nonreurn full way wheel valve. [D] 32 mm diameter	Each	
	Providing and fixng gun metal check or nonreurn full way wheel valve. [E] 40 mm diameter	Each	
	Providing and fixng gun metal check or nonreurn full way wheel valve. [F] 50 mm diameter	Each	
173	Providing and Fixing PTMT Towel Ring of size 215mm x 200mm of approved make and conforming to Manufacturers Standards. Make: PolyTUF or Equivalent.	Each	
174	Providing and Fixing PTMT Soap Dish as per specification and conforming to Manufacturers Standards. Make: PolyTUF or equivalent.	Each	
175	Providing and Urinal Flush Valve in Polished Chrome of approved quality and conforming to Manufacturers Standards. Urinal Flush Valve: As per Approved Make List	Each	
176	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) pipe having National Sanitation Foundation (NSF) seal for potable water of following dia. Nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [A] 15 mm	RMT	
	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) pipe having National Sanitation Foundation (NSF) seal for potable water of following dia. Nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [B] 20 mm	RMT	

	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) pipe having National Sanitation Foundation (NSF) seal for potable water of following dia. Nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [C] 25 mm	RMT	
	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) pipe having National Sanitation Foundation (NSF) seal for potable water of following dia. Nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [D] 32 mm	RMT	
	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) pipe having National Sanitation Foundation (NSF) seal for potable water of following dia. Nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [E] 40 mm	RMT	
	Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) pipe having National Sanitation Foundation (NSF) seal for potable water of following dia. Nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [F] 50 mm	RMT	
177	Providing, laying and jointing in true line and level 160 diameter U.P.V.C (Type 'B') conforming to IS 13592-1992 with one end plain and other end socketed with rubber ring, & fittings conforming to ISI 14735-1999 if approved make for drainage system pipe line, pipe shall be jointed with each other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 160 mm diameter X 210 mm length X 196 mm height at every 2000 mm center to center or shall be concealed in walls as directed including necessary fittings such as bends, shoes etc. including testing of pipes and joints with adhesive solvent cement including cost of all materials.	RMT	
178	Providing, laying and jointing in true line and level 110 diameter U.P.V.C (Type 'B') conforming to IS 13592-1992 with one end plain and other end socketed with rubber ring, & fittings conforming to ISI 14735-1999 if approved make for drainage system pipe line, pipe shall be jointed with each other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 110 mm diameter X 149 mm length X 145 mm height at every 2000 mm center to center or shall be concealed in walls as directed including necessary fittings such as bends, shoes etc. including testing of pipes and joints with adhesive solvent cement including cost of all materials.	RMT	
179	Supplying & erecting approved make Automatic liquid level controller 6A.as per instruction of Engineer in charge on site complete with wiring connection with existing wires , with copper conductor from pump to upper and lower tank.	Each	
180	Providing and fixing C.I. cover without frame for OHT & UGT of size 0.60M x 0.45M having weight not less than 45 kgs.	RMT	
181	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 20 mm Nominal size) complete as per design.	Each	

182	Providing and fixing G.I. rain water spout of 50mm dia. And 30cm length	Each	
183	Providing and fixing on ceiling and wall unplasticised Rigid PVC SWR Ring Fit Pipes as per IS : 13592 Type A, including rubber rings, leaving 10 mm gap for thermal expansion for the following diameter of pipes, Make: Astral / Supreme or Equivalent. (A) 110mm diameter	RMT	
184	Supplying & erecting approved make motor control cubical panel (Direct - on - line) made from 16 G. CRCA sheet duly epoxy powder painted inside and outside with hinged doors and locking, arrangement consisting of suitable size of ON- OFF isolator (AC - 3/23duty) main fuses, single phasing preventer, indicating lamps for R- Y - B phases, overload relay, Automatic water level controller, Ammeter, Voltmeter each with two way selector switch incoming, wires duly socket crimped, main contactor & overload relay, start - stop push buttons, to be erected on angle iron frame grouted on wall as directed. The isolator, overload relay & contactors will be of L & T, Siemens or BCH make only. (a) DOL up to 5.0 H.P.	Each	
185	Providing & erecting open well horizontal mono block pump set with cast iron body, complete for three phase submersible motor having [D] For 5 HP 3 phase open well horizontal mono block pump set suitable for 1350 LPM to 310 LPM @ 10 to 42 Mtr head suitable for 50/65 mm dia delivery pipe. Cat.II	Each	
186	Providing and fixing S.W. Gully trap with C.I. grating brick masonry chamber & water tight C.I. cover with frame of 300 mm x 300 mm.size (inside) with standard weight. [I] Square mouth trap (A) 150 mm. x 100 mm. size P-type.	Each	
	Providing and laying (To level or slopes) and jointing reinforced concrete light duty Non-pressure pipes I.S Class NP2 of the following internal diameter with collars and butt ends prepared for collar joints including testing of joints complete. (B) 150 mm diameter.	RMT	
	Providing and laying (To level or slopes) and jointing reinforced concrete light duty Non-pressure pipes I.S Class NP2 of the following internal diameter with collars and butt ends prepared for collar joints including testing of joints complete. (C) 250 mm diameter.	RMT	
187	Constructing manhole with R.C.C top slab in 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 brick bats 40 to 50 mm nominal size) inside plastering 15 mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) finished with a floating coat of neat cement slurry and making channels in cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 stone aggregate 20 mm nominal size) finished smooth complete including curing & testing (I) Inside size 900 mm x 1200 mm and 1.50 meter deep including C.I cover with frame size 560 mm diameter total weight of cover and frame to be not less than 128 Kgs (Weight of cover 64 Kg & weight of frame 64 Kg) (A) with 230 mm thick walls of brick masonry using bricks having crushing strength not less than 35 Kg / Sqcm in cement mortar 1:5 (1 cement : 5 coarse sand) (1) A-type depth 0.90 meter for 150 mm diameter sewer.	Each	
188	Constructing manhole with R.C.C top slab in 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 brick bats 40 to 50 mm nominal size) inside plastering 15 mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) finished with a floating coat of neat cement slurry and making channels in cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 stone aggregate 20 mm nominal size) finished smooth complete including curing & testing (I) Inside size 900 mm x 1200 mm and 1.50 meter deep including C.I cover with frame size 560 mm diameter total weight of cover and frame to be not less than 128 Kgs (Weight of cover 64 Kg & weight of frame 64 Kg) (A) with 230 mm thick walls of brick masonry using bricks having crushing strength not less than 35 Kg / Sqcm in cement mortar 1:5 (1 cement : 5 coarse sand) (2) B-type depth 1.50 meter for 150 mm diameter sewer.	Each	

189	Extra rate for constructing B.B masonry for every additional depth 0.10 meter or part thereof over item 24.27 (I) for depth from 0.90 meter to 1.50 meter.	Each	
190	Extra rate for constructing B.B masonry for every additional depth 0.10 meter or part thereof over item 24.27 (II) for depth from 1.50 meter to 2.25 meter.	Each	
191	Providing and fixing iron steps of size 500 mm x 150 mm x 22.5 mm and painting with two coats of anticorrosive paint etc. complete.	Each	
192	Providing and erecting at site of work, steel ventilating column of 150mm Internal Diameter and 12.20M height from ground level to bottom of top grill including C.I. grill and base plate, bolts and nuts etc. and excavation of foundation of size 120cm x 120cm x 165cm and filling the pit with first layer of cement concrete of 1:3:6 mix (1 part cement: 3 parts coarse sand: 6 parts graded stone aggregate 20mm nominal size) of 120cm x 120cm x 90cm and remianing pit with BBC 1:3:6 mix (1-cement: 3-coarse sand: 6-brick bats 40 - 50mm size) and providing fillet in cement concrete 1:2:4 mix (1-cement: 2-coarse sand: 4- graded stone aggregate 20mm nominal size) at G.L. and three coats of silver paint etc. complete (up to 10 tons)	Each	
193	“Boring of 200 mm diameter bore & sinking up to 200 mtr depth, Charges for electro logging for tube well, Charges for mud cutting & disposal by Tanker day to day from the site without staking at site, Charges for Cement sealing work if required, Providing, Laying. Testing & Commissioning of 150 mm dia NB MS ERW pipes having minimum 5mm thickness with square face & chaplas confirming to IS-4270 Size: 150mm dia, 150mm Johnson filtration make continuous slotted strainer pipe having minimum tensile strength 18mt collapsible strength: 3 kg/sq. cm in slot opening of 1mm slot opening, 150mm Johnson filtration make continuous slotted strainer pipe having minimum tensile strength 18mt collapsible strength : 3 kg/ sq. cm. in slot opening of 1.5mm slot opening, Cost of bail plug 150 mm dia x 5 mm minimum wall thickness x 5 mt. length with welded cone at the bottom with 55 mm length x 1.5 mm width 2900 Nos. Slot in 3 mt. length of bail plug at the bottom, 150 mm dia. Well cap as per requirement, Supplying, washing and shrouding with approved gravel, the annular gap between the casing pipe and the remaining annular space to be filled in with puddle clay (for which no measurement will be taken and paid for),Washing and developing the tube well with the air compressor and furnishing yield test by continuous pumping with air compressor for minimum 4 hours till the availability of sand free clear water or as specified, Including cost of fuel and necessary equipment, Supplying, installing and connecting on site suitable approved make flat type cable for above submersible pump with P.V.C. clamps at every 1.5 m. distance etc. complete as per approved sample and as directed Providing of 50mm dia UPVC heavy quality column pipe, as per IS 12818-2000 with all fittings, coupler & wire lock Supply of following size of TOP & BOTTOM accessories i.e. adaptor set (CI) long, pump guard set, starter pipe rubber ring for submersible pump & UPVC column pipe as directed by Engineer - in – charge with necessary plumbing as required, Providing & fixing of sluice valve as per tender specification”	Nos.	
194	Providing, & fixing Bore well submersible pump-motor set for bore of 100mm dia having suitable for 10HP , 3 Phase, 415 V, 50 Hz. motor having following discharge capacity. The pump shall be operated at 2900 RPM. The scope shall also include all required accessories viz. strainer, foot valve, level guard, delivery pressure guage, Standard double length flat submersible cable, float with control cable etc. as per sncifications and data sheet Capacity: 120 to 125 l PM Head : 155 to 120m	Nos.	

