

SPROTS AUTHORITY OF GUJARAT

NAME OF WORK: CONSTRUCTION OF LIBRARY AT VANSADA DIST: NAVSARI

Itemwise Specifications Index

Sr. No.	Description	Unit	Item No / Page No of the applicable specification
1	2	3	4
1	Demolition including stacking of serviceable materials and disposal of unserviceable materials with all lead and lift. (i) R.C.C. work	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-20, Item No. 20.3., Page No. 147
2	Demolition of Brick work and stone masonry including stacking of serviceable materials and disposal of unserviceable materials with all lead and lift.(ii) In Cement Mortar.	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-20, Item No. 20.11.(iii), Page No. 148
3	Excavation for foundation upto 1.5 m depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead. (A) Loose or soft soil	Cum	As per "General building work technical specifications Book" Sec-4, Cl.4.0.0.(A) ,Page No.-29
4	Excavation for foundation upto 1.5 m depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead.(B) Dense or Hard soil	Cum	As per "General building work technical specifications Book" Sec-4, Cl.4.0.0.(B) ,Page No.-29
5	Excavation for foundation for depth from 1.5 m to 3.0 m including sorting out and stacking of useful materials and disposing off the excavated stuff upto 50 Meter lead.(B) Dense or Hard soil	Cum	As per "General building work technical specifications Book" Sec-4, Cl.4.0.0.1.(B) ,Page No.-32
6	Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (B) By manual in area of thorny jungle	Hec.	As per seprate specifications sheet attached; Item Wise Technical Specification Library@Vansda
7	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.Beyond 60 cm girth upto and including 120 cm girth	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification Library@Vansda
8	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:6 (1- Cement : 6 -fine sand) (A) Modular	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification Library@Vansda
9	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm. in depth consolidating each disposed layer by ramming and watering	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-4, Item No. 4.12., Page No. 35
10	Filling in foundation and plinth with murrum or selected soiin layers of 20cm. thickness including watering, ramming and consolidating etc. complete.	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-4, Item No. 4.0.0.4., Page No. 35
11	Carring out plinth treatment to post construction / existing structure by spraying chemical solution for termite control treatment including labour and material consistment with I.S.I specification. Using Chlordene and Chiorpurfiles 20 EC. As Per 6131_paret-II Concentration Weight one percent is recommended i.e one litre 20 EC chemical emulsion with 19 liter give 1 % concentration inclusive of one litre chemical emulsion appication at the rate of 5 Litre chemical / Sqm of surface is recommended as per I.S (The Product Perfomance Shall Carry Guarantee for 5 Years)	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification Library@Vansda
12	Providing and laying cement concrete 1:2:4 (1- Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete excluding cost of formwork in (A) Foundation and Plinth	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification Library@Vansda
13	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (A) Foundations, footings, Base of columns and Mass concrete.	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
14	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies, Lintels, Beams, Girders and Cantilever upto floor two level.	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
15	Providing and laying controlled cement concrete M.200 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (A) Foundations, footings, Base of columns and Mass concrete in Grade Slab	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2., Page No. 47
16	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (D) Columns, Pillars posts and struts, upto floor two level.@G.F Column	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
17	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (D) Columns, Pillars posts and struts, upto floor two level.@ S.F Column	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
18	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (D) Columns, Pillars posts and struts, upto floor two level.@ T.F Column	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
19	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies, Lintels, Beams, Girders and Cantilever upto floor two level.@Ground Floor	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
20	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies, Lintels, Beams, Girders and Cantilever upto floor two level.@ First Floor	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47

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21	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies, Lintels, Beams, Girders and <u>Cantilever upto floor two level @ Second Floor</u>	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
22	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies, Lintels, Beams, Girders and <u>Cantilever upto floor two level @ Terrace Beam</u>	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.3., Page No. 47
23	Providing TMT Bar FE 500D reinforcement for R.C.C.work including bending, binding and placing in position complete upto floor two level	Kg	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.4.11, Page No. 45
24	Providing TMT Bar FE 500D reinforcement for R.C.C.work including bending, binding and placing in position complete upto floor two level	Kg	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.4.11, Page No. 45
25	Masonry work using Aerated light weight concrete block having crushing strength not less than 35 kg/sqcm for super structure above plinth level upto floor two level in cement mortar 1:5 (1 cement : 5 fine sand) complete as per Technical Specification in <u>Ground Floor & First Floor</u>	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
26	Masonry work using Aerated light weight concrete block having crushing strength not less than 35 kg/sqcm for super structure in cement mortar 1:5 (1 cement : 5 fine sand) complete as per Technical Specification in <u>Second Floor</u>	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
27	Masonry work using Aerated light weight concrete block having crushing strength not less than 35 kg/sqcm for super structure in cement mortar 1:5 (1 cement : 5 fine sand) complete as per Technical Specification in <u>Terrace Floor</u>	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
28	Providing 10mm thick cement plaster in single coat on brick/concrete Ceiling for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) <u>Ground Floor & First Floor</u>	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-17, Item No. 17.58 (II), Page No. 120 & Item No. 17.91, Page No. 121
29	Providing 10mm thick cement plaster in single coat on brick/concrete Ceiling for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) <u>Second Floor</u>	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-17, Item No. 17.58 (II), Page No. 120 & Item No. 17.91, Page No. 121
30	Providing 10mm thick cement plaster in single coat on brick/concrete Ceiling for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) <u>Third Floor</u>	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-17, Item No. 17.58 (II), Page No. 120 & Item No. 17.91, Page No. 121
31	Providing 15mm thick cement plaster in single coat on Rough (Similar)side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) including GI Galvanized 0.3Wide Hexagonal Wire Mesh on RCC & Brick Joints Internal Wall Plaster for <u>Ground Floor</u>	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
32	Providing 15mm thick cement plaster in single coat on Rough (Similar)side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) including GI Galvanized 0.3Wide Hexagonal Wire Mesh on RCC & Brick Joints Internal Wall Plaster for <u>First Floor</u>	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
33	Providing 15mm thick cement plaster in single coat on Rough (Similar)side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) including GI Galvanized 0.3Wide Hexagonal Wire Mesh on RCC & Brick Joints Internal Wall Plaster for <u>Second Floor</u>	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
34	Providing 15mm thick cement plaster in single coat on Rough (Similar)side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) including GI Galvanized 0.3Wide Hexagonal Wire Mesh on RCC & Brick Joints Internal Wall Plaster for <u>Terrace</u>	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
35	Applying two coats of acrylic lapy (putty) & two coats of primer of approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
36	Wall painting (Two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-18, Item No. 18.57, Page No. 136
37	Wall painting (Two coats) with plastic emulsion paint on Ceiling of approved brand and manufacture on undecorated Ceiling surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-18, Item No. 18.57, Page No. 136 & Item No. 18.60, Page No. 137

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38	Washed stone grit plaster on exterior walls height upto 10 metre above ground level, in two layers, under layer 12 mm cement plaster 1:4 (1cement : 4 coarse sand), furrowing the under layer with scratching tool,applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15 mm cement plaster 1:1/ 2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size), in panels with groove all around as per approved pattern, including scrubbing and washing the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in-charge (payment for providing grooves shall be made separately)	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
39	Extra for washed grit plaster on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
40	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer, including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :.@20 mm wide and 15 mm deep groove	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
41	40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) with joints 3 mm thick, side buttered with cement mortar 1:2 (1 cement : 2 stone dust) admixed with pigment to match the shade of stone and pointing with same mortar Red sand stone	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
42	<p>Providing and fixing eco-friendly light weight calcium silicate false ceiling tiles having Tegular edge & 15 mm Thick Densified edges on the Tile Periphery for Extra Strength The Light weight calcium silicate ceiling tiles shall have , light reflection 85% non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity0.043° w/m KC.for the best thermal Insulation . The Light weight calcium Silicate tile shall be of approved texture Fine fissured/ Spintone/Cosmos having NRC value of 0.5 & Globe having NRC value of 0.75 NRC or equivalent of size 595 X 595 mm to be laid on true horizontal level suspended inter locking metal grid of hot dipped galvanized steel sections (galvanizing @120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and size of 24X38mm made from 0.30 mm thick (minimum) sheet, 1200mm centre to centre, and cross 'T' of size 24X28mm made out of 0.33mm (Minimum) sheet spaced 1200mm along spaced between main 'T' at 600mm centre to centre to form agrid of 1200X600mm and secondary cross 'T' of length 600mm and size 24x28mm made of 0.30 mm thick (Minimum) sheet to be</p> <p>interlocked at middle of the 1200X600mm panel to form grid of size 600X600mm resting on periphery walls/partitions on a perimeter wall angle pre-coated steel of size (24X24X3000mm made of 0.40mm thick (minimum) sheet with the help of rawl plugs at 450mm centre to centre with 25mm long dry wall screws @ 230mm interval and laying 15mm thick Densified edges light weight calcium silicate ceiling tiles of approved texture (Fine Fissured/Cosmos/Spintone) in the grid including, cutting /making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required, Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25X35X1.6mm fixed to ceiling with 12.5mm dia and 50mm long dash fasteners, 4mm G.I. adjustable rods with galvanized steel level clips of size 85X30X0.8mm, spaced at 1200mm centre to centre long main 'T' bottom exposed with 24mm of all T-sections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-.Note:- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs) having area less than 0.30 sqm. The calcium silicate ceiling tiles shall have NRC. Value of 0.50 (Minimum) for Fine fissured/Spintone/Cosmos and 0.75 NRC for Globe, light reflection 85% non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity. 0.043° w/m KC for the best thermal Insulation</p>	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
43	Providing and fixing stainless steel railing 50mm dia.(16 gauge-Grade 304) TOP RAIL with 1 mtr c/c VERTICAL SUPPORT 37.5mm dia.(16 gauge-Grade 304), 3 NO. 25mm dia.(16 gauge-Grade 304) HORI. MEMBER .for up to 1.2mt height at any floor, including welding, grinding, buffing, polishing and making curvature (wherever required) ,for staircase on the side of waist slab with suitable arrangement as per drwaing (for payment purpose only hand rail Running meter will be consider, and other stainless steel members shall are inclusive of fixing accessories such as Baluster, supports, horizontal members, nuts, bolts, fasteners etc.)Rate includes for all lead & lift. etc, complete as per drawings and design supplied by architect and	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda

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44	Providing and Laying Waterproofing System is Two Components, Polymer modified, Highly Flexible Cementious Waterproofing Membrane system. It Comprises of Superior quality cement, Other Additives and Liquid Polymers. When both liquid and powder mixed together and applied it forms a tough, Flexible and seamless Waterproof barrier which also provides excellent bonding and crack bridging ability on masonry Substrates, Providing and applying Waterproofing, treatment to RCC bore packing (Sleeves for Plumbing / other services in RCC Slab etc. complete as per Approved by Engineer in charge. (FIVE YEARS PERFORMANCE WARRANTY)	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
45	Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer in Charge.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
46	Providing and laying Vitrified tiles 8 to 10 mm thick, in skirting risers of steps and dedo on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurry	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
47	Providing and laying Mirror polished Kota stone slab flooring over 20mm (Average) thick base of cement mortar 1:6 (1-cement : 6-coarse sand) or L.M. 1:1.5 (1-Lime putty :1.5 - coarse sand) laid over and jointed with grey cement slurry mixed with pigment to match the shade of slab including Grooves, half round edge, rubbing and polishing etc. complete (A) 25mm thick	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-14, Item No. 14.43.(A), Page No. 98
48	Providing and laying Mirror polished kota stone slab 25mm thick in risers of steps,skirting Dedo and pillars laid on 10mm thick cement mortar 1:3 (1-Cement : 3 coarse sand) and jointed with gray cement slury mixed with pigment to match the shade of slab including rubbing and polishing etc. complete.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-14, Item No. 14.44., Page No. 99
49	P & L 24" x 24" vitrified 8 mm thick tile flooring over 20 mm (average) base of cement mortar 1:6 (1 cement: 6 coarse sand) on new surface or fixing on existing flooring by adhesive material including dismantling of existing flooring and jointed with color cement slurry including finished with flush pointing & cleaning the surface etc. complete for antiskit	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
50	Providing and laying Vitrified tiles 8 to 10 mm thick , 24" x 24" in skirting risers of steps and dedo on 10mm thick cement plaster 1:3 (1-cement : 3coarse sand) and jointed with white cement slurry	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
51	Providing & Fixing 18MM Mirror Polished granite Washbasin platform of 45 cm width and 70 cm height and platform as per design including cost of cement, jari adhesive,Edge round Moulding etc as per approved by engineer in charge.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
52	Providing and laying 18mm thick granite of specified size colour, shade and of approved make, in Wall, column cladding, risers of steps, dedo and , sill and jambs of door, window & ventilation frame with mini. two coat of construction chemical and as per manufacture specification incl. rubbing and polishing, rounding edge and All joints filled with coloured cement putty as per architect detail and wiped to give sharp joints with flush pointing and washed clean with acid As per drawings and design supplied by architect and instruction given by authority and E.I.C. incl. cost of steel fastener of approved make at every 1/3 span if required etc. complete colour and shed as approved by architect engineer in charge.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
53	Green marble (Marble Slab stone 25mm thick double polished) Machine cut 7.5cm Strip on Ramp and Ramp Skirting Wall.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
54	Providing and fixing structural glazing with using the 17 micron anodised of approved colour alluminium section as transium, mullium of size 63mm x 38mm x 2 mm with using 6 mm thick reflective structural glass of approved make, colour, toughned and shade and fixed with silicone sealant and spacer tap and at corner sealed neoprene foam dust and air sealed gasket mirred including scaffolding, cleaning of glass etc.complete at all heights anf lifts with all necessary fitting and fixtures, anchore fasteners, necessary m.s. or aluminium brackets, suitable design for openable window as per architectural drawing and as directed by engineer-in-charge. Grooves between the glasses to be filled with sealant of dow corning - structural sealant 995, weather sealant 789. The entire façade should be water proof. The mullions are to be connected to bracket by ss-304 nut bolts. Measurement shall be given as per actual execution of the work.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
55	Providing & fixing 12mm thick toughened glass door with fittings & also with floor spring & Locking system of Approved Make. .note:- flooring cutting covered in this item so no extra claim for vitrified / kotah/Granite flooring.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda

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56	Providing and fixing window having extruded aluminum Colour anodized section frame main outer size 95mm x 24mm x 1.17mm @ wt.of 0.738 Kg/mt , horizontal Three track member size 92mm x 31.75mm x 1.30mm,@Wt.1.07 Kg/mt , vertical member of size 92mm x 31.75mm x 1.50mm @ Wt. 1.06 Kg/mt with sliding shutters of horizontal member size 40 mmx18mmx1.29mm @ wt.of 0.456 Kg/mt, vertical member of size 40mm x 18mm x 1.29 mm @ wt.of 0.456Kg/mt/ with 5mm thick transparent bronze colour tinted float glass with powder coated aluminum fittings and fixtures and transparent silicon sealant glass fixing to frame as per details etc with Mosquito jali window with extra track	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
57	Providing and fixing standared extruded of alluminium section of size 63mm x 38.10mm x 1.2mm , @ Wt. 0.643 Kg/mt with colour Powder Coated alluminium frame for ventilation with 5 mm thick frosted glass as details etc complete for Ventilation	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
58	Providing and fixing in position collapsible steel shutters with vertical channels 20 x 10 x 2 mm braced with flat iron diagonals 20 x 5 mm size with top and bottom rails of T_rin 40x 40 x 6 mm with 38mm dia, steel pulleys complete with bolts, nuts, locking arrangements, stoppers handles including applying a priming coat of red lead paint.	Quintal	As per 'General Building Work Technical Specifications' booklet, Sec-11, Item No. 11.6., Page No. 81
59	Providing and fixing 38mm thick shutter flush door shutters, solid core finshed with 1mm thick laminate on both side with guled PVC edge beading as patten & Selection hinges, Hydraulic Pelmet Arm Door Closer with Double Speed for Heavy Door/Soft Door Closer (ISO 9001 Certified) (Capacity 120 Kg, Silver) with necessary screw,s.s handle,s.s Aldrop,s.s Stopper for door 200CM x 210CM- D1 Single Shutter	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
60	Providing and fixing 38mm thick shutter flush door shutters, solid core finshed with 1mm thick laminate on both side with guled PVC edge beading as patten & Selection hinges, Hydraulic Pelmet Arm Door Closer with Double Speed for Heavy Door/Soft Door Closer (ISO 9001 Certified) (Capacity 120 Kg, Silver) with necessary screw,s.s handle,s.s Aldrop,s.s Stopper for door 120CM x 210CM- D2 Single Shutter	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
61	Providing and fixing 38mm thick shutter flush door shutters, solid core finshed with 1mm thick laminate on both side with guled PVC edge beading as patten & Selection hinges, Hydraulic Pelmet Arm Door Closer with Double Speed for Heavy Door/Soft Door Closer (ISO 9001 Certified) (Capacity 120 Kg, Silver) with necessary screw,s.s handle,s.s Aldrop,s.s Stopper for door 100CM x 210CM- D4 Single Shutter	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
62	Providing and fixing FRP frame size 125x65 mm and 35mm thick FRP shutter having extra reinforcement on sides & edges in polish finish. The core of the shutter & frame is to be filed up with injected polyurethane foam done in situ alongwith embedded wooden pieces for stiffening & also taking hinges & fintures. The whole FRP frame & shutter is to be water proof weather proof,termite proof & resistance to mild acid/alkali. Rates are to be inclusive of S.S hinges with necessary screws & alluminium S.S fixtures & fastenings & fastener sleeve	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
63	Providing & fixing laminate finish partition up to false ceiling ht (thickness of partition is 82 mm or as specified in drawing) having 12 mm thick marina plywood IS 710 grade both side on aluminum framing of gauge 16. Aluminum framing size for vertical & horizontal support is 50 mm x 25 mm. Grid of aluminum framing is 600 mm x 600 mm.All exposed surfaces finished with 1 mm thick Laminate of approved shade complete with mat finish. Necessary framing to be erected above false ceiling. No extra cost to be paid for the same. Before installation,make hole/face plate for conduit pipes of electrical / networking cables with open able stud from partition Including all materials and labor etc. Make necessary grooves as per shown in drawing. Using of 12 mm thick clear glass with proper crystal edges & with suggested frosted films on glass. All joints are covered with teakwood beading Patti finished with polish matching with laminate. Including door of same design if required Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/consultant/Engineer In charge. Contractor has to provide all necessary cut outs (race ways.) for Electrical works &	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
64	Providing and fixing M.S. grills of required pattern to wooden frames of windows etc. with M.S. flats at required spacings and frame alround, square or round bars with round headed bolts and nuts or by screws (A) Plain Grill	Kg	As per 'General Building Work Technical Specifications' booklet, Sec-10, Item No. 10.100.(A), Page No. 75
65	Applying priming coat over new steel and other metel surface after and including preparing the surface by throughly cleaning, oil,grease, dirt and other foreign matter and scoured with brushes fine steel wood, scrapers and sand paper with ready mixed priming paint brushing red lead	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-19, Item No. 19.12., Page No. 139
66	Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint, brushing, interior to give an even shade including cleaning the surface an even shade including cleanicn the surface of all dirt, dust and other foreign matter.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-19, Item No. 19.7., Page No. 138
67	Providing cement vata (10cm. x 10 cm. size) quarter round in cement mortar 1:1 including neat cement finishing, watering etc. complete.	Rmt	As per 'General Building Work Technical Specifications' booklet, Sec-17, Item No. 17.0.0.1, Page No. 124

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Sr. No.	Description	Unit	Item No / Page No of the applicable specification
68	Providing in position PVC pipe sleeves of 6Kg/cm2 and length as per design for following diameters for services wherever pipes pass through walls/ slabs/beam in mtrs length. All pipes shall be accurately cut to the required sizes, laid as per drawing, kept in the position while concreting, and burrs removed before laying. Open ends of the pipe shall be closed as the pipe is installed to avoid clogging while concreting. Rate shall be inclusive of removal of sleeves before waterproofing or grouting. For all floors/all levels /all heights. (a) 50mm Diameter	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
69	Providing in position PVC pipe sleeves of 6Kg/cm2 and length as per design for following diameters for services wherever pipes pass through walls/ slabs/beam in mtrs length. All pipes shall be accurately cut to the required sizes, laid as per drawing, kept in the position while concreting, and burrs removed before laying. Open ends of the pipe shall be closed as the pipe is installed to avoid clogging while concreting. Rate shall be inclusive of removal of sleeves before waterproofing or grouting. For all floors/all levels /all heights. (a) 75mm Diameter	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
70	Providing in position PVC pipe sleeves of 6Kg/cm2 and length as per design for following diameters for services wherever pipes pass through walls/ slabs/beam in mtrs length. All pipes shall be accurately cut to the required sizes, laid as per drawing, kept in the position while concreting, and burrs removed before laying. Open ends of the pipe shall be closed as the pipe is installed to avoid clogging while concreting. Rate shall be inclusive of removal of sleeves before waterproofing or grouting. For all floors/all levels /all heights. (a) 110mm Diameter	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
71	Providing in position PVC pipe sleeves of 6Kg/cm2 and length as per design for following diameters for services wherever pipes pass through walls/ slabs/beam in mtrs length. All pipes shall be accurately cut to the required sizes, laid as per drawing, kept in the position while concreting, and burrs removed before laying. Open ends of the pipe shall be closed as the pipe is installed to avoid clogging while concreting. Rate shall be inclusive of removal of sleeves before waterproofing or grouting. For all floors/all levels /all heights. (a) 160mm Diameter	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
72	Core cutting: Providing and wet drilling accurate and clean holes of specified diameter in RCC walls, slabs, beam or any other RCC member without vibration by core cutting (diamond drilling) machine including scaffolding, safety majors, disposing the debris, cleaning for all levels/ all height as per structural consultant's drawing, after approval of engineer in charge etc compete. Rate shall be inclusive of filling the hole with non-shrink grout/Chemical Anchoring in good manner. Measurement shall be taken for the depth of holes in running meter for specified diameter. Holes shall made by authorised approved agency. (a) Holes from 100 dia.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
73	Acrylic Signages (Name Plate 150 mm high) Providing and fixing ACRYLIC SIGNAGES of 10 mm Acrylic name plate with vinyl cut work on top of brand Ptglass, astari etc., with all laser and cnc work, including all material, labour, studs for mounting and other hardwares, waste of materials etc. and complete the work satisfactorily as per instruction of Architect or engineer-in charge.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
74	Steel work, welded in built up sections framed work including cutting, hoisting, fixing in position and applying a priming coat of red lead paint. (A)In beams and joists, channels angles Tees, flats, with connecting plates or angle cleats as in main and cross beams. Hip and jack rafters, purlins conneted to common rafters and the like.	Quintel	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
75	Providing and fixing 1.20Metre high fencing with 2.0Metre long M.S. Angle posts 40mm x 40 mm x6 mm and oil painting 3 coats fixed at 2.5 Mt, C/C. with five Horizontal lines and two diagonals of galvanised steel barbed wire weighting 9.38 Kg. per 100 Metre, strained and fixed to posts with G.I, staples including fixing the posts in ground with 0.5 M x 0.5 M x 0.5 M block in C.C:1:5:10 etc complete	Sqm	As per "General building work technical specifications Book" Sec-22, Cl.22.20.,Page No.-153
76	Filling in plinth with sand under floors including watering ramming, consolidating and dressing complete.	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-4, Item No. 4.24., Page No. 35
77	"Providing and laying polythene sheet / Low-Density Polyethylene (LDPE) film of approved brand and manufacturer, having a true thickness of 300 microns (conforming to IS: 2508 standards) over consolidated sub-grade, under cement concrete flooring, or for damp-proofing courses, including straightening, cutting, overlapping by a minimum of 100 mm, jointing and sealing laps securely with heavy-duty adhesive tape where necessary, and turning up at walls/sides to form an effective, puncture-resistant moisture barrier, complete at all levels as per architectural drawings and directions of the Engineer in charge."	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
78	Providing and laying controlled cement concrete M.250 and curing complete including the cost of formwork and excluding reinforcement for reinforced concrete work in (D) Columns, Pillars posts and struts, upto floor two level. @ T.F Column	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2., Page No. 47