195	RISER PUMP :- Supply, installation, testing & commissioning of submersible pumps directly coupled with the motor with SS casing, SS impeller, SS shaft and driven by 415 V AC, 3 phase, 50 Hz.motor running at 2900 RPM speed and shall be supplied with all accessories viz. strainer / foot valve, base plate, coupling, etc.complete. The scope shall also include suction & delivery piping & valves, Auto level sensor base operation system including cableing, starter panel etc comp.(Groundfos make)Capacity : 10cu. Rmt/ hr. (1 working +1 stand by system. Head : 40 MTRS	Nos.	
	Irrigation		
196	Piping Network Providing of PVC pipes (IS:4985- 88), and fittings & Accessories like tees, elbows, bends, junctions, Reducers etc; as required/directed at site a) PVC Pipe 4" Sch 40 b) PVC Pipe 3" Sch 40 c) PVC Pipe 2.5" Sch 40 d) PVC Pipe 75mm x 10kg/cm2 e) PVC Pipe 63mm x 10kg/cm2 f) PVC Pipe 040mm x 10 kg/cm2 g) PVC Pipe 2" Sch 40 h) PVC Pipe Sch 40 1" i) RCC Hume Pipe Half Round 3" to 6"	Mtr	
197	Providing of Non-Potable Water Marked Rotary or Spray Pop-up sprinkler 4" (5 to 7 Mtr Radius) with Check Valve, Wiper Seal, Flow Shield complete with required nozzle	Nos	
198	Providing of Swing Joint 1/2" with PP Clamp Saddle with Chromed Nut Bolt & Nitrile Rubber Gasket	Nos	
199	Providing INLINE Drip Pressure Compensating 16mm 18" Spaced 2 to 3.5 LPH, 4 Bar Pressure Rating, 1.2mm Thickness, Brown Color	Mtr	
200	17mm Insert Fittings - Brown Color - Take Off, Elbow,Tees, End Cap	Set	
201	9" Long Lateral Hold Stake - MS Gavanized	Nos	
202	Providing of 16 mm - 4 Bar Pressure Rating, 1.2mm Thickness, LEED Compliance, Brown Color, PE pipe -together with all required accessories.	Mtr	
203	Valves Providing of Various Valves with required Fittings & Tapping PP Clamp Saddles with Chromed Nut Bolt & Nitrile Rubber Ring a) Master Valve Diapharm <u>Solenoid Valve Flanged 110mm (4)" PN 10</u> Solenoid Valve Flanged 110mm (3)" PN 10 Solenoid Valve Flanged 110mm (2)" PN 10 Solenoid Valve Flanged 110mm (1.5)" PN 10 b) PVC Ball Valve 63mm PN 16 c) 1" Double Acting Air cum Vacum Release Valve with GM Valve d) Lockable Quick Coupling Hydrant valve 1" with Four Sets of Key & Swivel Elbow e) Rectangular Valve Box 12' f) Round Valve Box 7" g) Water Meter 4" h) Non Return Valve 4" i) Round Valve Box 10" j) PVC Ball Valve 90mm k) PVC Ball Valve 75mm l) PVC Butter Fly Valve 4"	Nos	

204	Automation Providing Automation Items for Irrigation with all its required accessories. a) Irrigation Controller 8 to 48 Station, Out Dorr, 230 VAC Unit, Capable of running 4 <u>Independent Programs with Power Back up in Lithium Coin-Cell Battery</u> B) 2" Solenoid Valve - 2" BSP Female Threaded, Pressure - 1 to 10 Bar c) Double Seathed Direct Barrier Irrigation Automation Cable 1.5 Sq.MM Black d) Voltage Stabilizer 1 Kva e) Voltage Stabilizer 25 Kva Weather Proof Cable Connection DBY	Set	
205	Valve - Pressure Regulating	Nos	
206	Filteration Unit Providing Fully Automatic Self Cleaning Filter, Pressure Differential Based, 80/110 Micron, Flanged End & all required Accessories a) <u>Screen Filter Self Cleaning 3" - 40m3</u>	Nos	
	b) Header Assembly 4" / 6" for Each Filter & Pump suction Made of Galvanized Pipes or PVC Sch 80 Pipe Fittings	Nos	
	c) Glycerene Filled Pressure Gauge 2" Dia	Nos	
207	Pump Station - Providing, of VFD Based Pump Station giving flow of 9 lps at 35 m head complete Set (2 working + 1 stand By) with Pressure Tank, Panel & all required accessories.	Set	
208	Excavating, Laying, Jointing & Commissioning PVC Pipes from 250mm OD to 25mm OD, Trench Size minimum 600mm Deep for Main Lines, 300mm to 450mm Deep for Submain Lines, Backfilling with compaction and removing excess soil up to 50m Lead from site. Includes Installation & Commissioning of all Irrigation hardwares like Sprinklers, Dripper, Drip Lines, Valves, Saddles, Swing Joints, Valve Boxes, Filter Unit & Automation Items Complete as per drawing, specifications, instruction & directions of the Engineer-in-charge.	Mtr	
209	Providing & Fixing Suitable Thrust Block for Main Line at Bend, Tee etc.	Nos	
210	Operation & Maintenance of Irrigation System Daily Operation of Irrigation System by using Automation, Routine Check up of Pump Station, Cleaning of Screen Filter, Checking Cable Connection, Valves & Servicing them as per requirement. Attending minor repair works as & when required. Maintaining Daily Log sheet <u>provided</u>	Months	
211	SITC of Gear Drive Pop up Sprinkler 8-12 meter Radius Rotor with Check Valve of Rain Bird / Toro make	Nos	
212	SITC of Spray Pop Up Sprinkler 3 to 5 Meter Radius of Rain Bird / Toro make	Nos	
213	SITC of Swing Joing 3/4" of Rain Bird/Toro make	Nos	
214	SITC of Swing Joint 1/2" of Rain Bird/Toro make	Nos	
215	SITC of PP Clamp Saddle 3/4" PN 16 of Astore/Cepex make	Nos	
216	SITC of PP Clamp Saddle 1/2" PN 16 of Astore/Cepex make	Nos	
217	Bore well - Inclusive of Drilling , Developing , Providing Casing Pipe , Pump, cable , Panel , Column Pipe etc. a complete borewell construction job a) Casing Pipe 8" Dia using MS / PVC Deep Well Pipe - Plain & Ribbed Screen b) Column Pipe 4" Galvanized or uPVC Pipe	Meter	
	c) Submersible Pump V6 having discharge of 9 LPS @ 140 Mtr Head with Auto Level Panel with Centrifugal Separator / Filter of 40m3	Nos	
	d) Pilot Drilling of 20" Dia, making of Pit, Gravel Providing & Packing, Lowering of Pipes, Compressor development using Top line Air Line, Lowering of Pump, Cable, Fixing of Auto Level Panel & other civil work	Job	
	e) Hot Deep Galvanised with Powder coated Header for Distribution 4" including all required Fittings to connect with Valves on Water Supply Main Line	Nos	

	f) Dewatering Pump 4" Outlet, MOC – CI Pump Flow – 10 lps @ 12 m with Dischrgre Line 4" & Valves	Nos	
218	DWC / PE Crossing Sleeve Pipes 6"	Meter	
219	DWC / PE Crossing Sleeve Pipes 4"	Meter	
220	DWC / PE Crossing Sleeve Pipes 3"	Meter	
221	Piping Network Providing of PVC pipes (ASTM STANDARD), and fittings & Accessories like tees, elbows, bends, junctions, Reducers with support claim at existing structure etc; as required/directed at site a) PVC Pipe 1.5" Sch 40 b) PVC Pipe 1"" Sch 40 c) LLDPE 16MM X 4KG/CM2 PVC 110 mm x 6 Kg/cm2 PVC 90 mm x 6 Kg/cm2 PVC 75 mm x 6 Kg/cm2 PVC 63 mm x 6 Kg/cm2	Mtr	
	a) PVC Pipe 1.5" Sch 40	Mtr	
	b) PVC Pipe 1"" Sch 40	Mtr	
	c) LLDPE 16MM X 4KG/CM2	mtr	
	PVC 110 mm x 6 Kg/cm2	mtr	
	PVC 90 mm x 6 Kg/cm2	mtr	
	PVC 75 mm x 6 Kg/cm2	mtr	
	PVC 63 mm x 6 Kg/cm2	mtr	
222	Providing of Fogger above hieght 2to8 mtr with support clamp/ wire with 28 LPH discharge at 4kg/cm2 pressure , spray pattern must be in mist form with Check Valve, wight block etc as per required/directed by engineer	Nos	
223	Providing Pump with pressure switch , tank, & complete header with valve assembly with 1.5 LPS flow & 45 Mtr Head with accessories	L.S	
224	Providing Disc type Filter of 7M3/hr flow with assembly PN -10 with accessories	Nos	
225	Providing of Time Base Controller with neccesory arrangement as per require/directed at site	Nos	
226	Valves Providing of Various Valves with required Fittings & Tapping PP Clamp Saddles with Chromed Nut Bolt & Nitrile Rubber Ring a) Diapharm Solenoid Valve Elanged 1" PN 10 b) PVC Ball Valve 1" PN 16 c) 1" Double Acting Air cum Vacum Release Valve with GM Valve e) Rectangular Valve Box 12' f) Round Valve Box 7" g) Water Meter 1" h) Non Return Valve 1.5"	Nos	
	a) Diapharm Solenoid Valve Elanged 1" PN 10	Nos	
	b) PVC Ball Valve 1" PN 16	Nos	
	c) 1" Double Acting Air cum Vacum Release Valve with GM Valve	Nos	
	e) Rectangular Valve Box 12'	Nos	
	f) Round Valve Box 7"	Nos	
	g) Water Meter 1"	Nos	
	h) Non Return Valve 1.5"	Nos	
227	Excavating, Laying, Joiting & Commissioning PVC Pipes from 50mm OD to 25mm OD, Trench Size minimum 600mm Deep for Main Lines, 300mm to 450mm Deep for Submain Lines, Backfilling with compaction and removing excess soil up to 50m Lead from site. Includes Installation & Commissioing of all Items Complete as per drawing, specifications, instruction & directions of the Engineer-in-charge	Mtr	
228	Providing & fixing PVC Floor Trap OR multi floor trap of 75mm dia diameter, with necessary distance piece of 75mm dia pipe and 150 * 150 mm grating,making necessary SLAB/WALL holes and cutting wall,etc comlete.(Supreme /Finolex/Prince/Astral Makes)		
	110 mm x 75 mm	Nos.	
	110 mm x 50 mm	Nos.	
	110 mm x 110 mm	Nos.	
	Horticulture		
229	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-incharge. All kinds of soil	cums	

230	Maintenance of lawn including plants with water for Eighty Four Months including weeding, hoeing, watering, pruning application of insecticides, fungicides , disposal of garden rubbish and solid waste from the premises to be approved municipal dumping ground, replacing casualty of plants (occurred due to any reason provided by srfdcl). All the equipments required for maintenance shall be arranged by the contractor. Cost of material including replacing casualty of Plants for Civil, Elec., Irrigation and Horticulture work including Plan Supply will be paid Extra as per Annexure.	Sqms/ Month	
231	Disposal of moorum/building rubbish/ malba/ similar unserviceable, dismantled or waste material by mechanical transport including loading, transporting, unloading to approved municipal dumping ground for lead upto 10 km for all lifts, complete as per directions of Engineer-in-charge.	cums	
232	Garden Soil supply The good quality garden soil shall be obtained from outside which can be useful for all plants. Laying of soil shall be done in proper slope as mentioned in drawing including watering, compacting and dressing etc. complete, as directed in specifications and by officer in charge.	cums	
233	Providing barick bat chharoo material in location as directed by engineer in charge.	cums	
234	Supplying of seasonal Seedlings of below mention varieties in 104 to 42 Cavity Tray the same as instruction of site incharge. Like- Aster, Antirhinium, Verbena, Petunia, Dianthus, Gazeonia, Gallardia and etc seasonal variety.	Nos.	
235	Supplying of seasonal plants of below mention varieties in 12 to 25 cm bag size the same as instruction of site incharge.Like- Aster, Antirhinium, Verbena, Petunia, Dianthus, Gazeonia, Gallardia and etc seasonal variety.	Nos.	
236	Supplying of seasonal plants of below mention varieties in 12 to 25 cm pot the same as instruction of site incharge. Like- Dahalia, Gerbera, Girenum, Impetion Hybrid, Calenchoe, Pentas Super, Holyhok etc. vareity	Nos.	
237	Supplying of seasonal plants of below mention varieties in 12 to 25 cm pot the same as instruction of site incharge. Like- chrysanthemum Pemba Imported, chrysanthemum Multi Flora, Poinsettia, Anthurium, Fire Ball, Liliium etc. variety	Nos.	
238	Supplying of seasonal Seedlings of below mention varieties in 104 to 42 Cavity Tray the same as instruction of site incharge. chrysanthemum Pemba Imported, chrysanthemum Multi Flora	Nos.	
239	Supplying of seasonal Seedlings of below mention varieties in 104 to 42 Cavity Tray the same as instruction of site incharge. Poinsettia, Gerbera	Nos.	
240	Providing 60% shade Agro net	smt	
241	Supply saplings of Palm bag size 100 to 150 cm, well branched, well established & free from disease at site as per the instructions. Date Palm	Nos.	
242	Supply of all type of Palm like Bismarkiya Palm & Washingtonia palm and other Palms bag size is 46 to 76 cm and having height minimum 6 to 12 ft. well branched, well established & free from disease at site as per the instructions.	nos	
243	Supply of All type of Big Tree variety, red machera, hybrid Champa and other variety, big Bamboos, ficus, bougainvillea and other plants variety in bag size of 46 to 76 cm, 8' to 15' height, well branched, well established & free from disease at site as per the instructions	Nos	
244	Supply saplings of bag size 35 to 55, well branched, well established & free from disease at site as per the instructions. Like- Nolina sp., Adenium grafted etc. vareity	Nos.	

245	Carpet Lawn : Bermuda dibbling/ Paspalum and other - earth to be spread on graded surface upto a depth of 75 mm and mixed with sand & manure to attain a total depth of 100 mm from the graded surface. Surface preparation by digging and mixing to attain a smooth finished surface and planting grass turf species. Rate to include supply of grass species, planting of rooted grass slips and other Lawns (Rate does not include supply of garden soil , sand and manure. This is to be separately quoted).	Sqms	
246	Planting: Pits of size 600 mm x 600 mm x 600 mm filled with a mixture of garden soil, manure and sand in the ratio of 3:1:1. Rate should include charges for : labour charges for pitting, mixing soil media, filling the pits with soil media, planting the sapling. Rate does not include supply of soil media.	Nos	
247	Planting: Pits of size 200 mm x 200 mm x 200 mm filled with a mixture of garden soil, manure and sand in the ratio of 3:1:1. Rate should include charges for : labour charges for pitting, mixing soil media, filling the pits with soil media, planting the sapling. Rate does not include supply of soil media.	Nos	
248	Supply of Exotic and Endangered Medicinal Plants like Insulin plant, zer kochalu and other plants having height of minimum 3.00 to 5.00 ft. and bag size is 30cm to 40 cm, well branched, well established & free from disease at site as per the instructions.	Nos	
249	Supply of Bougainvillea Glabra, Bougainvillea torch glory, Bougainvillea Formosa and other Bougainvillia and other variety Plants like jasud, exora, ticoma, tarpeta, chandani, tagar and other flowering shrub plants with well branched, well established & free from disease at site as per the instructions height of minimum 3.00 to 6.0 ft bag size is 30 cm to 46 cm,	Nos	
250	Spreading of all type of good soil, manure, chharoo etc. earth material in the required proportion specified or directed by the Officer-in-charge	Cumt	
251	supply of greenmoss	Kg	
252	supply of jivamrut	Lit	
253	Cocopeat	kg.	
254	vermi compost (30kg bag)	bag	
Electrical			
255	MAINS : (not for Point wiring) Supplying and Laying of mains with Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V with earth wires of Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in Suitable dia rigid PVC Pipe of Heavy Gauge (Scope Also includes Supply of with.) Supply & Laying of 1.5 sq mm x 3 core round flexible wire in Prelaid pipe / Raceway.	Rmt.	
256	Supply & Laying of 2.5 sq mm x 3 core round flexible wires in Prelaid pipe / Raceway.	Rmt.	
257	sitc 6 to 32 A SP MCB	nos	
258	Supply, Installation, Testing, Laying, Commissioning of following 1100 volt grade XLPE insulated PVC sheathed aluminum / Copper conductor armored cables as per (IS:7098)(I)-88 ISI marked & specification in trenches, cable trays, ducts, over bed of sand, clamped to wall with suitable clamps including, saddles fixing bolts, connecting testing and commissioning with identification tags at every 10 mtr. & Both ends. with All the fixing accessories, excavation Back filling & Cable protection with Bricks as per the drawing (If required). 10 sq.mm x 4 c Al. XLPE Arm. Cable	Rmt.	
259	SupplyiSITC of Cable end termination of the following XLPE insulated PVC sheathed aluminum/copper conductor armored cables of 1100 volt grade including supplying and fixing of bimetallic Long neck crimping lugs, Brass glands with earthing. 10 sq.mm x 4 c Al. cable	mtr	

260	Light Fixtures & Fans SITC of LED Post Top with a system lumen output of 2200 lumens and a minimum system efficacy of 55 to 60 lm/W. The luminaire shall have a rated system lifetime of 25,000 burning hours at L70. The luminaire should have a color temperature of 4000K and CRI > 70. The luminaire shall meet IP65 with THD < 20% and PF > 0.9. The luminaire shall have closed diffused optics with polycarbonate diffuser board. The total power consumption should not exceed 40 to 45W (including driver). of Suveg, Philips , Crompton make	nos	
261	SITC of led floodlighting luminaire capable of changing color in the entire RGBW spectrum. Luminaire should have dedicated floodlighting optics with beam option of 15,30,45 and 60degree.Light output should be atleast 3500 lumens with all systems on. Luminaire should have led life of 30000 hrs burning hoursat 70% lumen maintenance. It should be capable of working on power supply from power supplies data enable pro and should be capable of operating on line voltage. Wattage consumption should be 144w at maximum output. Luminaire should be controllable by DMX controllers. Luminaire should be IP 65protected and it should UL/cul.FCCclasss A, CE, PSE certified. KREIOS of Osram Make/ Philips /Lumenpulse make/Griven make	nos	
262	SITC of DMX Stand Alone Controller of OSRAM make EASY DMX 16x4 SO. Scope also includes the Designing and Programming of the same as per clients requirement. Or Lumenpulse make / Ecosense make / Griven make Scope also includes the Designing and <u>Programming of the same as per clients requirement</u>	nos	
263	SITC of led floodlighting luminaire capable of giving uniform lighting over the period of luminaire. Luminaire should have dedicated floodlighting optics with beam option of 15x15,60x60,20x130 degree.Light output should be atleast 10000 lumens with all systems on. Luminaire should have led life of 50000hrs burning hours at 70% lumen maintenance. It should be capable of working on power supply from power supplies and should be capable of operating on line voltage. Wattage consumption should be 100w at maximum output.. Luminaire should be IP 65 protected and it should UL/cul.FCCclasss A, CE, PSE certified. OLUX LED Flood Osram/Philips /Lumenpulse/Griven.	nos	
264	Earthing Providing and laying of following tined copper / GI plate electrode, with 2 Nos 50 x 6 mm copper strips from earth plate electrode to inspection chamber, 50 mm dia medium class GI pipe, CI funnel with 20 gauge GI wire mesh, masonry chamber 1000 x 500 mm with concrete base C I heavy duty / chequered plate manhole cover with frame painted with bitumastic paint and packing with mixture of charcoal and common salt around plate electrode including digging of pit up to permanent moisture level and as per soil condition but not less than 3 meters and back filling as required. 600 x 600 x 3.15 mm cu.plate	nos	
	25 x 3 mm cu. Tape	mtr	
265	PVC & HDPE Conduits Supply & laying of 25 mm dia. rigid PVC conduit of 2.0-2.2 mm thick heavy gauge with all accessories.	mtr	

266	<p>Street Light Poles Supply of GRP / FRP Pole having following specifications: GRP Light Pole made by CNC filament winding machine using thermoset resin polyester/epoxy resin system) having minimum 62% glass content. The pole should be in one piece and tapered round in shape, having smooth finish and should be totally free from corrosion as well as non conductive & shock proof Pole should be provided with FRP Anchor Base and it should be heavy duty, or MS Material duly painted with Epoxy paint.Pole should be flame retardant as per IS 6746. Resin used shall be UV resistance and pigmented. Deflection of the pole shall not exceed more than 10% of the length of pole for the given loadâ€œ? Pole should be generally made as per the dimensional data, performance criteria and some interchangeability features of poles as per standard ANSI C 136.20 latest version or ASTM D 4923/01 . The size of pole and type of installation are as below .(1) Suitable for base plate mounting single arm Bracket.[D] Overall length of 4 Mtr. Average Thickness: 7mm. Top/ Bottom OD Dia A/F 89/145 mm ± 2mm approx. Approx. Weight of Pole 19 kg approx. (Without Base) Anchor Base (Size 250X250 & 12mm th.) 1) 4 way connector and 6A MCB 2) 50 mm diameter DWC pipe for each cable entry. Pipe length is up to 3.5 mtr. Per cable 3) Wiring up to the light fixture from the junction box using 3core x 1.5 sq.mm. flexible copper wires / Fixture of specified make.</p> <p>4) M20 - Concrete coping with Reinforcement with foundation bolt with base plate with stiffener. 5) Spiral/Coil Type Earthing from the 8 swg Cu. Wire of 2.5 mtr. With the suitable size pipe with clamps and painting. 6) Radium strip of two color at suitable height & Pole Numbering as per Client</p> <p>/ Consultant's instruction 7) Excavation & back filling for erection of poles. Debris to be removed from the site to suitable location as per the instruction of the engineer in charge 8) Foundation with Foundation bolt as</p>	nos
267	<p>Supply of GRP / FRP Pole having following specifications: GRP Light Pole made by CNC filament winding machine using thermoset resin polyester/epoxy resin system) having minimum 62% glass content. The pole should be in one piece and tapered round in shape, having smooth finish and should be totally free from corrosion as well as non conductive & shock proof Pole should be provided with FRP Anchor Base and it should be heavy duty, or MS Material duly painted with Epoxy paint.Pole should be flame retardant as per IS 6746. Resin used shall be UV resistance and pigmented. A highly weather resistant polyurethane coating shall be applied to the pole after applying suitable primer system that ensures proper adhesion of the paint. Minimum coating thickness shall be 80 to 100 micron. Deflection of the pole shall not exceed more than 10% of the length of pole for the given loadâ€œ? Pole should be generally made as per the dimensional data, performance criteria and some interchangeability features of poles as per standard ANSI C 136.20 latest version or ASTM D 4923/01 . The size of pole and type of installation are as below .(1) Suitable for base plate mounting single arm Bracket.[D] Overall length of 6 Mtr. Average Thickness: 7mm. Top/ Bottom OD Dia A/F 89/145 mm ± 2mm approx. Approx. Weight of Pole 19 kg approx. (Without Base) Anchor Base (Size 300X300 & 18mm th.) 1) 4 way connector and 6A MCB</p> <p>2) 50 mm diameter DWC pipe for each cable entry. Pipe length is up to 3.5 mtr. Per cable 3) Wiring up to the light fixture from the junction box using 3core x 1.5 sq.mm. flexible copper wires / Fixture of specified make. 4) M20 - Concrete coping with Reinforcement with foundation bolt with base plate with stiffener. 5) Spiral/Coil Type Earthing from the 8 swg Cu. Wire of 2.5 mtr. With the suitable size pipe with clamps and painting. 6) Radium strip of two color at suitable height & Pole Numbering as per Client / Consultant's instruction 7) Excavation & back filling for erection of poles.</p>	nos
268	Debris to be removed from the site to suitable location as per the instruction of the engineer in charge 8) Foundation with Foundation bolt as per typical detail	

	At P.R. of 70%	nos	
	At P.R. of 30%	nos	
269	Supply & installation of 8 Mtr high G.I. decorative Octagonal 8.0 mtr height above the ground level having top 70.0mm O.D. & bottom 190.0mm O.D. with avg. thickness of 3.0mm. The column shall also be provided with flush door at the bottom with proper strengthening to the cutout of the door opening. A junction/ looping box with 32 Amps heavy duty connector shall be built into the pole. street light pole with Single Arm Bracket / arrangement for the top mounting fixture as per drawing. 1) 4 way connector and 6A MCB 2) 50 mm diameter DWC pipe for each cable entry. Pipe length is up to 3.5 mtr. Per cable 3) Wiring up to the light fixture from the junction box using 3core x 1.5 sq.mm. flexible copper wires / Fixture of specified make. 4) Spiral/Coil Type Earthing from the 8 swg Cu. Wire of 2.5 mtr. With the suitable size pipe with clamps and painting. 5) Radium strip of two color at suitable height & Pole Numbering as per Client / Consultant's instruction 6) Foundation with Foundation bolt as per typical detail	nos	
270	SITC of the lighting panel for the Street Lighting Consisting of following Incoming : 100 Amp FP MCCB	nos	
271	Miscellaneous Providing & laying. Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II) Anti Rodent type with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and backfilling the same to make ground as per original. Scope also includes the damaged finish of the Road to be done and making ground as per original. <u>150 mm dia</u>	Rmt.	
272	Providing & laying. Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II) Anti Rodent type with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and backfilling the same to make ground as per original. Scope also includes the damaged finish of the Road to be done and making ground as per original. (B)90 mm dia	Rmt.	
273	Supplying , fabricating and installation of various sizes MS race way / junction boxes/clamps/hangers for Cable Tray, Light Fixture made out of specified size sheet/Angle/Flat/rod/ channel etc as per design with all necessary accessories like bend, junction boxes, coupler, Anchor fastener, Bolt Nuts, etc.. & work from MS structure for other work with anchor fastener of Hilti make and necessary hardware with necessary welding has to be done to complete the job from ISA / ISMC / PLATE. The job also includes to paint the structure with two coats of red oxide and two coats color of enamel paint as approved and recommended by consultant. Complete in all respect to be installed at any height with all necessary arrangements. Contractor has to complete the work up to satisfaction of Consultant	kg	
274	Cable Trench Making trench in soft soil of suitable width of 90 cms deep for laying cable or locating the fault all over the run and backfilling the same and making the surface proper. Providing and erecting iron clad cable route marker duly marked with ELE.CABLE of size 23 cms.X 12 cms. Flushed with ground in cement foundation as directed by Engineer in charge. <u>The width shall be as per requirement</u>	mtr	
275	P.A. System SITC of Garden Speaker with Rated Input 30 W (100 V line), 15 W (70 V line), Rated Impedance 100 V line: 330 Ω (30 W), 70 V line: 330 Ω (15 W), Sensitivity: 87 dB (1 W, 1 m), GS 302 Frequency Response 100 Hz - 8k Hz, Speaker Component: 12 cm splash-proof cone-type, Water Capability: Equivalent to IPX4 Input Terminal: Push-in terminal, Operating Temperature: -10 °C to +50 °C (14 F to 122 F). Make: TOA/ NEXO / NILES / Quest / Soundtube / Sonodyne Scope also includes the supply of IP68 Junction box, poor anchor anchor for cable termination	nos	

276	SITC of third largest amplifier in the C Series family, delivering an impressive 4 x 1200 W at 4 ohms. The exceptional power output plus a long list of protection and monitoring features are all packed into a 2U chassis, Total output of 4800 W (4 ohms) in a 2U cabinet, C Series 48:4 Four channels “ All channels bridgeable for 2- or 3-channel configurations, Lo-Z or Hi-Z (70 V / 100 V) “ Selectable per channel, normal or bridged, Patented Class TD® amplifier topology, Voltage Peak Limiter (VPL) “ Configurable per channel to optimize each output for connected loads, , THD 20 Hz - 20 kHz at 1 W <0.1%, THD at 1 kHz and 1 dB below clipping <0.05%, Signal to Noise Ratio >112 dBA, Channel separation (Crosstalk) at 1 kHz >70 dB, Frequency response (1 W into 8 ohms) +0 / -3 dB 6.8 Hz - 34 kHz, Input impedance 20 kOhm, Common Mode Rejection (CMR) >50 dB, 20 Hz - 20 kHz, Output impedance @ 100 Hz 30 mOhm, Phoenix-type input connectors, Screw terminal output connectors Make: Lab Grouppen / Camco / Nexo / Quest / Australian Monitor	nos	
277	SITC of multifunctional amplifier with Rated Output: 360 W, Frequency Response: 50 Hz - 20 kHz, ±3 dB , Distortion: 0.7 % or less , S/N Ratio: 85 dB or more, Audio Input/Output Characteristic: Sampling frequency: 48 kHz , A/D D/A converter: 24 bit, Input:- 50 dB (MIC)/-10 dB (LINE) , 600 Ω, VM 3360 Output: Max. (360 W) per output, Emergency Control, Network I/F, RM Link, VM Link, ATT Control: Relay contact 1-6, 125 V AC or 30 V DC, total under 5 A, DC24V Output: 24 V DC, Maximum feeding current 0.3 A, Operating Temperature: -5 ° to +45 ° (23 °F to 113 °F). Make: TOA / NILES / Camco / Quest / Australian Monitor	nos	
278	SITC of Remote Microphone with Zone, group and call paging and satrting pre-recorded messages, Audio Output : 0 dB*, Gooseneck Microphone Unidirectional electret condenser, External Microphone Input : -40 dB*, 2.2 kΩ, unbalanced, mini jack, phantom powering, Distortion Under : 1%, RM-200M Frequency Response : 100 - 20,000 Hz, S/N Ratio : Over 60 dB, Internal Monitor Speaker : 200 mW, Power Source: 24 V DC (Operating range: 14 - 28 V DC). Make: TOA / NILES / Shure / Quest / Australian Monitor	nos	
279	SITC of Desk Mount Pagging microphone , Sleek, modern design fits todays high tech “ workstations, Dynamic microphone element with a 600 ohm balanced output, Prominent press-to-talk bar with convenient locking lever, Auxiliary switch contact for mute or relay circuits. Directivity: Unidirectional, cardioid pattern, Sensitivity (1 kHz) -58 dB*, Frequency Response PM 660U 100Hz-10kHz, Microphone Element Dynamic (moving coil), Impedance 600 ohm, balanced, CONTROLS: Push-To-Talk Bar, Auxiliary Switch Contact ,Locking Lever Locks push-to-talk bar in “œon“ position. Make: TOA / NILES / Shure / Quest / Australian Monitor	nos	
280	SITC of Multipurpose Mixer with 4 mic/line inputs, 2 with Class A FET high impedance inputs, Neutrik mic XLR, Neutrik 1/4 inch jacks, 3 band EQ with MusiQ, ZED-10FX: 1 pre-fade Aux send 1 FX send, Sound image pan, Illuminated PFL indicator, Stereo returns & playback, All inputs with level control. Make : Australian Monitor / Yamaha	nos	
281	SITC of of DVD / USB Player Make: Sony / Philips / Pioneer / Denon	nos	
282	SITC of 4 core 1.5 sq.mm. copper flexible Shielded armored cable in Existing pipe / PCC Make: Polycab / R.R cable / Mecab / Darshan plus / Flexible / Kraystal / Amata / Beldon / Cali Plast	nos	
283	SITC of of Water proof inter connectivity in amplifier and mixer Connectors clamp & Required Accessories for all the Speakers mounting in ground.	set	

284	SITC of CAT6 STP cable with armoured cable with digging Impedance: 100+15 Ohms Mutual Capacitance, Max. nf/1000 ft.: 17.1 DC Resistance, Max. Ohms/1000 ft.: 28.6 DC Resistance Unbalance of a pair: 5% Max. Capacitance Unbalance (Pair to Ground): 330pf/100m Max. Propagation Delay Skew: 25 nS/100M Normal Velocity of Propagation: Plenum FEP insulated 69%, Non-Plenum insulated 66% Make: Polycab / R.R cable / D-link / Audiotech	mtr	
285	SITC of 32U Rack with Patch Panel with Cisco 12 Port POE Gigabit Layer 2 Managed Switch with Patch panel & Patchcord , Power Panel complete in all respect. Make : Legrand / Delta / Alpine	set	
286	PointWiring Point wiring for Light / Bell with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (green) both are of ISI marked FRLS PVC insulated multistrand copper wires, in existing pipe duly erected complete with 6A Modular type switch / bell push & accessories and earth	Nos	
287	Point wiring for secondary light point with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (green) both are of	Nos	
288	Point wiring for FAN with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (green) both are of .	Nos	
289	One 6 A x 5 pin 250 Volt socket outlet point	Nos	
290	6 A x 5 pin 250 Volt switched socket outlet point at convenient location. (Plug & Switch can be together or at different location	Nos	
291	Wiring for the 250 volts single phase and neutral 16 amps switched socket outlet with 2.5 sq.mm FRLS flexible copper conductor 1100 volts grade wires of approved make in concealed	Nos	
292	Wiring for the Exhaust fan point with 1.5 sq.mm FRLS flexible copper conductor 1100 volts grade wires of approved make in concealed	Nos	
293	Wiring for the UPS / Comp. / Raw Power outlet with 2 nos. of 250 volts single phase and neutral 16 amps switched socket outlet with 2.5 sq.mm x 3 core FRLS flexible copper conductor 1100 volts grade wires of approved make in concealed	Nos	
294	Providing and erecting 1.6 - 1.8 mm thick FIA approved and ISI mark (embossed) RIGID PVC PIPES of following size complete erected with necessary PVC fittings & Junction boxes fixed with adhesive solution & Clamps with following type of erection. 2) For erecting concealed in RCC / Brick wall/slab along with continuous fish wire to draw mains, laid in approved manner with plastering by cement mortar & finishing the surface to match the wall/ceiling. Supply and laying of 25 mm rigid PVC pipe of 1.6-1.8 mm thickness	Rmt.	
	MAINS : (not for Point wiring) Supplying and Laying of mains with Cu. PVC insulated flexible wire with ISI and FIA approval for 650 V/ 1100 V with earth wires of Cu. PVC insulated flexible wires with ISI approval for 650 V/ 1100 V as earth wires to be drawn in Suitable dia rigid PVC Pipe of Heavy Gauge (Scope Also includes Supply of with.)		
295	Supplying and Laying of 4 nos. of 10 sq mm Cu. FRLS flexible wires with 2 nos 4 sqmm Cu. FRLS flexible wires to be drawn in 2 nos. of 40 mm dia Pipe	Rmt.	
296	Supplying and Laying of 4 nos. of 6 sq mm Cu. FRLS flexible wires with 2 nos 2.5 sqmm Cu. FRLS flexible wires to be drawn in 2 nos. of 40 mm dia Pipe	Rmt.	
297	Supplying and Laying of 2 nos. of 10 sq mm Cu. FRLS flexible wires with 1 nos 4 sqmm Cu. FRLS flexible wires to be drawn in 40 mm dia Pipe	Rmt.	
298	Supplying and Laying of 2 nos. of 6 sq mm Cu. FRLS flexible wires with 1 nos 2.5 sqmm Cu. FRLS flexible wires to be drawn in 40 mm dia Pipe	Rmt.	

299	Supplying and Laying of 2 nos. of 4 sq mm Cu. FRLS flexible wires with 1 nos 2.5 sqmm Cu. FRLS flexible wires to be drawn in 25 mm dia Pipe	Rmt.	
300	Supplying and Laying of 2 nos. of 2.5 sq mm Cu. FRLS flexible wires with 1 nos 1.5 sqmm Cu. FRLS flexible wires to be drawn in 25 mm dia Pipe	Rmt.	
301	Supplying and Laying of 2 nos. of 1.5 sq mm Cu. FRLS flexible wires with 1 nos 1.5 sqmm Cu. FRLS flexible wires to be drawn in 25 mm dia Pipe	Rmt.	
302	Supply & Laying of 1.5 sq mm x 3 core round flexible wire in Prelaid pipe / Raceway.	Rmt.	
303	Supply & Laying of 2.5 sq mm x 3 core round flexible wires in Prelaid pipe / Raceway.	Rmt.	
304	Supply & Laying of 4 sq mm x 4 core round flexible Cu wire	Rmt.	
305	Supply, Assembling, grouting, leveling Connecting & testing D.B of IP 43 of specified make. Distribution Board-VTPN	nos	
306	Supply,errecting 6-32A SP MCB	nos	
307	Supply, Erecting, testing and commissioning of only TPN D.B. PPI type with space for FPMCB as incoming and space for DPELMCB and 4 SPMCB as outgoing per phase (i.e. 8 way per phase D.B.) of Hensel Make KV9336M	Nos	
308	Supply, Erecting, testing and commissioning of SPN D.B. PPI type with space for DPELMCB as incoming and 4 SPMCB as outgoing per phase (i.e. 8 wav D.B.) of Hensel Make KV7109M	Nos	
	25 A DP ELMCB	Nos	
	25 A FP MCB	Nos	
309	125 Amp. MCCB (16 KA) with the Enclosure & Both Side Cable end Box with the Handle with Spreader Link with On off Indicating Lamp	Nos	
310	Cables : Supply, Installation, Testing, Laying, Commissioning of following 1100 volt grade XLPE insulated PVC sheathed aluminum / Copper conductor armored cables as per (IS:7098)(I)-88 ISI marked & specification in trenches, cable trays, ducts, over bed of sand, clamped to wall with suitable clamps including, saddles fixing bolts, connecting testing and commissioning with identification tags at every 10 mtr. & Both ends. with All the fixing accessories, excavation Back filling & Cable protection with Bricks as per the drawing (If required)		
	95 sq.mm x 3.5c Al. XLPE Arm. Cable	Rmt.	
	70 sq.mm x 3.5c Al. XLPE Arm. Cable	Rmt.	
	50 sq.mm x 3.5c Al. XLPE Arm. Cable	Rmt.	
	35 sq.mm x 3.5c Al. XLPE Arm. Cable	Rmt.	
	25 sq.mm x 4 c Al. XLPE Arm. Cable	Rmt.	
	16 sq.mm x 4 c Al. XLPE Arm. Cable	Rmt.	
	10 sq.mm x 4 c Al. XLPE Arm. Cable	Rmt.	
311	1 x 28 W type light fixture	nos	
312	48" dia Ceiling Fan	nos	
313	ITC of any kind of light fixture with all necessary	nos	
314	Earthing Providing and laying of following tined copper / GI plate electrode, with 2 Nos 50 x 6 mm copper strips from earth plate electrode to inspection chamber, 50 mm dia medium class GI pipe, CI funnel with 20 gauge GI wire mesh, masonry chamber 1000 x 500 mm with concrete base C I heavy duty / chequered plate manhole cover with frame painted with bitumastic paint and packing with mixture of charcoal and common salt around plate electrode including digging of pit up to permanent moisture level and as per soil condition but not less than 3 meters and back filling as required. 600 x 600 x 3.15 mm cu.plate	Rmt.	
	25 x 3 mm cu. Tape	Rmt.	

315	Street Light Poles -4mtr Supply of approved make GRP / FRP Pole having following specifications: GRP Light Pole made by CNC filament winding machine using thermoset resin polyester/epoxy resin system) having minimum 62% glass content. The pole should be in one piece and tapered round in shape, having smooth finish and should be totally free from corrosion as well as non conductive & shock proof Pole should be provided with FRP Anchor Base and it should be heavy duty, or MS Material duly painted with Epoxy paint.Pole should be flame retardant as per IS 6746. Resin used shall be UV resistance and pigmented. A highly weather resistant polyurethane coating shall be applied to the pole after applying suitable primer system that ensures proper adhesion of the paint. Minimum coating thickness shall be 80 to 100 micron. Deflection of the pole shall not exceed more than 10% of the length of pole for the given load"? Pole should be generally made as per the dimensional data, performance criteria and some interchangeability features of poles as per standard ANSI C 136.20 latest version or ASTM D 4923/01 . The size of pole and type of installation are as below .(1) Suitable for base plate mounting single arm Bracket.[D] Overall length of 4 Mtr. Average Thickness: 7mm. Top/ Bottom OD Dia A/F 89/145 mm ± 2mm approx. Approx. Weight of Pole 19 kg approx. (Without Base) Anchor Base (Size 250X250 & 12mm th.)	No.	
	AT.P.R. of 95%(Remaining)	No.	
316	SITC of the lighting panel for the Street Lighting Consisting of following Incoming : 63 Amp FP MCB with the spreader link with earth	No.	
317	SITC of the lighting panel for the Street Lighting Consisting of following Incoming : 250 Amp FP MCCB with the spreader link with earth leackage relay	Nos	
318	SITC of IP66 Water Tight Junction Box 167mm x 125mm x 82mm With necessary clamp for mounting of the J.B.	Nos	
319	Providing & laying. Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II) Anti Rodent type with necessary connecting accessories of same material at required depth for laying of cable. below ground / road surface for enclosing cable and backfilling the same to make ground as per original.		
	(A)50 mm dia	Rmt.	
	(B)90 mm dia	Rmt.	
	(C)120 mm dia.	Rmt.	
320	Construction of Brick masonry cahmber 600*600mm	Nos.	
321	Construction of Brick masonry cahmber 750*750mm	Nos.	
322	Construction of Brick masonry cahmber 1000*1000mm	Nos.	
323	Fountain		
	WATER FEATURE NO 1 MIST WATER FEATURE NOZZLES Supply of 3.5 mtr dia Stainless steel ring having 35 Nos Brass mist spray nozzles having 04 nos 50 mm inlet socket complete with flange joint as required.	No.	
	Supply of 2.5 mtr dia Stainless steel ring having 30 Nos Brass mist spray nozzles having 04 nos 50 mm inlet socket complete with flange joint as required.	No.	
	Supply of 1.5 mtr dia Stainless steel ring having 25 Nos Brass mist spray nozzles having 04 nos 50 mm inlet socket complete with flange joint as required.	No.	
	Supply of 1 mtr dia Stainless steel ring having 20 Nos Brass mist spray nozzles having 04 nos 50 mm inlet socket complete with flange joint as required.	No.	
	Supply of 50 mmABS Floor Inlet nozzles complete as required.	Nos.	
	Supply of Stainless Steel Overflow skimmer.	No.	

324	LIGHTS Supply of 24V DC, 6 x 3 W LED, (RGB)color under water luminary with wide beam super magnifying lense (MOC SS 304 Gr) Protection Index IP 68.	Nos.	
325	Supply of RGB Controllers for LED Lights.(DMX Type)	No.	
326	Supply of Slave Unit for RGB Controllers for LED Lights.(DMX Type)	Nos.	
327	Supply of Stainless Steel 304 Gr stands/ABS Casing for 6 X 3 watt LED light.	Nos.	
328	Supply of Waterproof joints.	Nos.	
329	Supply of constant voltage LED driver input AC 220-250 volts,output DC.	Nos.	
330	Supply of 304 Gr Stainless steel Debris collection strainer complete as required.	No.	
	PUMPS		
331	Supply of Monoblock Submersible pump set delivering 22.7 LPS @ 8 mtrs head ,suitable for operation on 415 Volts AC Supply complete as required.	Nos.	
332	Supply of Monoblock Submersible pump set delivering 1.9 LPS @ 14 Mtrs head ,suitable for operation on 220 Volts AC Supply complete as required.(For Filtration Unit)	No.	
	DOSING PUMP UNIT		
333	Supply of online Chlorine Dosing unit with mechanical connections complete as required.	Nos.	
	ELECTRICAL CONTROL PANNEL		
334	Supply of Cubical Control Panel made of 16 gauge CRC sheet powder coated with Starter, ,Single phase prevention, MCB, volt-meter, Amp meter, TP MCB's, Protection circuits etc and space for CVD for the lights	Set	
	MULTI MEDIA SAND FILTER		
335	Providing of FRP pressure High rate Sand Filter for filtration of suspended mtrl from water body complete with six position multiport valve for filter,backwash,rinse,waste ,recirculate and close all flow to pool the filter body manufactures in fibre glass with uV .resistance surface provided <u>with oil pressure during can pressure 2.5 Kg/sqcm filter dia 550 MM dia</u>	No.	
336	Supply of Silica sand for filter with granulometry between 0.4-0.8 mm.	Kg	
	UPVC PIPING		
337	Supply of uPVC pipes (10kg. Pressure) including accessories & fittings as required (Elbow, MTA, Endcap, Socket, Tee, Reducing Tee etc.) u PVC Pipe OD 63 (10 Kg/sq. cm.)	mtr	
	u PVC Pipe OD 110 (10 Kg/sq. cm.)	Mtrs	
338	SUPPLY OF VALVES WITH FITTINGS AS REQUIRED. Supply of 63 mm dia PVC Ball Valve complete as required.	Nos.	
339	Supply of 90 mm dia PVC/CI Body Butterfly Valve with matching flanges, nuts & Bolts,Rubber gasket etc complete as required.	No.	
340	Supply of 50 MM dia Non Return Valves with fittings complete as required.	Nos.	
341	Supply of 80 MM dia Non Return Valves with fittings complete as required.	Nos.	
	CABLE AND CONDUITING.		
342	Supply of double sheathed cables of various sizes including accessories etc required (PVC Conduit, PVC Bend, Steel wire, etc.) for final equipment connections with control panel. 3 X 6 Sqmm Flat Submersible Cable with conduit.(For Submersible Pumpset)	Mtrs	
	4 X 2.5 Sqmm double sheathed round flexible cable(Lights)	Jobs	
343	WATER FEATURE NO 3 BUBBLERS WIH OVERFLOW NOZZLES Supply of Flow Controlled Cascading jet nozzle with swivel connector for vertical alignment complete as required.	Nos.	
344	Supply of 7.9 mtr dia Stainless steel ring having 08 nos 25 mm outlet sockets and 50 mm 04 inlet socket complete with flange joint as required.	No.	
345	Supply of 50 mmABS Floor Inlet nozzles complete as required.	Nos.	
346	Supply of Stainless Steel Overflow skimmer.	No.	

347	LIGHTS Supply of 24V DC, 6 x 3 W LED, (RGB)color under water luminary with wide beam super magnifying lense (MOC SS 304 Gr) Protection Index IP 68. Supply of RGB Controllers for LED Lights.(DMX Type)	Nos. No.	
348	Supply of Slave Unit for RGB Controllers for LED Lights.(DMX Type)	Nos.	
349	Supply of Stainless Steel 304 Gr stands/ABS Casing for 6 X 3 watt LED light.	Nos.	
350	Supply of Waterproof joints.	Nos.	
351	Supply of constant voltage LED driver input AC 220-250 volts,output DC.	Nos.	
	PUMPS		
352	Supply of Monoblock Submersible pump set delivering 27 LPS @ 12 mtrs head ,suitable for operation on 415 Volts AC Supply complete as required.	Nos.	
353	Supply of Monoblock Submersible pump set delivering 1.9 LPS @ 14 Mtrs head ,suitable for operation on 220 Volts AC Supply complete as required.(For Filtration Unit)	No.	
354	DOSING PUMP UNIT Supply of online Chlorine Dosing unit with mechanical connections complete as required.	Nos.	
355	ELECTRICAL CONTROL PANNEL Supply of Cubical Control Panel made of 16 gauge CRC sheet powder coated with Starter, ,Single phase prevention, MCB, volt-meter, Amp meter, TP MCB's, Protection circuits etc and space for CVD for the lights.	Set	
356	MULTI MEDIA SAND FILTER Providing of FRP pressure High rate Sand Filter for filtration of suspended mtral from water body complete with six position multiport valve for filter,backwash,rinse,waste ,recirculate and close all flow to pool the filter body manufactures in fibre glass with uV .resistance surface provided with oil pressure gauge can pressure 2.5 Kg/sq.cm filter dia 550 MM dia	No.	
357	Supply of Silica sand for filter with granulometry between 0.4-0.8 mm.	Kg	
358	U PVC PIPING Supply of uPVC pipes (10kg. Pressure) including accessories & fittings as required (Elbow, MTA, Endcap, Socket, Tee, Reducing Tee etc.) u PVC Pipe OD 63 (10 Kg/sq. cm.)	mtr	
	u PVC Pipe OD 110 (10 Kg/sq. cm.)	Mtrs	
359	SUPPLY OF VALVES WITH FITTINGS AS REQUIRED. Supply of 63 mm dia PVC Ball Valve complete as required.	Nos.	
360	Supply of 110 mm dia PVC/CI Body Butterfly Valve with matching flanges, nuts & Bolts,Rubber gasket etc complete as required.	No.	
361	Supply of 50 MM dia Non Return Valves with fittings complete as required.	Nos.	
362	Supply of 100 MM dia Non Return Valves with fittings complete as required.	Nos.	
363	CABLE AND CONDUITING. Supply of double sheathed cables of various sizes including accessories etc required (PVC Conduit, PVC Bend, Steel wire, etc.) for final equipment connections with control panel. 3 X 6 Sqmm Flat Submersible Cable with conduit.(For Submersible Pumpset)	Mtrs	
	3 X 2.5 Sqmm Flat Submersible Cable with conduit.(For Submersible Pumpset)	Mtrs	
	4 X 2.5 Sqmm double sheathed round flexible cable(Lights)	Jobs	
364	WATER FEATURE NO 4 BUBBLERS WIH OVERFLOW (WEIR LENGTH 16 MTRS) NOZZLES Supply of Flow Controlled Cascading jet nozzle with swivel connector for vertical alignment complete as required.	Nos.	
365	Supply of 304 Gr Stainless steel Debris collection strainer complete as required.	No.	

366	Supply of 50 mmABS Floor Inlet nozzles complete as required.	Nos.	
367	Supply of Stainless Steel Overflow skimmer.	No.	
368	LIGHTS Supply of 24V DC, 6 x 3 W LED, (RGB)color under water luminary with wide beam super magnifying lense (MOC SS 304 Gr) Protection Index IP 68.	Nos.	
369	Supply of RGB Controllers for LED Lights.(DMX Type)	No.	
370	Supply of Slave Unit for RGB Controllers for LED Lights.(DMX Type)	Nos.	
371	Supply of Stainless Steel 304 Gr stands/ABS Casing for 6 X 3 watt LED light.	Nos.	
372	Supply of Waterproof joints.	Nos.	
373	Supply of constant voltage LED driver input AC 220-250 volts,output DC.	Nos.	
374	PUMPS Supply of Monoblock Submersible pump set delivering 32 LPS @ 12 mtrs head ,suitable for operation on 415 Volts AC Supply complete as required.	Nos.	
375	Supply of Monoblock Submersible pump set delivering 1.9 LPS @ 14 Mtrs head ,suitable for operation on 220 Volts AC Supply complete as required.(For Filtration Unit)	No.	
376	DOSING PUMP UNIT Supply of online Chlorine Dosing unit with mechanical connections complete as required.	Nos.	
377	ELECTRICAL CONTROL PANNEL Supply of Cubical Control Panel made of 16 gauge CRC sheet powder coated with Starter, ,Single phase prevention, MCB, volt-meter, Amp meter TP MCB's Protection circuits etc and space for CVD for the lights.	Set	
378	MULTI MEDIA SAND FILTER Providing of FRP pressure High rate Sand Filter for filtration of suspended mtrl from water body complete with six position multiport valve for filter,backwash,rinse,waste ,recirculate and close all flow to pool the filter body manufactures in fibre glass with uV .resistance surface provided with oil pressure guage cap , pressure 2.5 V _{el} com filer dia 550 MM dia	No.	
379	Supply of Silica sand for filter with granulometry between 0.4-0.8 mm.	Kg	
380	U PVC PIPING Supply of uPVC pipes (10kg. Pressure) including accessories & fittings as required (Elbow, MTA, Endcap, Socket, Tee, Reducing Tee etc.) u PVC Pipe OD 63 (10 Kg/sq. cm.)	mtr	
	u PVC Pipe OD 110 (10 Kg/sq. cm.)	Mtrs	
	u PVC Pipe OD 110 (10 Kg/sq. cm.)	Mtrs	
381	SUPPLY OF VALVES WITH FITTINGS AS REQUIRED. Supply of 63 mm dia PVC Ball Valve complete as required.	Nos.	
382	Supply of 110 mm dia PVC/CI Body Butterfly Valve with matching flanges, nuts & Bolts,Rubber gasket etc complete as required.	No.	
383	Supply of 50 MM dia Non Return Valves with fittings complete as required.	Nos.	
384	Supply of 100 MM dia Non Return Valves with fittings complete as required.	Nos.	
385	CABLE AND CONDUITING. Supply of double sheathed cables of various sizes including accessories etc required (PVC Conduit, PVC Bend, Steel wire, etc.) for final equipment connections with control panel. 3 X 6 Sqmm Flat Submersible Cable with conduit.(For Submersible Pumpset)	Mtrs	
	3 X 2.5 Sqmm Flat Submersible Cable with conduit.(For Submersible Pumpset)	Mtrs	
	4 X 2.5 Sqmm double sheathed round flexible cable(Lights)	Mtrs	

386	LAKE BUBBLERS WIH TRICKLING NOZZLES Supply of Flow Controlled Cascading jet nozzle with swivel connector for vertical alignment complete as required.	Nos.	
387	Supply of 304 Gr Stainless steel Debris collection strainer complete as required.	No.	
388	LIGHTS Supply of 24V DC, 6 x 3 W LED, (RGB)color under water luminary with wide beam super magnifying lense (MOC SS 304 Gr) Protection Index IP 68.	Nos.	
389	Supply of RGB Controllers for LED Lights.(DMX Type)	No.	
390	Supply of Slave Unit for RGB Controllers for LED Lights.(DMX Type)	Nos.	
391	Supply of Stainless Steel 304 Gr stands/ABS Casing for 6 X 3 watt LED light.	Nos.	
392	Supply of Waterproof joints.	Nos.	
393	Supply of constant voltage LED driver input AC 220-250 volts,output DC.	Nos.	
394	PUMPS Supply of Monoblock Submersible pump set delivering 32 LPS @ 12 mtrs head ,suitable for operation on 415 Volts AC Supply complete as required.	Nos.	
395	ELECTRICAL CONTROL PANNEL Supply of Cubical Control Panel made of 16 gauge CRC sheet powder coated with Starter, ,Single phase prevention, MCB, volt-meter, Amp meter, TP MCB's, Protection circuits etc and space for CVD for the lights	Set	
396	U PVC PIPING Supply of uPVC pipes (10kg. Pressure) including accessories & fittings as required (Elbow, MTA, Endcap, Socket, Tee, Reducing Tee etc.) u PVC Pipe OD 63 (10 Kg/sq. cm.)	mtr	
	u PVC Pipe OD 110 (10 Kg/sq. cm.)	Mtrs	
397	SUPPLY OF VALVES WITH FITTINGS AS REQUIRED. Supply of 63 mm dia PVC Ball Valve complete as required.	Nos.	
398	Supply of 110 mm dia PVC/CI Body Butterfly Valve with matching flanges, nuts & Bolts,Rubber gasket etc complete as required.	No.	
399	Supply of 100 MM dia Non Return Valves with fittings complete as required.	Nos.	
400	CABLE AND CONDUITING. Supply of double sheated cables of various sizes including accessories etc required (PVC Conduit, PVC Bend, Steel wire, etc.) for final equipment connections with control panel. 3 X 6 Sqmm Flat Submersible Cable with conduit.(For Submersible Pumpset)	Mtrs	
	4 X 2.5 Sqmm double sheated round flexible cable(Lights)	Mtrs	
401	LAKE (HIGH RISING JETS) NOZZLES Supply of 80 mm Heavy coloumnar jet nozzles complete as required.	Nos.	
402	Supply of 304 Gr Stainless steel Debris collection strainer complete as required.	No.	
403	LIGHTS Supply of 24V DC, 6 x 3 W LED, (RGB)color under water luminary with wide beam super magnifying lense (MOC SS 304 Gr) Protection Index IP 68.	Nos.	
	Supply of RGB Controllers for LED Lights.(DMX Type)	No.	
404	Supply of Slave Unit for RGB Controllers for LED Lights.(DMX Type)	Nos.	
405	Supply of Stainless Steel 304 Gr stands/ABS Casing for 6 X 3 watt LED light.	Nos.	
406	Supply of Waterproof joints.	Nos.	
407	Supply of constant voltage LED driver input AC 220-250 volts,output DC.	Nos.	
408	PUMPS Supply of Monoblock Submersible pump set delivering 32 LPS @ 12 mtrs head ,suitable for operation on 415 Volts AC Supply complete as required.	Nos.	

409	ELECTRICAL CONTROL PANNEL Supply of Cubical Control Panel made of 16 gauge CRC sheet powder coated with Starter, ,Single phase prevention, MCB, volt-meter, Amp meter. TP MCB's. Protection circuits etc and space for CVD for the lights.	Set	
410	U PVC PIPING Supply of uPVC pipes (10kg. Pressure) including accessories & fittings as required (Elbow, MTA, Endcap, Socket, Tee, Reducing Tee etc.) u PVC Pipe OD 63 (10 Kg/sq. cm.)	mtr	
	u PVC Pipe OD 110 (10 Kg/sq. cm.)	Mtrs	
411	SUPPLY OF VALVES WITH FITTINGS AS REQUIRED. Supply of 63 mm dia PVC Ball Valve complete as required.	Nos.	
412	Supply of 110 mm dia PVC/CI Body Butterfly Valve with matching flanges, nuts & Bolts, Rubber gasket etc complete as required.	No.	
413	CABLE AND CONDUITING. Supply of double sheathed cables of various sizes including accessories etc required (PVC Conduit, PVC Bend, Steel wire, etc.) for final equipment connections with control panel. 3 X 6 Sqmm Flat Submersible Cable with conduit.(For Submersible Pumpset)	Mtrs	
	4 X 2.5 Sqmm double sheathed round flexible cable(Lights)	Mtrs	
414	LAKE FILTRATION SYSTEM NOZZLES Supply of 50 mm ABS Floor Inlet nozzles complete as required.	Nos.	
415	Supply of Heavy discharge Stainless Steel Overflow skimmer.	No.	
416	PUMPS Supply of Monoblock Submersible pump set delivering 32 LPS @ 12 mtrs head .suitable for operation on 415 Volts AC Supply complete as required.(1W+1S)	Nos.	
417	ELECTRICAL CONTROL PANNEL Supply of Cubical Control Panel made of 16 gauge CRC sheet powder coated with Starter, ,Single phase prevention, MCB, volt-meter, Amp meter. TP MCB's. Protection circuits etc and space for CVD for the lights.	Set	
418	MULTI MEDIA SAND FILTER Supply of FRP pressure High rate Sand Filter for filtration of suspended mtral from water body complete with six position multiport valve for filter, backwash, rinse, waste ,recirculate and close all flow to pool the filter body manufactures in fibre glass with uV .resistance surface provided with oil pressure guage cap , pressure 2.5 Kg/sqcm, filer dia 2000 MM dia with 150 mm valve battery.	No.	
419	Supply of Silica sand for filter with granulometry between 0.4-0.8 mm.	Kg	
420	U PVC PIPING Supply of uPVC pipes (10kg. Pressure) including accessories & fittings as required (Elbow, MTA, Endcap, Socket, Tee, Reducing Tee etc.) u PVC Pipe OD 110 (10 Kg/sq. cm.)	Mtrs	
421	SUPPLY OF VALVES WITH FITTINGS AS REQUIRED. Supply of 110 mm dia PVC/CI Body Butterfly Valve with matching flanges, nuts & Bolts. Rubber gasket etc complete as required.	No.	
422	Supply of 100 MM dia Non Return Valves with fittings complete as required.	Nos.	
423	CABLE AND CONDUITING. Supply of double sheathed cables of various sizes including accessories etc required (PVC Conduit, PVC Bend, Steel wire, etc.) for final equipment connections with control panel. 3 X 6 Sqmm Flat Submersible Cable with conduit (For Submersible Pumpset)	Mtrs	

424	Lowering of submersible motor pump set complete with required. Nos. and size of casing pipes erected by means of proper chain pulley block & pipe wrenches after checking of threads of each pipe with coupling to take the load of the pump set and pipe assembly filled up with water.		
	(a) Above 120 mtr.	Per Job	
425	Removing the pump set from foundation after removing suction & discharge connection pipes & all wiring connections taking it to workshop & open it for fault finding , refitting the same, after carrying out repairing, taking back on site refitting on foundation with pipe & wiring connections & put in working condition. (Excludes cost of repairing. Includes to & from transportation)		
	(a) Up to 3 HP	Job	
	(b) Above 3 HP to 7.5 HP	Job	
	(c) 10 Hp to 20 HP	Job	
426	Removing deteriorated gasket, gland packing, washer nuts & bolts before refitting of motor pump set.		
	(a) Up to 3 HP	Nos	
	(b) Above 3 HP to 7.5 HP	Nos	
	(c) 10 Hp to 20 HP	Nos	
427	Rewinding of 3 phase 440V motor as per original winding design by using super enamelled copper Wire and putting the same in working condition as per original.		
	(a) Upton 1.0 HP	Nos	
	(b) Up to 2 HP	Nos	
428	Rewinding of , 3 phase 440V motor as per original winding design by using super enamelled copper Wire and putting the same in working condition as per original.		
	a)3 H.P	Nos	
	b)5 H.P	Nos	
	c)7.5 H.P	Nos	
	d)10 H.P	Nos	
	d)12.5 H.P	Nos	
	e)15 H.P	Nos	
	f)20 H.P	Nos	
429	Replacing burnout unserviceable ball bearing /roller bearing suitable for following motors for mono block pump sets		
	(A) For 1 H.P. motor/pump	Ea.	
	(B) For 2 H.P. motor/pump	Ea.	
	(C) For 3 H.P. motor/pump	Ea.	
	(D) For 5 H.P. motor/pump	Ea.	
	(E) For 7.5 H.P. motor/pump	Ea.	
	(F) For 10/12.5 H.P. motor/pump	Ea.	
	(G) For 15 H.P. motor/pump	Ea.	
	(H) For 20 H.P. motor/pump	Ea.	
430	Dewatering sump well by hiring pump sets & temporary pipe connections of following sump capacity		
	(a) up to 5000 Ltr	Ea	
	(b) Above 5000 Ltr to 20000 Ltr	Ea	
	(c) Above 20000 Ltr to 1 Lac Ltr	Ea	
	(d) Above 1 Lac Ltr	Ea	
431	Opening the open well sub. mono pump set for fault finding , carry out required repairs refitting the same with necessary oiling, greasing & overhauling & making pump set in good working condition. (Excludes cost of repairing. Includes to & from transportation)		
	(a) 1HP to 5HP	Ea	

	(b) 7.5 to 15HP	Ea	
	(c) Above 15HP	Ea	
432	Rewinding single phase 230V motor for open well horizontal mono pump set by using polycab copper winding wire & putting the same in working order for pump capacity of		
	(a) 0.5 HP - 230V	Ea	
	(b) 0.75 HP 230V	Ea	
	(b) 1HP - 230 V	Ea	
433	Rewinding 3 phase, 440V motor for open well horizontal mono pump set by using poly. cap copper winding wire & putting the same in working order for pump capacity of		
	(a) 0.5 H.P./ 1 HP / 1.5 HP - 440V	Ea	
	(b) 2 HP / 3 HP - 440V	Ea	
	(c) 5 HP - 440V	Ea	
	(d) 7.5 HP - 440V	Ea	
	(e) 10 HP - 440V	Ea	
	(f) 12.5 HP - 440V	Ea	
	(g) 15 HP - 440V	Ea	
	(h) 20 HP - 440V	Ea	
	(i) 25 HP - 440V	Ea	
434	Replacement of S.S. sleeves for shaft of open well horizontal submersible pump sets for		
	(i) 1HP to 5HP	Ea	
	(ii) 7.5 to 15HP	Ea	
	(iii) Above 15HP	Ea	
435	Replacement of Stainless Steel bushing fitted in end shield for open well horizontal submersible pump set		
	(a) 1HP to 5 HP	Ea	
	(b) 7.5Hp to 15 HP	Ea	
	(c) above 15 HP	Ea	
436	Replacement of Gun metal /Bronze bushing for open well horizontal submersible pump set		
	(a) 1HP to 5 HP	Ea	
	(b) 7.5Hp to 15 HP	Ea	
	(c) above 15 HP	Ea	
437	Replacing gasket, oil, nuts, bolts & washers for open well horizontal submersible pump sets.		
	(a) 1HP to 5 HP	Ea	
	(b) 7.5Hp to 15 HP	Ea	
	(c) above 15 HP	Ea	
438	Replacement of Bronze / Carbon thrust bearing with fibber plate & bushing suitable for open well horizontal submersible pump set for		
	(a) 1HP to 5 HP	Ea	
	(b) 7.5Hp to 15 HP	Ea	
	(c) above 15 HP	Ea	
439	Replacement of cast iron impeller for openwell horizontal submersible pump pump sets		
	(i) 1HP to 5 HP	Ea	
	(ii) 7.5Hp to 15 HP	Ea	
	(iii) above 15 HP	Ea	
440	Replacement of Bronze / Gunmetal impeller for open well horizontal submersible pump set		
	(a) 1HP to 5 HP	Ea	
	(b) 7.5Hp to 15 HP	Ea	

	(c) above 15 HP	Ea	
441	Opening the submersible pump set for fault finding , carry out required repairs refitting the same with necessary oiling, greasing & overhauling & making pump set in good working condition. (Excludes cost of repairing. Includes to & from transportation)		
	(a) 1HP to 5HP	Ea	
	(b) 7.5 to 15HP	Ea	
	(c) 20HP to 35 HP	Ea	
	(d) Above 35 HP	Ea	
442	Rewinding of submersible motor by using approved make PVC insulated copper winding Cores of suitable size complete with connection. Capacity Suitable for pump of following size. <u>Dismantled Materials to be retained by agency.</u>		
	(a) 5 HP	Ea	
	(b) 7.5 H.P	Ea	
	(c) 10 to 15 H.P	Ea	
	(d) 16 to 20 H.P	Ea	
	(e) 21 to 25 H.P	Ea	
	(f) 26 to to 35 H.P	Ea	
443	Replacement of bronze/ carbon thrust bearing with fibre plate & housing for		
	(a) 150 mm. dia.	Ea	
	(b) 200 mm. dia.	Ea	
444	Replacement of motor bush, upper/ lower with sleeve with following material		
	(A) Bronze		
	(i)150 mm. dia.	Ea	
	(ii)200 mm. dia	Ea	
	(B)Rubber		
	(i) 150 mm. dia.	Ea	
	(ii) 200 mm. dia.	Ea	
445	Replacement of stage casing bowl with nuts and bolts.		
	(A)C.I.		
	(i)150 mm. dia.	Ea	
	(ii)200 mm. dia	Ea	
	(B)Bronze		
	(i) 150 mm. dia.	Ea	
	(ii) 200 mm. dia.	Ea	
446	Replacement of Bronze impeller with neck ring.		
	(a) 150 mm. dia.	Ea	
	(b) 200 mm. dia.	Ea	
	Replacement of Shaft sleeve stainless steel.		
	(a) 150 mm. dia.	Ea	
	(b) 200 mm. dia.	Ea	
447	Replacement of Bowl bearing/ bush		
	(A) Rubber		
	(i)150 mm. dia.	Ea	
	(ii)200 mm. dia	Ea	
	(B) Lead		
	(i) 150 mm. dia.	Ea	
	(ii) 200 mm. dia.	Ea	
448	Replacement of S.S.Shaft for		
	(A) 3 stage pump		
	(i)150 mm. dia.	Ea	
	(ii)200 mm. dia	Ea	
	(B) Add per stage		

	(i) 150 mm. dia.	Ea	
	(ii) 200 mm. dia.	Ea	
449	Replacement of suction strainer		
	(a)150 mm. dia.	Ea	
	(b)200 mm dia.	Ea	
450	Providing and erecting flat copper cable following size		
	(a)3 core 1 Sq.mm	Mtr.	
	(b)3 core 1.5 Sq.mm	Mtr.	
	(c)3 core 2.5 Sq.mm	Mtr.	
	(d)3 core 4 Sq.mm	Mtr.	
	(e)3 core 6 Sq.mm	Mtr.	
451	Supplying and erecting Direct - On - Line Starter with 18 A. rating contactor and with 3.5 Amp. 18A range directly operated in totally insulated elegant enclosure for single phase operation up to 3 HP as per IS 13947 complete erected on P.W. Block with necessary connection.	Ea	
452	Supplying and erecting Direct on line starter with 30 Amp. (resistive @ 230v) power relay and with 2 to 5/ 4 to 10 / 8 to 20 amp. Range C.T. Operated electronic overload relay in engineering grade plastic enclosure for 3 ph 415v 50 HZ A.C. motor up to 7.5 HP with high voltage protection (above 480 v) and under voltage protection (below 330 v) current sensing single phasing protection. Reverse phasing protection, inverse current characteristic overload protection with indication for On, OL, HV,LV SPP in a single unit with feather touch start / stop push button, high temperature with standing Bakelite terminals complete erected on P.W. Block with necessary connection. [Cat.II]	Ea	
453	Supplying and erecting push button operated fully automatic Star-Delta starter with 3 Nos. of 15A.rating contactors and directly operated thermal overload relay having 10-21A range and erected in sheet steel enclosure for 3 phase 415V. 50 c/s. A.C. motors from 7.5 to 15H.P. <u>complete erected on</u>	Ea	
	28 watt T-5 Tubelight repairing work		
	(a) To be replace 36 watt Tubelight rod.	01 no	
	(b) To be replace 36/40 watt Tubelight Starter	01 no	
	(c) To be replace 36/40 watt Tubelight copper chock	01 no	
	(d) To be replace Tube light Side holder	01 no	
454	28 watt T-5 Tubelight repairing work		
	(a) To be replace 28 watt T-5 Tubelight rod.	01 no	
	(b) To be replace 28 watt T-5 Tubelight chock	01 no	
	(c) To be replace Tube light Side holder	01 no	
455	(a)Supply and fitting new 36 watt tube light complete set with tuberod,Starter and copper chock.(crompton,philips make)	01 no	
	(b) Supplying and erecting approved make of tube fitting with One no T-5 tube 24/ 28 W with Electronic ballast with each tube separately THD less than 10 & built in adaptors, GI / PVC housing & mirror optic reflector, suitable to work on 120V - 300V, A.C. supply with connector and adapter if required. [Make of fitting & tube may be differ& fitting shall be providing with tube]	01 no	
456	Providing and erecting ISI mark Medium class RIGID PVC PIPES of following size complete to be erected on/in wall or ceiling erected with necessary PVC fittings & Junction boxes fixed with adhesive solution & Clamps with following dia of pipes, in approved manner as directed		
	(a) 20 mm	Mtr.	
	(b) 25 mm	Mtr.	
457	Ceiling fan repairing work.	Mtr.	
	(a)Rewinding of 48 " ceiling fan	01 no	
	(b)To be replace Bearing set in pair (ISI make)	01 no	
	(c)To be replace capacitor(ISI make)	01 no	

458	Supply and installation of miscellaneous item forelectrical maintenance.		
	(a) 5 AMP 230 Volt Piano type plug socket (anchor, panama,vinay make)	01 no	
	(b) 15 AMP 230 Volt Piano type switch (anchor, panama,vinay make)	01 no	
	(c) 15 AMP 230 Volt Piano type plug socket (anchor, panama,vinay make)	01 no	
	(d) 5Amp Modular type Switch (roma vinay make)	01 no	
	(e) 15Amp Modular type Switch (roma vinay make)	01 no	
	(f) 5Amp Modular type plug socket (roma vinay make)	01 no	
	(g) 15Amp Modular type plug socket (roma vinay make)	01 no	
	(h) 5 AMP 3 pin Top (anchor,roma,panama,vinay make)	01 no	
	(i) 15 AMP 3 pin Top(anchor,roma,panama,vinay make)	01 no	
	(j) Switch type fan regulator. (anchor,roma,panama,vinay make)	01 no	
	(k) Socket type fan regulator.	01 no	
	(l) 40/100 watt BC Clear Lamp	01 no	
	(m) Bakelite lamp holder	01 no	
	(n)Approved make C.F.L. Retrofit 13/15/18 Watt erected if required	01 no	
	(o)Approved make C.F.L.Retrofit 20 / 23 / 25 / 26 Watt. erected if required	01 no	
459	(a) Replace 6 Amp to 32 Amp SP MCB (Indoasian,C&S,L&T)	01 no	
	(b) Replace 16 Amp DP MCB (Indoasian,C&S,L&T)	01 no	
	(c) Replace 32 Amp DP MCB (Indoasian,C&S,L&T)	01 no	
	(d) Replace 40 Amp DP MCB (Indoasian,C&S,L&T)	01 no	
	(e) Replace 40 Amp TPN MCB (Indoasian,C&S,L&T)	01 no	
	(f) Replace 63 Amp TPN MCB (Indoasian,C&S,L&T)	01 no	
	(g) Replace 6 way Singal phase MCB DB (Indoasian,C&S,L&T)	01 no	
	(h) Replace 8 way Singal phase MCB DB (Indoasian,C&S,L&T)	01 no	
	(i) Replace 12 way Singal phase MCB DB (Indoasian,C&S,L&T)	01 no	
	(j) Replace 6 way Three phase MCB DB (Indoasian,C&S,L&T)	01 no	
	(k) Replace 8 way Three phase MCB DB (Indoasian,C&S,L&T)	01 no	
460	Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected concealed in /flushed on wall/ceiling, with 1.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size with medium class Rigid PVC pipe and accessories		
	(a) 2 wire 1.5 sq. mm	Mtr.	
	(b) 2 wire 2.5 sq. mm	Mtr.	
	(c) 3 wire 1.5 sq. mm	Mtr.	
	(d) 3 wire 2.5 sq. mm	Mtr.	
	(e) 4 wire 1.5 sq. mm	Mtr.	
	(f) 4 wire 2.5 sq. mm	Mtr.	
	[A] For 6 Amp.	pt.	
	[B] For 16 Amp.	pt.	
461	Havells make 10 Watt LED	01 no	
462	28 Watt Philips make Tube Light	01 no	
463	18 Watt Tubelight	01 no	
464	Exhaust Fan	01 no	
465	Ceiling Fan	01 no	
466	Plug point 15 Amp.	01 no	
467	5 Amp Plug board	01 no	
468	2 Way Point	01 no	
469	supply Pump 1 HP single phase	01 no	
470	Lighting DB	01 no	
471	6 to 32 A 4 Pole MCB	01 no	
472	6 to 32 A FP ELMCB(ELCB+MCB) (100mA)	01 no	
473	DP ELCB 16 A	01 no	
474	6A SP MCB	01 no	

475	16 A SP MCB	01 no	
476	10 A SP MCB	01 no	
477	Blank Plate	01 no	
478	Exhaust FanSupply, Installation,testing and commissioning of following sizes Exhaust Fans of approved make 13.3 Light duty 305 mm. diameter propeller exhaust fans single phase 1400 RPM. Equivalent to CG	01 no	
479	Automatick Liquid level controller	01 no	
480	Bore well submesible pumpProviding, & fixing Bore well submersible pump- motor set for bore of 100mm dia having suitable for 5HP , 3 Phase, 415 V, 50 Hz. motor having following discharge capacity. The pump shall be operated at 2900 RPM. The scope shall also include all required accessories viz. strainer, foot valve, level guard, delivery pressure guage, Standard double length flat submersible cable, float with control cable etc. as per specifications and data sheet Capacity: 120 to 125 LPM Head : 155 to 120m	01 no	
481	Supply, testing and Laying XLPE steel wire/flat armoured cable of 1100 V grade Copper Conductor of following sizes in ready made trench or mounted on wall with necessary clamping 4 Sq.mm x 4c Cu. Cable.	Mtr.	
482	3Mtr Copper Bonded Rod with approx 20 Kg Resistance lowering compound Earthing.	01 no	