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Sr. No.	Description	Unit	Item No / Page No of the applicable specification
79	Providing and laying broken chine mosaic flooring for terrace using 12 mm to 20 mm broken pieces of glazed tiles to be laid over cement mortar 1:3 to plain or slope and to be tempered to bring mortar creme out upto surface using white cement including rounding off junctions and extending them upto 15 cm along the wall,clearing with water and oxalic acid etc. as directed. (The Product Perfomance Shall Carry Guarantee for 5 Years Against Any Leakage)	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
80	Providing and Laying cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 broken stone aggregate 40 mm nominal size) and curing complete excluding cost of form work in (A) Foundation and plinth PCC.	Cum	As per "General building work technical specifications Book" Sec-5, Cl.5.3.2.(A) ,Page No.-38
81	Providing and laying controlled cement concrete M.200 and curing complete excluding the cost of formwork and reinforcement for reinforced concrete work in (A) Foundations, footings, Base of columns and Mass concrete.	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2., Page No. 47
82	Providing formwork of ordinary timber planking so as to give a rough finish including centering shuttering and propping etc, height of propping and centering below supporting floor to ceiling for in situ reinforced concrete and plain concrete work in (Foundations footings bases of columns etc. and mass concrete.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-9, Item No. 9.1.(A), Page No. 63
83	Providing and laying controlled cement concrete M 200 and curing complete including cost of formwork and excluding cost of reinforcement for reinforced concrete work in R.C.C. COLUMN	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2, Page No.47
84	Providing and laying controlled cement concrete M 200 and curing complete including cost of formwork and excluding cost of reinforcement for reinforced concrete work in R.C.C. PLINTH BEAM	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2, Page No.47
85	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-6, Item No. 6.12(B), Page No.51
86	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in superstructure above plinth level upto floor two level in Cement Mortar 1:5. (1- Cement : 5 -fine sand)(B) Conventional	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-6, Item No. 6.19(B), Page No.53
87	20 mm thick sand faced cement plaster on walls upto height 10 meters consisting of 12 mm thick backing coat of c.m. 1:3 (1 cement :3 fine) and 8 mm thick finishing coat of c.m. 1:1 (1 cement :1sand) with Two 12mm Groove etc. complete. As per Drawings and as per approved by Engineer in charge.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-17, Item No. 17.95, Page No. 122
88	Finishing wall with water proofing cement paint of on wall surfaces (Two coats) to give an approved brand and manufacture and of required shape even shade after thoroughly brushing the surface to remove all dirt and remains of loose powered materials	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-18, Item No. 18.51, Page No. 135
89	Excavation for foundation upto 1.5M depth including sorting out and stacking of usefull materials and disposing of the excavated stuff with all lead & lift . (C) Hard Murrum	Cum	As per "General building work technical specifications Book" Sec-4, Cl.4.0.0.(C) ,Page No.-30
90	Providing and laying controlled cement concrete M.150 for curing complete excluding cost of formwork and reinforcement for reinforced concrete work in (C) Slabs, landing, shelves, Balconies, Lintels, Beams, Girders and Cantilever upto floor two level	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.1, Page No.46
91	Providing and laying controlled cement concrete M.200 and curing complete including the cost of formwork and excluding cost of reinforcement for reinforced concrete work in Ground Floor Beam	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2, Page No.47
92	Providing and laying controlled cement concrete M.200 and curing complete including the cost of formwork and excluding cost of reinforcement for reinforced concrete work in Ground Floor Slabs	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2, Page No.47
93	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:6 (1- Cement :6 -fine sand)(B) Conventional	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-6, Item No. 6.13.(A), Page No. 51
94	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:6 (1- Cement :6 -fine sand)(B) Conventional for Ground Floor	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-6, Item No. 6.13.(A), Page No. 51
95	Providing 10mm thick cement plaster in single coat on brick/concrete walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) including with 1 X 1 cm Grooves Ceiling Plaster For Ground Floor	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
96	Providing 15mm thick cement plaster in single coat on Rough (Similar)side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand) including with 1 X 1 cm Grooves and GI Galvanized 30cm Wide Hexagonal Wire Mesh on RCC & Brick Joints Internal Wall Plaster for Ground Floor	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
97	Wall painting (two coats) with plastic emulsion paint on Ceiling of approved brand and manufacture on undecorated Ceiling surface to give an even shade including throughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-18, Item No. 18.57, Page No. 136 & Item No. 18.60, Page No. 137
98	Providing and laying Vitrified tiles 10 mm thick , 24'x 24" in flooring treads of steps and landing laid on a bed of 12mm thick cement mortar 1:3 (1-cement : 3-coarse sand) finishing with flush pointing in white cement.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda

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99	Providing and laying Vitrified tiles 10 mm thick , 24"x 24" in skirting risers of steps and dedo on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurry	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
100	Green marble (Marble Slab stone 25mm thick double polished) frame as per detail drawing on four sides of the window and Three side of Door. The size of marble frame on all sides shall be 6 mm more than thickness of wall Etc complete.(Composite Item)	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
101	Green marble (Marble Slab stone 25mm thick double polished) frame as per detail drawing on Bottom side of Door. The size of marble frame on all sides shall be 6 mm more than thickness of wall Etc complete.(Composite Item)	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
102	Providing and fixing window having extruded aluminum Colour anodized section frame main outer size 63.50 x 38.10 x 1.95 mm,@ Wt 1.094 Kg / Rmt, horizontal two track member size 61.85 mm x 31.75 mm x 1.20mm @wt.of 0.695 Kg/mt, vertical member of size 61.85 mm x 31.75mm x 1.30 mm @ wt.of 0.659 Kg/mt with sliding shutters of horizontal member size 40mm x 18mm x 1.29mm @ wt.of 0.456Kg/mt, vertical member of size 40mm x 18mm x 1.29mm @ wt.of 0.456Kg/mt, @ Wt.0.457 Kg/mt with 5 mm thick transparent bronze colour tinted float glass with powder coated aluminum fittings and fixtures and transparent silicon sealant glass fixing to frame as per details etc complete for window with Mosquito jali window with auto track	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
103	Providing and fixing 38mm thick shutter flush door shutters, solid core finshed with 1mm thick laminate on both side with guled PVC edge beading as patten & Selection hinges with necessary screw,s.s handle,s.s Aldrop,s.s Stopper. Etc as per F I C.	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
104	Providing and fixing M.S. grills of required pattern to wooden frames of windows etc. with M.S. flats at required spacings and frame alround, square or round bars with round headed bolts and nuts or by screws (A) Plain Grill	Kg	As per 'General Building Work Technical Specifications' booklet, Sec-10, Item No. 10.100.(A), Page No. 75
105	Applying priming coat over new steel and other metel surface after and including preparing the surface by throughly cleaning, oil,grease, dirt and other foreign matter and scoured with brushes fine steel wood, scrapers and sand paper with ready mixed priming paint brushing red lead.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-19, Item No. 19.12., Page No. 139
106	Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint, brushing, interior to give an even shade including cleaning the surface an even shade including cleanicn the surface of all dirt, dust and other foreign matter	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-19, Item No. 19.7., Page No. 138
107	20 mm thick sand faced cement plaster with Gutka finish on walls upto height 10 meters consisting of 12 mm thick backing coat of c.m. 1:3 (1 cement :3 fine) and 8 mm thick finishing coat of c.m. 1:1 (1 cement :1sand) etc. complete with 1CM x 1CM Grooves and GI Galvanized 30cm Wide Hexagonal Wire Mesh on RCC & Brick Joints	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
108	Finishing wall with 100% weather proof exterior emulsion paint on wall surface (two coats) with one coat of exterior primer to give an required shape even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials etc complete	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-18, Item No. 18.51, Page No. 135
109	Providing and laying broken chine mosaic wirh 50mm Beding of cement concrete flooring 1:2:4 (1cement : 2-coarse sand : 4-graded stone aggregate 20mm nominal size) for terrace using 12 mm to 20 mm broken pieces of glazed tiles to be laid over cement mortar 1:3 to plain or slope and to be tempered to bring mortar creme out upto surface using white cement including rounding off junctions and extending them upto 15 cm along the wall,clearing with water and oxalic acid etc. as directed. (The Product Perfomance Shall Carry Guarantee for 5 Years Against Any Leakage)	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
110	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excaveted stuff and depositing on the road side slope as directed upto 50 Mt. Lead	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
111	Jungle clearance (Ganda Bavai etc) of Light/heavy dence (work done by manually or by machinery) including grabbing of & removing the roots & girth completely from the ground & back fill with earth & making surface good (a) In Earth as directed including depositing & removing the material away from the site of work at own risk and cost as and where directed etc completed for following	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
112	Providing , Laying, Spreading and Compacting stone aggregates of specific size to water bound macadam (GRADE - II) (63 mm to 45 mm) specification including spreading in uniform thickness , hand packing , rolling with 3- wheeled steel / vibratory roller 8 - 10 tonnes in stages to proposer grade and camber , applying and brooming requisite type of screeding / binding materials to fill up the interstices of coarse aggregates , watering and compaction to the required density	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda

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113	Providing and laying controlled cement concrete M.200 for curing complete including cost of formwork and Trimix process providing extra labour charges for the trimix vacuum dewatering service process on cement concrete road surface by using vacuum dewatering pump floater surface vibrator including making groves and rough finish to concrete surface	Cum	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
114	Providing and fixing pre-cast Rubber Dye / steel Dye inter locking concrete block 60mm thick with grade of concrete M300 pneumatic compressed / vibrated mechanically and as per approved design Confirming to IS 15658 : 2006 including 35 mm Sand layer for levelling and filling the joint with sand in proper line and level as per guidelines of IRC : SP 63-2018 etc. Complete	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
115	Providing and fixing pre-cast concrete kerb stone of gray cement based concrete block 30cm length,30cm height and 15cm thick of M250 grade concret as per approved design and including excavation for fixing in proper line and level,filling the joint with C:M 1:3 (1cement:3fine sand) etc complete	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
116	Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint, brushing, interior to give an even shade including cleaning the surface an even shade including cleanin the surface of all dirt, dust and other foreign matter.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-19, Item No. 19.7., Page No. 138
117	Providing, assembling, transporting & placing/fixing of Magazine Rack of size: 900W x 300D x 1800mmH. Top and body structure made of 18mm thick BWR plywood (IS303:1989) with 1mm thick laminate (IS 2046:1995) on all exposed surfaces. Four inclined display shelves made of 18mm thick BWR plywood (IS303:1989) with 1mm thick laminate (IS 2046:1995) finish. Bottom fitted with adjustable nylon bushes for floor leveling. All exposed edges to be finished with 2mm thick PVC edge banding. Complete with all necessary hardware and accessories As per design and drawing provided and finishing as per approval of architect and material as approved by engineer in charge	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
118	Providing and Placing News paper Stand 600 W X 900 D X 900 H mm. To be made from prime-quality CRCA steel tubes and sheets for durability & longevity, and the reading top is made from high-quality pre-laminated MDF for a seamless finish and contemporary look. H-type cross bracings, paired with levelling bolts at the base, provide extraordinary strength and stability, ensuring steady performance even on uneven floors.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
119	Table : Providing & fixing office table / staff table having ht of 750 mm Top, with 19mm thk plywood as per Architect/ Engineer Design or Selection and Back and side Ply of table is also made up of 19mm Thick. Top of Table is 19mm thk ply with laminate Finish Per Requirement and All internal & external Joints finished with teakwood beading Patti. Item includes fixing of drawers and keyboard tray and storage with shutters under table as per drawing. With grooves shown as per drawing. All exposed and internal surfaces covered with Laminate Finish of approved shade & Complete as per detail drawings & as instructed by Architect/consultant/ Engineer In charge. Complete with all necessary hardware like nails, ss screws, table chain, TDS channel, adhesives etc. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it. All ply should follow IS 710	Sq.m.	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
120	Reading Table/Work Station : Providing & fixing work station / table having ht of 750 mm Top, with MS Pipe Structure of Frame as per Architect/ Engineer Design or Selection and Back and side Ply of table is also made up of 19mm Thick. Top of Table is 19mm thk ply with laminate Finish Per Requirement and All internal & external Joints finished with teakwood beading Patti. Common or front Part of Table is Sectationized with MS Perforated Sheet. All exposed and internal surfaces covered with Laminate Finish of approved shade & Complete as per detail drawings & as instructed by Architect/consultant/ Engineer In charge. Complete with all necessary hardware like nails, ss screws, table chain, Key board tray, TDS channel, adhesives etc. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it. All ply should follow IS 710	Sq.m.	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
121	Chair Type - 01 (Cabin Main Chair) :- Supplying and providing High Back Mesh office Chair As per specification below: -Metal frame seat made of Mesh fabric upholstery (foam base) -Adjustable Head rest -Fixed Arm rest -Knee tilt mechanism -360 swivel motion/ 100mm stroke gas -Nylon Star base -Pushback mechanism & Comfy seating. -Complete as per architectural design and concept and approved by Architect &	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda

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122	Providing, assembling, transporting & placing/fixing of high-back mesh office chair with metal frame seat and mesh fabric upholstery with foam base. Features include: - Adjustable headrest - Fixed armrests - Knee tilt mechanism - 360° swivel motion with 100mm stroke gas lift - Nylon star base - Pushback mechanism Complete with all necessary hardware and accessories As per design and drawing provided and finishing as per approval of architect and material as approved by engineer in charge.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
123	Providing, assembling, transporting & placing/fixing of bookshelf of size: 900W x 410D x 1800mmH. Upper section and Lower section with 5mm thick glass and with 18mm thick BWR plywood (IS303:1989) doors with 1mm thick laminate (IS 2046:1995) finish. Main structure made of 18mm thick BWR plywood (IS303:1989) with 1mm thick laminate (IS 2046:1995) finish. All exposed edges to be finished with 2mm thick PVC edge banding. Complete with handles, locks, and all necessary hardware As per design and drawing provided and finishing as per approval of architect and material as approved by engineer in charge.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
124	Gang Chair (3 Seater) : Providing and Fixing 3 Seater (moulded foam seat and back In PU upholstery) Pero Cross Beam made of powder coated regular MS ERW tube having 8.0+/-0.03 cm x 4.0 +/- .03 cm x 0.2 +/- 0.014 cm size. Legs to be chrom plated made of rolled steel with 0.12 +/- 0.013 cm thickness.Seat and Back Shell to be perforated made from cold rolled M.S. Sheet (DIN 1623 Part 1 ST -12 Grade), 0.14 +/- 0.013 cm thickness. The side Bar is made of chrome Plate solid steel 3.0 cm +/- 0.03cm x 1.2 cm +/- 0.03 cm with fluting and plastic inserts. The Shell to be assembled on the cross beam with help of MS Bolts	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
125	Supplying and Placing Folding Wheel Chair with Overall dimension: (L) 790 x (W) 600 x (H)870mm Frame structure Foldable frame structure is made of section 22x1.2mm A3 carbon steel with chrome finish. Cross bar are made of A3 carbon steel with section 25.4 x 1.2mm. Rear wheel 24 inch Solid mag wheels with alloy in the rim Hand rim Integrated hand rim provide to drive the wheel chair of section 16x1.2mm A3 carbon steel with chrome finish Front wheel 8 inch HUB made of PA polymer and outer with solid rubber Arm rest PU molded arm rest & base is made of ABS for better arm support Calf rest & seat Leatherette strap for calf rest & leatherette cushion for seat Footrest Adjustable alluminium die cast foot rest with updown & swivel type mechanism Push handle Handles are made of moulded rubber grip to push the wheelchair Brakes Hand brakes are provided to lock the wheelchair at desired location. Foot press Extended base with molded plastic for better grip Finish Anti rust chrome finish safe working load 100kg.etc.complete as per drawings and design supplied by architect and instruction given by authority and	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
126	Supplying and providing dust bin made of 100% virgin plastic with paddle. Capacity-10 to 15 Ltr.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
127	Providing, assembling, transporting & placing/fixing of decorative wood panelling (1200mm x 3000mm) with melamine polish for reception area vertical wall with Photo frame 10 nos size of A4 (210 X 297 MM), 03 nos A3 (420 X 297 MM), 2 nos A2 (594 X 420 MM) with 50mm wooden frame with plastic glazing. MDF back with metal hangers. In Dark brown, Solid colour. As per design and drawing provided and finishing as per approval of architect and material as approved by engineer in charge. Complete with all necessary hardware and accessories	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
128	Providing and Placing Goddess Saraswati idol, seated gracefully on a swan having Copper detailing and with dimensions of Height: 24 inches (61 cm), Width: 22 inches (55.88 cm), Depth: 11.5 inches (29.21 cm). As per design and drawing provided and finishing as per approval of architect and material as approved by engineer in charge	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
129	Providing and fixing of approved quality roller blinds using phifer or equivalent fabric of premium grade, with roller tube, bottom bar leveller made of extruded aluminium alloy an Idler, Insert Type- Brackets, PVC chain etc. all complete at all floor and heights as per approved specification. Roller Tube Control, Clutch, Idler Side by side or single Roller Tube of extruded Aluminium 38mm inner dia - 41mm outer dia minimum wall thickness of 1.6mm. Roller blind - roller blind fabric should be made up of 35% Fibreglass, 65% PVC, it should have specific low emissivity treatment and lead free with Greenguard gold certification. It should have 3% to 5% openness, fabric thickness should be 0.43 mm, mesh weight approx 400 gms/ sqmtr. It should cut UV rays, with antimicrobial properties preferably with Microban. The fabric should be Flame retardant and Lead Free. It should be GreenGuard certified with Gold Standard for low chemical emissions for indoor use. including all accessories, material, labour,installation etc..and complete the work satisfactorily as per	Sqm	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda

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Sr. No.	Description	Unit	Item No / Page No of the applicable specification
130	Providing and laying controlled cement concrete M.200 and curing complete including the cost of formwork and excluding cost of reinforcement for reinforced concrete work for ground floor Wall	Cum	As per 'General Building Work Technical Specifications' booklet, Sec-5, Item No. 5.8.2, Page No.47
131	Wall painting (three coats) with plastic emulsion paint on Ceiling of approved brand and manufacture on undecorated Ceiling surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-18, Item No. 18.57, Page No. 136 & Item No.18.59, Page No. 137 & Item No. 18.60 Page No. 137
132	Providing and laying white glazed tiles 6mm thick in flooring treads of steps and landing laid on a bed of 12mm thick cement mortar 1:3 (1-cement : 3-coarse sand) finishing with flush pointing in white cement.	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-14, Item No. 14.29, Page No.96
133	Providing and laying white glazed tiles 6mm thick in skirting risers of steps and dedo on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurrv	Sqm	As per 'General Building Work Technical Specifications' booklet, Sec-14, Item No. 14.32, Page No.97
134	Providinf and fixing R.C.C. Manhole cover 600 MM x 600 MM size with R.C.C. cover frame having 5 MT load carrying capacity etc comp	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification Library@Vansda
135	Point wiring for Light / Bell with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length , in below type of pipe erected with 6A Modular type switch / bell push & accessories and earth continuity of following type, erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected, with necessary Lamp holder/ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	Pt.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
136	Point wiring for Tissino / Modular secondary light point with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires, in below type of pipe to be erected complete with earth continuity and necessary connection with primary light with accessories erected on Metal / PVC / wooden box covered with 3 mm thick PC(Polycarbonate) / Acrylic sheet for open / concealed wiring. with necessary Lamp holder / ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete	Pt	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
137	Point wiring for FAN with 2-1.5 sq.mm & earth wire of 1.5 sq.mm (Green) both are of .ISI marked 1.1 KV Grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected with 6A Modular type switch and hum free EME step type electronic fan regulator mounted and accessories with earth continuity of following type erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected. with necessary ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	Pt.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
138	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories.[I] For 6A Plug and 6 a switch with 2-1.5 sq.mm Cu. Wire from nearby switchboard/mcb db board.(f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	Pt.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
139	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories. [III] For 16A Plug and 16 amp switch with 2-4 sq.mm Cu. Wire with 2.5 sq.mm (green) earthing wire from mcb d b board.(f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	Pt	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
140	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories.[II] For 16A Plug and 16 amp switch with 2-2.5 sq.mm Cu. Wire from mcb db board.(f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	Pt.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
141	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge. (7) Blank Plate Single Cat.III	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
142	Supplying & erecting Approved make call bell indicator with buzzing sound and Red light indicating lamp with Red light button to attend the call suitable for 240 v 50 c/s supply to be erected.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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143	Point wiring for on board Looped Plug with 6A Modular type switch & 5 pin socket erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured /metallic/white front plate modules erected on / in wall / ceiling with following type accessories Cat III	Pt.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
144	Supplying & erecting approved make LAN cable of following size in existing pipe as per direction [C] CAT - 6	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
145	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	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
146	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 (b) 25 mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
147	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 (c) 32 mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
148	Supplying under floor pregalvanised corrosion proof rectangular sheet steel cable trunking of 1.6 mm thick having with stand point load up to 1.33 Ton & free from seepage of concrete of screed water with all accessories, Junction Box, Joints as required and demanded by engineer-incharge and laying/erecting as per OEM guidelines and as per instruction of engineer incharge having following size of dimensions and No of compartments (W x D x T) Cat-III [13] 300mm x 38mm x 1.6 mm with Three Compartments (FOR ELV, POWER IN FLOORING)	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
149	Providing and fixing approved make Perforated C type cable tray. Made from pre-galvanized sheet steel. The cable tray should be bended as per IS 2062/1079 . with max 17.5% perforation with coupler plate / Fish plate and GI hardware like nut - bolt and washers etc. erected on existing support as per Specification and as per instruction of engineer in charge..(5) 300 X 50 X 1.5 mm Thick (FOR ELV, ELE HVAC FIRE PLACED INDUCT)	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
150	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge. (8) Computer RJ-45 socket Cat.III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
151	Providing following type of Modular Type Accessories mounted with PVC / metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate , modules erected with necessary connections as per site situation directed by Engineer In charge. (3) Two Pin/RJ-11 Telephone Socket [B] For Two Gang Cat.III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
152	Providing & erecting Switch board for Computer or electric apparatus consisting of following modular type accessories mounted with PVC / Metallic concealed/open box with single mounting base frame covered with textured/metallic /white front plate, modules erected with necessary connections as directed. 1 no. 6A/16A universal plug-switch combined. 3 nos. 6A Switch 3 nos. 6A 5 pin Plug .For Modular Type Accessories Cat.III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
153	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V, Power Factor more than 0.95, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy > 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (H) Mirror Light 9 Watts, wall	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
154	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/ aluminium die cast powder coated and high U.V. & corrosion resistance with diffuser with company mark/name 160V to 270V, Power Factor more than 0.95, THD < 15% CCT 3000 K to 6500K, Luminaire efficacy > 85 lumens/watt ,LED LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Tube Light with integral driver (iii) 18-20 Watts, Ganga 20/18-20 conventional 4 feet Cat.III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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155	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.9, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Square/ Circular shaped Surface/Recessed Mount Downlight with provision for spring loaded mounting clips	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
156	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.9, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Square/ Circular shaped Surface/Recessed Mount Downlight with provision for spring loaded mounting clips	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
157	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.9, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Square/ Circular shaped Surface/Recessed Mount Downlight with provision for spring loaded mounting clips	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
158	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.9, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (B) LED Panel Light with provision for Plane front frame with translucent cover fixed to housing complete.IP20 (vi) 36 watts, 24"	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
159	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminium housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.(fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (B) Flood Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
160	Supplying & erecting approved make low noise decorative exhaust fan having square frame ABS body with inbuilt lowers & square frame. 250mm with 1350 RPM Cat.II	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
161	Providing & erecting Approved make Ceiling Fan with double ball bearing with Condenser 230 volt A.C.50 Hz. 900 mm sweep complete having 3 Aluminium blades, canopy erected complete. [Make shall be approved by Engineer in Charge]	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
162	Providing & erecting Approved make Power Saving 50 Watt Ceiling Fan with double ball bearing ISI mark with Condenser 230 volt A.C. 50 Hz 1200 mm sweep complete having 3blades with aluminium blades with , canopy & 30 cm. down rod erected with earthing.(Make shall be approved by Engineer in charge))	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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163	Supplying & erecting fan hook box of 10 mm M.S. round bar bounded to the RCC bars up to 50mm length each side and pierced through a 16 Gauge M.S. box / Heavy Duty PVC box complete erected concealed in Ceiling with necessary finishing.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
164	Providing 2.5mm.thick laminated acrylic sheet to cover the fan hook or Fan box.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
165	Supplying and erecting 19 / 20 mm. nominal bore Medium Class M.S. Pipe down rod erected duly painted for fan complete with proper insulation without leakage and earthing.	Mtr.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
166	Providing & erecting water cooler having storage capacity 150 Ltr. & cooling capacity 150 Ltr.per hour @ an ambient temp of 45° C. The outlet temp. of the water should drop by 15°C within a hour, The water cooler should be comprising of hermetically sealed compressor, fan motor, condensing unit, water tank surrounded by evaporating, coil, thermostats, relay etc.complete with necessary inlet & outlet connection. The body of water cooler will be made from Stainless Steel.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
167	Supplying & erecting 5 stage single reverse osmosis water purification system with M.S. powder coated frame, prefilter housing with 'O' ring presediment filter GAC filter, carbon filter suitable buster DC pump capacity 80 psi, mention with 40 psi inline type post carbon filter auto low & high pressure switches with following size of storage tank & LPH capacity & erected as directed [C] 50 Ltr / Hr with 150 psi 2 nos booster pump	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
168	Providing and erecting Miniature circuit breaker single pole 6A to 25A suitable to operate on 240 V A.C. system and having breaking capacity 10 KA to be erected in existing box, confirming to IS 8828/1996 with ISI Mark Cat.III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
169	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed (i) 25 Amps DP, Cat. III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
170	Providing & erecting 240 V MCB double pole switch for lighting Load (B Curve) having 10 KA breaking capacity & confirms to IS : 8828 in existing box having following capacity (A) 6 to 32 Amp. Cat.III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
171	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (c)63 Amp. Cat.III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
172	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (A) single phase incoming and horizontal single phase outgoing (b) sheet steel double door (IP-43) (iv)12 way	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
173	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (B) three phase incoming and single phase horizontal type outgoing Per phase isolation type (PPI) (b) sheet steel double door (iii)8 way	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
174	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated indoor type cubical panel board necessary IP42 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S.sheet for internal partitions with necessary accesories , supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of supplied switch gears, BUSBARS, suitable size of inter connecting PVC copper wire / copperaluminium strips, rubber grommets, rib, bakelite control fuses/MCB for measuring instruments, earth bus & earth bolts, foundation flange - boltsbase Plates, sufficient nos. of hinged doors, handles with locking arrangement and rubber gasket,heavy duty end terminal connection,danger notice board,necessary ventilation,earthing strip complete. The Panel shall be painted with epoxy powder coating.(The rates excludes the cost of switchgears, bus bars, inter connecting mains & Copper Aluminium strips, meters, Fuses etc. The dimension shall be measured excluding base beams) The panel shall be supplied with following approved manufacturers with followingsize.(C) The standard companies switch gear shall be used and only manufacturers at CPRI approved factory as per IEC 61439 for beneficial use.(i) with 350mm depth	Sq Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
175	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 25 KA. at 415 V, having normal current rating up to 25 A to 100A. with Fixed thermal & magnetic release suitable to work on A.C. supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existng 16 G M.S. housing. ICS=100% of ICU only Cat.III Page 14 of 30	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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176	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 35 KA. at 415 V. having normal current rating 125A. with Fixed thermal & magnetic release suitable to work on A.C.supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing ICS=100% of ICU only Cat III	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
177	Providing and erecting Approved make Earth fault Relay suitable to mount with inter connection suitable to following size of moulded case circuit breaker having CT ratio & MCCB rating as following along with shunt trip 220V AC. with all internal connections & complete erected in existing M.S.housing.. (2) 125 A -200 A , CT Ratio 1/200	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
178	Supplying and erecting triple pole & neutral 440V/ 500V panel mounting Aluminium Busbars with four equal Nos. of bus having current density not more than 0.8 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each busbar,erected in existing cubical panel with necessary connections. (A) Suitable for 100 Amp. Capacity	Rn.Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
179	Supplying and erecting triple pole & neutral 440V/ 500V panel mounting Aluminium Busbars with four equal Nos. of bus having current density not more than 0.8 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each busbar,erected in existing cubical panel with necessary connections. (B) Suitable for 200 Amp. Capacity	Rn.Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
180	Providing and erecting multifunctional meter suitable for application of Power monitoring and showing measurement of following Voltage, Frequency, Apparent energy, Apparent power, Active and reactive energy, Active and reactive power, Average voltage Vavg, Peak demand power PM, QM, SM, Demand power P, Q, S, Apparent power S, S1, S2, S3, Unbalance current, Power factor and displacement PF (signed, four quadrant), Calculated neutral current, Active, reactive, apparent energy (signed, four quadrant), Active power P, P1, P2, P3, Voltage U21, U32, U13, V1, V2, V3, Phase currents, Average current lag, Peak demand currents, Reactive power Q, Q1, Q2, Q3, Demand current I1, I2, I3, [Us] rated supply voltage 40...300 V AC 45...65 Hz, 40...300 V DC, Network frequency 50 Hz, Type of network 3P, Display type 7 segments LED, Display colour Red, Messages display capacity 3	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
181	Supplying and erecting approved make suitable panel indicator LED type lamp, lens cover, complete erected with necessary connections.	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
182	Providing and erecting AC-3 duty 3 pole power contactor with 2 NO & 2 NC aux contacts complete with 415V/220V operating coil suitable for (L&T, BCH,T.C., Siemens, C&S make).(C) for 60 / 70 A rating	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
183	Supplying & erecting approved make Four Pole 415V change over switch interior for panel mounting with operating mechanism A.C.23 duty confirming to IS for (C)100-125A Cat-III	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
184	Providing and erecting metallic vitrified danger notice board as per language suggested by engineer incharge for MEDIUM VOLTAGE installation to be erected as per IS-2551.	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
185	Supplying and erecting approved make Octagonal pole made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/2633/4759, suitable suspend local wind speed with integral Junction box consist of terminal plate of min 6mm Hylam sheet, standard profile 35mmX7.5mm Din-Rail for MCB Mounting, stud type terminal and arrangement for cable termination to be erected With Suitable foundation (Included) as per details given by manufacturer considering site requirement. (D) 6 Mtr. Long 70 mm Top X 135 mm bottom dia, 3 mm thickness with 200mmX200mmX12mm base plate, 4-M20 Bolts and 600mm long with necessary C.I. L Bolts. Approx. Pole weight 50 kg.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
186	Providing and erecting Street Light pole bracket comprising main B Class MS pipe of 4.2 cm/require outside dia. complete with suitable B Class M.S. sleeve tubing of approx. 45cms.length and suitable for 76.5 mm /80mm / required size of pole top having sufficient fasteners for fixing the brackets and having spread of 1.5.mtr. length with 110 deg.with vertical plane & suitable welded stays, reducer and with check nuts complete painted with one coat of Red oxide / PU base primer and two coats of Aluminium / PU paint. paint with following nos of arms [A] Single Arm Bracket 1.5 Mtr.	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
187	Providing 1:2:4 cement concrete foundation & 70 % PCC from bottom including excavation for the pole of size 45 x 45 x 100 cm. Deep in below ground level with plinth of 45 cm x 45 cm (or 45 cm dia x 45 cm) high upper ground level with necessary curing and finishing in approved manner (for 4 & 6 mtr pole)	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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188	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 1Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses with company mark/name engraved or embossed 120 to 300 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K, Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.CREE /OSRAM / PHILIPS Lumileds / NICHIA / SEOUL/ BridgeLux (U.S.A.) make LED used for luminaire. (fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Street Light (IP-65), Surge protection - 4KV integral and 10 kv non integral ,Light must have 440VAC line supply protection. It should withstand 48 hours for 440VAC	EACH	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
189	Supplying & erecting IP 55 grade following size section pillar fabricated from joint less M.S. Sheet with angle iron legs made from jointless M.S. Angle with cable clamps to be buried in ground to have appropriate erection to work uniform until erected with cement concrete foundation and 45 cm high bricks work finishing with plaster etc. hinged double door internally supported on both side,with internal and outside looking arrangement with lock and keys in duplicate 35 x 35 x 5 mm M.S. Angle of Two Nos. one is welded and other with nut and bolt for erecting Bakelite sheet. Painting the Section Pillar inside and out side with three tank powder coated paint. section pillar roof should be without joint with water leakage proof & tested as per IP 55 test & followed by IS 2147 of 1962 (B) 75 X 60 X 45 cm section pillar fabricated from 16 Gauge MS Sheet with angle iron legs 45 cm long made from 35	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
190	Supplying & erecting approved make Digital time switch having lithium cell 6 years operative and operate battery backup 1 channel day clock with 14 memory programme, suitable to operate on 240V + 5%, 16A with, floating contacts Minimum switching setup time 1 minimum & LCD display. Also comprised permanent ON/OFF switching. Programming switches & housed in fire proof thermoplastic enclosure & transparent cover erected as required with necessary connection erected as directed.	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
191	Providing and erecting 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 (A) With medium class Rigid PVC pipe and accessories (a) 2 wire 1.5 sq. mm	Mtr.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
192	Providing and erecting 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.(A) with medium class Rigid PVC pipe and accessories (b) 2 wire 2.5 sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
193	Providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size(A) with medium class Rigid PVC pipe and accessories (a) 2 wire 4 sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
194	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand / Solid Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cables.(C) 4 core 6 Sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
195	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cables.(A) 4 core 10 Sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
196	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (D) 3 1/2 core 70 Sq. mm (35 Sq. mm 1/2 core)	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
197	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (C) 3 1/2 core 50 Sq. mm (25 Sq.1/2 mm core)	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
198	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cables. (B) 4 core 16 Sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
199	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand / Solid Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (C) 4 core 10 Sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
200	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (C) 2 to 4 core 10 Sq. mm	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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201	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (D) 2 to 4 core 16 Sq. mm	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
202	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (C) 3 & 1/2 core 70 Sq. mm	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
203	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables. (B) 3 & 1/2 core 35/50 Sq. mm	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
204	Solder less crimping type Copper lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (C) 16 Sq.mm.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
205	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (B) 10 Sq.mm	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
206	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (D) 35/50 Sq.mm	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
207	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (G) 120 Sq.mm.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
208	Providing and erecting Mains with ISI marked, 1.5KV grade electrolyte multi stranded, annealed copper conductor with heat resistant PVC insulated conforms to IS 694, IEC - 227 erected in existing pipe of following size (Specifically for control panel, relays, power switchgears, motor starters & control wiring) with required size of copper lugs, nuts and bolts if required. (h) One wire 1.50 sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
209	Providing and erecting Mains with ISI marked, 1.5KV grade electrolyte multi stranded, annealed copper conductor with heat resistant PVC insulated conforms to IS 694, IEC - 227 erected in existing pipe of following size (Specifically for control panel, relays, power switchgears, motor starters & control wiring) with required size of copper lugs, nuts and bolts if required. (c) One wire 2.50 sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
210	Providing and erecting Mains with ISI marked, 1.5KV grade electrolyte multi stranded, annealed copper conductor with heat resistant PVC insulated conforms to IS 694, IEC - 227 erected in existing pipe of following size (Specifically for control panel, relays, power switchgears, motor starters & control wiring) with required size of copper lugs, nuts and bolts if required. (e) One wire 6.00 sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
211	Providing and erecting Mains with ISI marked, 1.5KV grade electrolyte multi stranded, annealed copper conductor with heat resistant PVC insulated conforms to IS 694, IEC - 227 erected in existing pipe of following size (Specifically for control panel, relays, power switchgears, motor starters & control wiring) with required size of copper lugs, nuts and bolts if required. (f) One wire 10.00 sq. mm	Mtr	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
212	Making trench in soft soil of suitable width of 90 cm deep for laying cable or locating the fault all over the run and back filling the same and making the surface as normal ground.	Mtr.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
213	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (A)50 mm outer dia.	Mtr.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
214	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (C)90 mm outer dia.	Mtr.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
215	Providing and erecting ISI marked PVC insulated PVC Sheathed Flat flexible Submersible copper cable approved make of following Size. (B) 3 Core x 2.5 Sq. mm.	Mtr.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
216	Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200- 250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover.(approved make OEM has to submit test certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 • / meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphar content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retainmoisture for long time Necessary test report must be submitted.(c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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	(b)For Electrical installation up to 11 KV in normal soil. Length of Pipe : 2.00 mtrs <u>Back filling Compound :1 no. Bag of 25 Kg.</u>		
217	Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200- 250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover.(approved make OEM has to submit test certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 • / meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphar content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retainmoisture for long time Necessary test report must be submitted.(c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like (c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like Automation, SCADA) i.e independent Earthing in normal soil. Length of Pipe : 3.00 mtrs <u>Back filling Compound :2 nos. Bags of 25 Kg.</u>	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
218	Providing and erecting required size HOT deep Galvanised iron strip for earthing of H.T. , OCB/ ACB/ Transformer LT panel board, Motors etc. using proper clamp.	Kg	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
219	Providing and erecting HOT deep Galvanised iron strip wire 8 to 16 SWG.	Kg	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
220	Providing & erecting open well horizontal mono block pump set with cast iron body, complete for three phase submersible motor having[C] For 3 HP 3 phase open well horizontal mono block pump set suitable for 85 LPM to 270 LPM @ 11 mtr to 33 mtr <u>head suitable for 50/65 mm dia delivery pipe Cat II</u>	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
221	S.I.T.C. submersible pump set suitable for bore of 100 mm. dia. or more having three phase motor capacity not more than 5 H.P. with following capacity . Lifting and Lowering taken extra. (B) (16 stage) 140 to 180 LPM discharge at 96 to 69 mtrs. <u>head respectively suitable for 50mm dia delivery pipe Cat III</u>	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
222	Supplying & erecting approved make 3 phase motor control cubical panel (Star - Delta) made from16 G. CRCA sheet duly painted with epoxy powder painted inside and outside with hinged doors and locking arrangement, consisting of suitable size of ON- OFF isolator (AC - 3/23 duty) main fuses, single phasing preventer cum water level. Guard (Complete unit), Toggle switch to by pass Single phase preventer cum WLG, indicating lamps for R- Y- B phases, over load relay, Automatic water level controller, Ammeter & Voltmeter each with two way selector switch incoming wires duly socket Crimped, Panel to be erected on angle iron frame grouted on wall as directed. Star Delta & main contactor, overload relay, thermal / Electronic Star delta cutoff timer, start - stop push buttons. The isolator overload relay & contactors of L& T, Siemens or Cuttler Hamer make only. Panel to be erected on angle iron	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
223	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.(Size Not less than 1.5 Sq MM) from pump to upper and lower tank with ISI marked Rigid PVC <u>Pipe</u> Supplying and erecting, commissioning and testing of Diesel Generating set confirming to IS: 4722:1968 & BS:5514 having continuous rating, 3 phase, 415 volts, 50 cycles A.C. supply comprising of a totally enclosed air/water cooled diesel engine with multi-cylinders developing suitable BHP not less than following capacity at 1500 RPM with 10% overload for one hour in 24 hours with standard accessories like fly wheel, lubricating oil cooler, "A" class governor, heavy duty fuel wheel and lubricating oil filter, oil bath air filler, lubricating oil pressure gauge, end exhaust manifold, standard set of tools with adjustable spanners, screw drivers, cylinder head to cover, joint cylinder head to exhaust, element lube oil filter, 12 / 24 volts <u>excitation system with brushless excitation</u> duty battery, dynamo, cut-outs, ammeter, necessary wiring, pressure gauge, starter etc and heavy duty Residential type exhaust silencer and vertical hot air duct both logged with asbestos rope, save oil trays, exhaust piping of required length, standard wall/floor mounted fuel with level indicator and piping and drip proof alternator, self excited, self regulated, screen protected, with excitation system, capable of delivering the rated system output at 415 volts, 3 phase, 0.8 PF, 50 Hz, 4 wire, running at 1500 RPM, conforming to IS-4722- 1968 with voltage regulation +/- 5% of rated voltage from no load to full load. Both the engine and alternator fitted on a common fabricated steel base plate with antivibration mounting engine and	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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	alternator both connected to each other by flexible flange coupling and with floor/wall mounted control panel box comprising of voltmeter ammeter, selector switches, ACB / MCCB / MCB of adequate capacity, indicator lamps duly wired with HRC fuses. The alternator & control panel shall be connected with provided suitable capacity armoured cable and complete with Acoustic enclosure (canopy) made out of 16 SWG CRCA Sheet, sound absorbing material Rockwool of 64 density & 100 mm thick conforming to IS:8183 / PU Foam of 40 Density - at least 40 mm. The resin bonded rockwool covered from inside the canopy by perforated sheet with 3/4 mm holes, sound level not more than 75 dB at a distance of 1 mtr, as per PVCT norms. Erection, commissioning and satisfactory testing as per requirement with first filling of fuel, oil, etc. with guarantee / Warrantee of complete system for Two years. & with obtaining all necessary certificate from Electrical Inspector. The Capacity and		
224	(H) Continuous Rating of 50 KVA ,BHP not less than 65.8 BHP	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
225	Providing & erecting approved make AMF control panel suitable for following size of 3 phase, 415 V., 50 cycles, A.C. diesel generating set complete of scope as detailed below: 1) Power module: A pair of electromechanically interlocked contactors (for mains & generator) Overload relay for generator contactor Neutral contactor for mains and generator Power socket for connections. 2) Control and metering module: Line voltage monitor. Generator voltage monitor Ammeter 3 items attempt start facility. Air circuit breakers/MCB/MCCB of suitable rating for auto/manual operation. Auto/manual switch. Emergency stop push buttons. Manual start push button. frequency meter. Engine hour meter. Two earthing studs. 3) Protection module: The engine shutdown in the unlikely event of Low lube oil pressure High cylinder head temperature. V belt failure. 4) Indicators with alarm Load on generator. 5) Indicators Load on mains Engine fails to start . Emergency stop battery charger. The AMF Panel of following capacity (A) AMF Control Panel for 50/62.5 KVA 3 phase DG Set	Ea	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
226	Supply, Installation, Testing & Commissioning of following size of Grid Tied Solar Power Plant with Supply, Installation, Testing & Commissioning of following size of Grid Tied Solar Power Plant with Solar Panels (ALMM approved): Frame Material : Anodized Aluminum alloy Frame With Twin Wall Profile, Front Cover : High Transmission Low-Iron Tempered Glass (AR Coated), High efficiency and positive power tolerance Pmax: 0/+5, Module Efficiency should be approx. 18%-21%, Normal operating temperature 45'C, Junction Box with Waterproof IP67 & MC4 Compatible and Enclosed with Bypass diodes, 100% Electroluminescence test to ensure error free Modules, Thep. temp. co-efficient of the PV module shall equal or better than - 0.45%/degree C. Solar PV modules of minimum fill factor 75% to be used. Unit Production:- 4 to 5 Unit /kw /day (Actual)(1Year Avg) With 10 year Product warranty and 25 year Linear Power Warranty., Solar Inverter: MPPT Range: 80-1000 V, Max efficiency: 97.5% - 98.9%, O/p Frequency: 50/60Hz, Operating Altitude (m) ≤4000, O/p Power Factor: ~1, O/P THDI: <3%, Operating Tempreture Range: -25~60°C, Anti-islanding Integrated, Input Reverse Polarity Protection Integrated, Insulation Resistor Detection Integrated, Residual Current Monitoring Unit Integrated, Output Over Current Protection Integrated, Output Short Circuit Protection Integrated, Output Over Voltage Protection Integrated, Protection Degree: IP65, User Interface LCD & APP,Datalogger & Communication: GPRS / Wi-Fi, Module Mounting Structure: Seamless Box Pipe / 'C' Channel of suitable size for rooftop solar installations with good stability agaist wind & weight load., Hot Dipped Galvanized steel coils.suitable arrangement for base plate for foundation , solar panel mounting, the structure should be suitable for carry the load of solar panel,wiring, sprinkler system etc. with necessary foundation work/wall mount, j bolt, anchor fastner etc. the nut bolt used for installtion of stucture should be (SS 304) quality. and Balane of System with necessary Swithgears (Suitabel size and protection of ACDB & DCDB), inter connecting wiring, earthing system, lightning arrester system, all liasoning work with various gov. dipartment like state nodal agency,DISCOM & CEIG is included in agency scope. (Excluding GEDA Application fees, Solar connectivity Charges, Meter connectivity Charges, Meter testing Charges.)	Per KW	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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227	Providing and erecting Inverter based approved make split air-conditioning unit consisting of condensing unit with variable speed fan motor, inverter type hermetically sealed rotary compressor with accessories etc. duly connected separately erected evaporating unit and blower motor with its accessories by means of extra supplied proper insulated copper tubing, drain PVC pipes suitable for (cost includes Eco Friendly green gas charging and 15A plug top & Remote Control & MS Stand) with necessary core cutting. (1)For ISEER Range (KWH/KWH)(3.1 to 2.00) for 1.5 ton capacity.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
228	SITC of 48 x 10/100/1000BASE-T ports 4 x Gigabit GbE/SFP combo ports Advanced L2 switching and security features L2+ Static Routing Optional "standard mode" or "surveillance mode" management user interface [Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
229	SITC of Patch Panel Cat 6 UTP Keystone Type- 24 Port-Fully Loaded [Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
230	SITC of Face Plate - Dual (Keystone Jack,square) [Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
231	SITC of CAT6 UTP 24AWG PATCH CORD:2M,Plug 30U' Snag less [Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
232	Supply, Installation, Testing & Commissioning of Indoor / Outdoor 5 MP IP Dome Camera of 1/2.8" Progressive CMOS Sensor with resolution 30 fps @ 2048x1536 & Manual Vari Focal f = 3- 9 mm Field of View 40° ~ 80° (H), 30° ~ 60° (V) IR range upto 30 Mtr Smart IR Min. Illumination 0.1 Lux @ F1.4 (Color), 0.01 Lux @ F1.4 (B/W) 3D Noise Reduction ; Compression Technology H.265, H.264, MJPEG with 3 simultaneous streams ; S/N Ratio 51.5 dB Dynamic Range 110 dB WDR; two way Audio ; on board SD/SDHC/SDXC card slot ; P-iris Lens & Digital Image Stabilization ; ONVIF IP43, CE, FCC Class A, UL listed with all required accessories	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
233	Supply, Installation, Testing & Commissioning of Indoor / Outdoor 5 MP IP Bullet Camera of 1/2.8" Progressive CMOS Sensor with Night Vision and with resolution 30 fps @ 2048x1536 & Manual Vari Focal f = 3- 9 mm Field of View 40° ~ 80° (H), 30° ~ 60° (V) IR range upto 30/50 Mtr Smart IR Min. Illumination 0.1 Lux @ F1.4 (Color), 0.01 Lux @ F1.4 (B/W) 3D Noise Reduction ; Compression Technology H.265, H.264, MJPEG with 3 simultaneous streams ; S/N Ratio 51.5 dB Dynamic Range 110 dB WDR; two way Audio ; on board SD/SDHC/SDXC card slot ; P-iris Lens & Digital Image Stabilization ; ONVIF IP66, IK10, CE, FCC Class A, UL listed with all required accessories	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
234	Supply, Installation, Testing and Comissioning of 64 Channel Network Video Recorder (NVR), Dual OS design, HDD Hot Swap with RAID support, N+1 hot spare configuration, Support 16CH@2MP, H.265/H.264 Video Compression, HDMI, VGA output, up to 8 SATA interface each with max 10 TB support and 1 eSATA, 16-ch synchronous playback at up to 1080p resolution, Gigabit Ethernet network interfaces, bandwidth 320 mbps, CE FCC, BIS, Operating Temp -10 deg to 50 deg C, USB and serial Interface, RAID supported	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
235	Supply, install, test, and commission 8TB enterprise-class hard disk drive optimized for 24x7 surveillance recording. SATA III interface, 7200 RPM, ≥256 MB cache, low power consumption, vibration tolerant, suitable for RAID/NVR/DVR systems. Includes mounting, cabling, configuration, full functional testing, and manufacturer warranty	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
236	Supply, deliver, install, test, and commission a 55" LED/LCD display with Full HD resolution (1920x1080 pixels) for conference halls, classrooms, meeting rooms, or similar applications. The display shall have at least 2 HDMI ports, 1 VGA port, and support for other standard inputs. It shall include a wall-mount or floor stand as required, and all necessary accessories for installation such as mounting brackets, power and signal cables. The display should deliver clear, high-contrast video output, support standard refresh rates, and provide reliable operation for continuous or intermittent use. Scope includes proper mounting, cabling, connection, configuration, and functional testing to verify all ports and features. The work also includes warranty support as per manufacturer standards	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
237	SITC of Jack Cat 6 Keystone UTP [Approved by Competent Authority i.e. not Below the rank of Executive Engineer]	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
238	SITC of 12U Network Rack for Network switch, Jack panel consisting of mains panel, fan tray for ventilation, power distribution, cable channel etc as required.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION

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Sr. No.	Description	Unit	Item No / Page No of the applicable specification
239	Supplying and erecting approved make online Un-interruptible Power Supply system comprising flat cum-boost charger with IGBT base rectifier & Inverter & sealed maintenance free SMF batteries. The charger having operating capacity for input 160-270V AC & inverter having output 230V,50 Hz Ac with 0.8 load power factor with battery, over/under voltage output with over load & short circuit protection equipment. The system housed in CRC sheet duly powder coated paint with following power backup.with MS painted batteries stand, 10% Overload capacity for momentary load (1) 20 KVA, 2 phases with 4Hr Backup	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
240	POWER CONNECTION & STATUTORY APPROVALS (LIAISONING WORK FOR GEB POWER FOR 1NO 3PHASE METER.) Charges for doing liasioning work for taking power for the premises obtaining the necessary clearances from the Electrical inspector / competent Authorities for the total Electrical installation, co-ordinating with various agencies. All necessary drawings, calculations, test certificates, etc. as required by these authorities shall be prepared and furnished by the contractor. Any modification/rectification as required by these authorities shall be carried out by the Contractor. As per drawing and design supplied by architect and instruction given by authority	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
241	The required unit shall be a high-performance, portable Bluetooth-enabled Public Address (PA) system, specifically designed for large open-hall environments, seminars, and social gatherings. The speaker must deliver a minimum power output of 150W to 240W RMS to ensure uniform sound distribution in open spaces without distortion. It shall feature a multi-driver configuration, including dedicated woofers for deep bass and high-frequency tweeters for crisp vocal reproduction during lectures and seminars. The system must support the latest Bluetooth (v5.0 or higher) for seamless wireless streaming and include multiple input options such as USB, AUX (3.5mm), and SD card slots. For seminar use, the unit must be equipped with at least two professional-grade UHF Wireless Microphones with independent volume and echo controls, along with a dedicated "Mic Priority" feature that automatically	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
242	Supply, deliver, install, test, and commission a 75" Full HD (1920x1080) resolution display suitable for conference halls, meeting rooms, and classrooms. The display shall include 2 HDMI ports, 1 VGA port, and standard connectivity options for laptops, PCs, and media devices. The work includes provision and installation of wall mount stand, all necessary cables and accessories, power cabling, and proper mounting as per site requirements. The display shall be capable of clear, bright, and distortion-free output, supporting both video and presentation applications. Scope includes configuration, functional testing of video and audio output, and verification of connectivity through HDMI/VGA interfaces. The package shall include	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
243	The required unit shall be a heavy-duty, monochrome (black and white) multi-function laser printer capable of high-speed printing, digital scanning, and standalone photocopying ("Xerox" functionality). The device must utilize dry toner-based laser technology to ensure smudge-proof, archival-quality output with a minimum print and copy resolution of \$600 \times 600\$ dpi. It should deliver a sustained print speed of at least 18 to 30 pages per minute (ppm) on A4 media, featuring a robust monthly duty cycle ranging from 8,000 to 10,000 pages to support consistent office workloads. The integrated flatbed scanner must provide color scanning capabilities with an optical resolution of at least 600 dpi, supporting digital	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
244	Supply and installation of a Desktop PC featuring an AI-integrated processor (Intel Core Ultra 5 / Ryzen 5 or equivalent with NPU), 16GB DDR5 RAM, and 512GB Gen4 NVMe SSD. Unit must include a 24-inch IPS height-adjustable monitor with TUV-certified eye protection. Connectivity must support Wi-Fi 6E, Bluetooth 5.3, and USB-C Thunderbolt 4. System must be housed in a tool-less SFF chassis with an 80 Plus Gold PSU. Includes 3-year onsite OEM warranty.	Ea.	As per seprate specifications sheet attached; ELE DETAILED ITEMWISE TECHNICAL SPECIFICATION
245	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 (I-Cement: 1- fine sand) (Seal and cover to be measured and paid for separately) (A) vitreous china Pattern : (i) in white colour.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
246	Providing and fixing 12.5 Liters low level flushing cistern with a pair, of C.I. or Mild brackets, complete with fittings such as lead valve less syphon, 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	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
247	Jet spray heavy duty with S.S. Braided hose 60 cm long	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
248	Providing and fixing toilet paper holder.(A) C.P. Brass.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION

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249	P&F 2-way Brass Bib Tap Providing and Fixing 2-Way Brass Bib Tap with wall flange in Polished Chrome of approved Quality and conforming to Manufacturers Standards.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
250	Providing and fixing plastic seat and cover for wash down water closer with C.P. brass hinges and rubber buffers. (B) Black plastic seal and cover.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
251	Providing and fixing washbasin with single hole for pillar tap with C.I. or M.S. brackets painted white including sutting holes and making good the same but excluding fittings.(A)Vitreous China:(ii) Flat Back washbasin 550 mm x v 400mm size (i) In white colour	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
252	Providing and fixing Kitchen sink with C.I. or M.S. brackets, painted white including cutting holes in walls and making good the same but excluding fittings. (C) Vitreous China Sink.(i) 600mm x 450mm x 150mm size	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
253	Providing and fixing C.P. brass towel rail complete with C.P. brass brackets fixed to wooden plugs with C.P. brass screws.(B) 600mm x 20mm size.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
254	Providing and fixing C.P. brass waste for washbasin or sink. (B) 40mm dia.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
255	Providing and fixing pillar tap, capstan head, screw down high pressure with screws, shanks and back nuts. (i) 20mm dia.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
256	Providing and fixing Heavy Duty Stainless Steel flexible Connection Pipe Set with Acessories	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
257	Providing and fixing 600mm x 450mm bevelled edge mirror of superior glass mounted on 6mm thick A.C. sheet or plywood sheet and fixing to wooden pluge with C.P. brass screws and washers.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
258	Providing and fixing Rubber plug for sink or wash basin.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
259	Providing and fixing C.P. brass shower rose,divertor(cold and hot water inlet),spout with 15mm or 20mm inlet..	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
260	Providing and fixing screw down bib taps of following size.(B) Brass chromium plated screws down Bib Tap. (ii) 20mm dia.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
261	Providing and fixing chromium plated,C.P.Angle stop cock 15 mm Heavy duty with cap of approved quality for .	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
262	Providing and fixing chromium plated, bottle trap with necessary couplings of approved quality for wash basin/urinal.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
263	Providing and fixing Urinal of approved quality including connection with trap and with integral longitudinal flush pipe.(A) Squating plate pattern white earthenware 550mm x 300mm.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
264	Providing and fixing chromium plated brass half turn flush cock of approved quality including fixing in pipe line etc. complete.(i) 20mm dia.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
265	Providing and fixing G.I. inlet connection for flush pipe with W.C. Pan	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
266	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] 20 mm	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
267	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] 25 mm.	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
268	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] 32mm.	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
269	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall 32 mm	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION

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270	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall 40 mm	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
271	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall 50 mm	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
272	Supply, installation, testing and commissioning of PN 16 full bore, lever operated, forged brass body, quarter turn, ball valve provided with forged brass hard chrome plated ball. Including necessary nipple, coupling, union etc 20 MM	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
273	Supply, installation, testing and commissioning of PN 16 full bore, lever operated, forged brass body, quarter turn, ball valve provided with forged brass hard chrome plated ball. Including necessary nipple, coupling, union etc 25 MM	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
274	Supply, installation, testing and commissioning of PN 16 full bore, lever operated, forged brass body, quarter turn, ball valve provided with forged brass hard chrome plated ball. Including necessary nipple, coupling, union etc 32 MM	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
275	Supply, installation, testing and commissioning of PN 16 full bore, lever operated, forged brass body, quarter turn, ball valve provided with forged brass hard chrome plated ball. Including necessary nipple, coupling, union etc 40 MM	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
276	Supply, installation, testing and commissioning of PN 16 full bore, lever operated, forged brass body, quarter turn, ball valve provided with forged brass hard chrome plated ball. Including necessary nipple, coupling, union etc 50 MM	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
277	Supply, installation, testing and commissioning of Horizontal plunger type Forged Brass / Bronze Float Valve, Screwed End, HDPE Ball / Float, PN 10 rating, 40 MM	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
278	Supply, installation, testing and commissioning of 'Y' type Strainer (CI Body) with SS 316 / 304 mesh complete with required accessories. The strainer shall be single or double type screwed thread for bores of up to 50 mm and flanged for bores of 65 mm above. Strainers of up to 50 mm shall be gun metal or bronze. 50 MM	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
279	Woltman Type Bulk Water Meter- AMR Based: Water Meter: Design, Supply, Installation, Testing, Commissioning of Woltman type Bulk Water Meter, CI/ Brass/ Bronze body material, totalizer made of copper can/ suitable anti corrosive metallic material, totaliser metallic shall have 5 mm thick glass cover suitable against antifraud attempts, Flange End process connection, IP 68 protection class, AMR Woltman Type Water Meter with removable mechanism, magnetic drive, dry dial, and be fitted with a low mass rotor which is parallel to the direction of water flow and exhibits dynamic thrust relief, water meters complete with T Type strainer, ISO 4064 : 2005 with valid CE mark mentioning notified body number along with MID / OIML / ISO certification from a recognized International laboratory. AMR System : AMR System shall be Walk By / Drive By mode, Wireless AMR trans-receivers shall be directly fitted on meter or inbuilt, IP 68 protection class, water meter & AMR Module shall be of same brand, Single Command based AMR Reading and Minimum 90 days historical data retriive facility, alaram indication/ recording (for Reverse Flow, back flow, Peak Flow, Minimum Flow, Low Battery Alaram, Volume below threshold, Volume above threshold, Reverse Meter, Meter Stopped), Minimum 10 years of AMR module battery life considering one no. communication	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
280	Design, Supply, Installation, Testing and Commissioning of \Float/ Displacer Type level switches with 2 nos SPDT contacts of Micro switch rated 5 A, potential free power supply, Material of wetted parts shall be SS 316 and the material of accessories shall be SS. IP 65 or equivalent degree of protection for enclosure, suitable for sump, ESR, tank, vessels and underground reservoirs. The top mounted level switches shall be supplied with still tubes to suit the requirement. Accessories like name plate, mating flange, gaskets, fasteners, bolts & nuts, etc. shall be supplied with the Level Switch of following Range.. 0 to 5 meter Float type level switches shall be provided in underground water tanks for pump control, and top mounted displacer type level switches shall be provided in overhead water tank for automatic operation of transfer pumps.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION

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281	Supply, installation, testing and commissioning of brass/bronze Auto air vent valve rated for PN 16 including all fitting & accessories (Including ball valve, nipple, etc.) 20 mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
282	Providing and fixing 600 mm x 600 mm manhole FRP covers fixed with cement mortar as required. (For UGWT & OHWT)	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
283	Providing and erecting water cooler having storage capacity 80Ltr. & cooling capacity 40 Ltr.per hour @ an ambient temp of 45° C. The outlet temp. of the water should drop by 15° C within a hour, The water cooler should be comprising of hermetically sealed compressor, fan motor, condensing unit, water tank surrounded by evaporating coil, thermostats, relay etc. complete with necessary inlet & outlet connection. The body of water cooler will be made from Stainless Steel. °	Each	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
284	Providing and fixing in position cowel went to pipes.(C) 100mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
285	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 of approved make for drainage system pipe line, pipe shall be jointed with Nos. other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 160mm diameter x 210mm 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 and jointed with adhesive solvent cement including cost of all materials	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
286	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 of approved make for drainage system pipe line, pipe shall be jointed with Nos. 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 and jointed with adhesive solvent cement including cost of all materials	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
287	Providing and fixing PVC SWR pipes IS 13592 for Drain - 75 mmdia	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
288	Providing and fixing P.V.C. Pipes 10 kgf / Sq.cm. 50mm dia.	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
289	Providing and fixing P.V.C. Pipes 10 kgf / Sq.cm. 40mm dia..	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
290	Providing and fixing PVC SWR P- Trap IS 14735 for Drain -110x110 outlet 75 mm	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
291	Providing and fixing PVC SWR Nahni trap IS 14735 for drain- 75 mm diameter with jali of the following nominal diameter of self cleansing design with C.I scread down or hinged grating including the cost of cutting and making good the walls.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
292	Supplying and fixing reinforced concrete heavy duty nonpressure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specifications including setting the pipes in C.M. 1:2 watering and laying (to level or slopes) of class NP3 of following internal daimeters.(i) 300mm dia.Providing laying (to level or slopes) and jointing reinforced concrete Light duty non- pressure pipes I.S. class NP3 of the following internal diameter with collars and butt ends prepared for collar joints including testing of joints complete. (A) 300mm	Rmt	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
293	Providing and fixing S.W. gully trap with C.I. grating brick masonry chamber and water tight C.I. cover with frame of 300mm x 300mm size (inside) with standard weight.(i) Square mouth traps.(A) 110mm x 100mm size P or R type	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
294	Constructing brick masonry manhole in cement mortar 1:4 (1 cement: 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size),foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 900x800 mm and 90 cm deep including C.I. cover with frame (Medium duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) : With Sewer	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION

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295	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 900x800 mm and 1.5M deep including cover with frame (Medium duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) with common burnt clay of class designation 5 as directed by E-I-C complete as per specifications & drawing provided for all places, all heights & all levels) Storm network. (WITH GRATING COVER)	Nos.	As per separate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
296	OVERHEAD WATER TANK FILLING PUMPING SYSTEM	Set	As per separate specifications sheet attached; VANSDA LIBRARY PLUMBING_TENDER SPECIFICATION
	Supply, installation, testing and commissioning of submersible pumping system with suitable food grade membrane, charging connection, connected to outlet header with necessary flanges, gaskets, isolating valves, nuts/bolts etc complete. The pumps shall have SS head, SS 304 Gland plate, shaft / impeller / intermediate chamber, mechanical seals with rubber parts, suction and delivery pipe connection with suitable flanges (threaded / bolted) and required accessories for proper functioning of the system. Motor shall be TEWC IP55 Sq Cage, IE-3 type, suitable for 415 ± 10% Volts, 50 Hz, 3-phase AC power supply. Electrical starter panel of suitable capacity shall be included in the quote. The pump shall be mounted on common base frame. The maximum permissible sound level of the pump shall not exceed 85 dB measured at 1m from the pump surface. The pump shall be supplied with necessary vibration isolators. The pump shall be selected for performance at best efficiency point. However, the pump selection shall be suitable for performance with set point @ ± 20% of the rated head. Vendor shall submit the pump performance curves and technical catalogue of the proposed model for review. All the pumping equipments & accessories such as valves, strainer, pressure gauge, pressure switch, suction and discharge header, electrical starter panel , inter connecting power and control cabling etc shall be included in the quote. Electrical starter panel shall be located as per site condition as directed by EIC. The pump shall be suitable for auto / manual operation and should be equipped with dry running protection.		
	Flow Rate (Each Pump) : 5 m3/hr		
	Head (Each Pump) : 30 Meter		
	Speed: NMT 2900 rpm		
	Impeller: SS		
	Location: UGWT		
	Configuration: 1W + 1S		
297	a) Supplying, installation, testing and commissioning of Electric driven Main Fire Pump conforming to IS 12469: 2019 suitable for automatic operation and consisting of following, complete in all respects, as required : (b) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal as required. (c) Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-12615: 2018. (d) M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required. (e) Suitable cement concrete foundation duly plastered with anti vibration pads.	Set	As per separate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification

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298	Supplying, installation, testing and commissioning of diesel engine driven main fire pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Diesel Driven Pump) Horizontal type, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12 /24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential silencer, instruments and protection as per standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required. M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required. Suitable cement concrete foundation duly plastered and with anti vibration pads.2280 lpm at 56 m Head	Set	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
299	Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Jockey Pump) Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS : 1520. Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325. M.S.fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required. Suitable cement concrete foundation duly plastered and with anti vibration pads.480 lpm at 56 m Head	Set	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
300	CONTROL PANEL Fabrication, supplying, Installation testing & commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter-connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump & diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required : INCOMING 250A, 50kA 4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Digital Ammeter (0-250 A) with selector swtich & CTs etc. LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps Set of Copper Bus Bar 300A OUTGOING (Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps) Main Fire Pump 125 A, 50kA TPN MCCB, Ics=100% Icu, with fully automatic Star/Delta starter suitable for 60 HP pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. Jockey Pump 63 A, 50kA TPN MCCB, Ics=100% Icu, with suitable HP fully automatic Star/Delta starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. Diesel Engine Control Control for diesel engine comprising - Automatic/Manual selctor switch & 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication Battery charger suitbale for 12V/24 V DC with boost and trickle selector	Set	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
301	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
302	FIRE PUMP Supply, installation, testing and commissioning of electrical driven terrace pump suitable operation and consisting of following, complete in all respects, as required: (terrace pump) Horizontal type, multistage, centifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical confirming to IS: 1520 Suitable HP squirell cage induction motor TEFC type suitable for operation on415 volts, 3 phase, 50 hz , Ac supply with IP55 class of protection for enclosure, horizontal foot mounted type with class-'F' insulation, conforming IS- 325. M.S. fabricated common base plate, coupling, coupling guard, foundation bolts, etc. as required. Suitable cement foundation duly plastered and with anti vibration pads.450 lpm at 25 m Head	Set	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification

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303	CONTROL PANELControl panel for TERRACE PUMP CONTROL. (As Above) a) 75 Amps TP & N SFU with HRC fuses b) Voltmeter (0-500 Volt) with selector switch c)Ammeter (0-75 Amps) with selector switch & CTs. d) Set of 3 phase indication lamp e) Suitable HP fully automatic Star/Delta Starter with over load protection current sensing type single phase prevent or complete with all accessories and internal wiring required for automatic operation f) Selector switch for local/remote auto/manual/off operation ON/OFF indication lamp etc.	Set	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
304	Providing, laying, testing & commissioning of 'C' class heavy duty GI pipe conforming to IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required : 25mm dia (hvdrant to hose reel tanning)	Mtr	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
305	Providing, laying, testing & commissioning of 'C' class heavy duty GI pipe conforming to IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required : 80mm dia (Hvdrant tanning)	Mtr	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
306	Providing, laying, testing & commissioning of 'C' class heavy duty GI pipe conforming to IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required : 100mm dia	Mtr	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
307	Providing, laying, testing & commissioning of 'C' class medium duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required : 150mm dia (fire brigade connection) & (DOWNCOMER)	Mtr	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
308	Providing, laying, testing & commissioning of 'C' class medium duty G.I. pipe conforming to IS 1239 including welding, fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required : 200mm dia	Mtr	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
309	Supplying and fixing single headed internal hydrant valve with instantaneous Gunmetal/Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required :	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
310	Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required : 150mm nominal dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
311	Supplying, fixing, testing & commissioning of double flanged sluice valve of rating PN 1.6 with non rising spindle, bronze/gun metal seat, ISI marked complete with nuts, bolts, washers, gaskets and conforming to IS 780 of following sizes as required : 80mm nominal dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
312	Providing, fixing, testing and commissioning of C.I. Butterfly valve conforming to I.S:13095 class PN 16 rating with Fittings, Flanges, Nutbolts, Washers, Gaskets etc.of size 150mm nominal dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
313	Providing, fixing, testing and commissioning of C.I. Butterfly valve conforming to I.S:13095 class PN 16 rating with Fittings, Flanges, Nutbolts, Washers, Gaskets etc.of size 100mm nominal dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
314	Providing, fixing, testing and commissioning of C.I. Butterfly valve conforming to I.S:13095 class PN 16 rating with Fittings, Flanges, Nutbolts, Washers, Gaskets etc.of size 80mm nominal dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
315	Providing, fixing, testing and commissioning of C.I. Butterfly valve conforming to I.S:13095 class PN 16 rating with Fittings, Flanges, Nutbolts, Washers, Gaskets etc.of size 50mm nominal dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
316	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required : 150mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
317	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required : 100mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
318	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required : 80mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
319	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange. 150mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification

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320	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange. 100mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
321	Supply, Installation, testing & commissioning of Rubber type and Single sphere (Double arch) Expansion joints (expansion bellow) with inner EPDM and outer SS to absorb and isolate vibration of fire pumps with flanged connection for PN 16 pressure rating with all accessories. 150mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
322	Supply, Installation, testing & commissioning of Rubber type and Single sphere (Double arch) Expansion joints (expansion bellow) with inner EPDM and outer SS to absorb and isolate vibration of fire pumps with flanged connection for PN 16 pressure rating with all accessories. 80mm dia	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
323	Supply, installation ,testing & commissioning of Fire Pumps Test Meter Body ASTM A 53 along with all accessories like control valve, hose, 150mm size dial	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
324	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required : Gun metal	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
325	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle. Drum and brackets for fixing the equipments on wall. Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket 40 mtr	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
326	Supplying, installing and commissioning of fire brigade inlet connection of 4 way with 4 nos. 63 mm dia, built - in Gun metal Non- return valves instantaneous coupling type arranged on 150 mm dia pipe manifold and connected to hydrant main. Quoted rate shall be included with C.I. Butterfly valve, C.I. Non-return valve of suitable size with mounting supports etc. complete	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
327	Supplying, installing and commissioning of fire brigade inlet connection of 2 way with 2 nos. 63 mm dia, built - in Gun metal Non- return valves instantaneous coupling type arranged on 100 mm dia pipe manifold and connected to hydrant main. Quoted rate shall be included with C.I. Butterfly valve, C.I. Non-return valve of suitable size with mounting supports etc. complete	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
328	SITC of microprocessor based intelligent addressable main fire alarm panel, central processing unit with the following loop modules and capable of supporting not less than 240 devices (including detectors) and minimum 120 detectors per loop and loop length up to 2 km, network communication card, minimum 320 character graphics/ LCD display with touch screen or other keypad and minimum 4000 events history log in the non volatile memory (EPROM), power supply unit (230 ± 5% V, 50 Hz), 48 hrs back-up with 24 volt sealed maintenance free batteries with automatic charger. The panel shall have facility to connect printer to printout log and facility to have seamless integration with analog/digital voice evacuation system (which is part of the schedule of work under SH: PA System) and shall be complete with all accessories . The panel shall be compatible for IBMS system with open protocol	set	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
329	SITC of addressable manual call point complete as required	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
330	SITC of addressable horn cum strobe complete as required	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
331	Supplying, installation, testing & commissioning of intelligent analog addressable photothermal detector complete with mounting base complete as required.	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
332	SITC of fault isolator complete with base as required	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
333	Supplying, installation, testing & commissioning of addressable fire control module complete as required	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
334	SITC of Monitor module complete with base as required	Nos.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
335	Supplying and laying of 2 x 1.5 sqmm fire survival armoured cable, 600/1000 V rated with annealed copper conductor having glass mica fire barrier tae covered by an extruded layer of cross linkable ethylene propylene rubber (EPR) insulation and LSZH inner bedding, steel wire armouring and LSZH outer sheath complete as required	Mtr.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification
336	Supplying and laying of 4 core x 1.5 sqmm fire survival armoured cable.	Mtr.	As per seprate specifications sheet attached; VANSDA LIBRARY FFTG Tender Specification

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337	Supplying, installing and commissioning Portable Fire extinguishers of following type & capacity all conforming to IS 15683 filled in brand new cylinder and rated as per requirement and color coded with suitable mounting arrangements. ABC type fire extinguisher of 6 Kgs.(Basement parking, Staircases, Utility, Electrical room, Exec block, Reception, Dining Area, AHU Rooms & Substation) Stainless steel (S.S MOC)	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
338	Supplying & erecting carbon dioxide (CO2) fire extinguisher user of following capacity with necessary clamps made from 50 x 6 mm M.S. Flat with nut & bolts grouted in wall complete. 4.5 KG CAPACITY	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
339	Supply, installation, testing and commissioning of Pump on/off Remote switches to each floor with required accessories.	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
340	Supply and installation of Pressure switches of suitable range with 6Kg pressure for pumpsets with Ball valves, Fittings like unions / colours / reducers etc.	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
341	Design, Supply, Installation, Testing, Commissioning of Diaphragm sealed Pressure Gauge, $\pm 1\%$ accuracy, Direct bottom 1/2" NPT (M) process connection, IP 67, Glycerine filled, SS304 Case with Bayonet Type Bezel, SS316 L Diaphragm, SS316 Bottom Housing Material, SS 316 Movement material, Aluminium dial with black graduation on white background, Micro Zero adjustable pointer, neoprene gasket, Blow out disc, shatter proof glass, SS tag plate etc as per IS 3624. 150 mm Dial Size 6kg/cm ²	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
342	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required;	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
343	M.S. Hose cabinet stand mounted type fabricated out of M.S. sheet of 16 swg. with glass fronted (4mm thick glass with rubber beading) door and size of the cabinet shall be 600mm x 750 mm x 250 mm Quoted rate shall be includes suitable stand for mounting, all fasteners etc, and cabinet shall be powder coated of approved colour both inside and out side. Hose Boxes for external points should be suitable for Outdoor erection, should have metallic cover over box so that box can be protected from rain	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
344	Providing, fixing, testing and commissioning of gun metal air release valve with connection in the riser & control valve.	Nos.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
345	Obtaining NOC from fire license from local fire authorities and industries authorities upon the client request and all liasioning activities etc complete in all respect. (NOTE: The documents required for getting NOC from any other department shall also be in the scope of the contractor).	Ea.	As per seprate specifications sheet attached; VANSADA LIBRARY FFTG Tender Specification
346	Drilling of 315 mm dia bore in overburden strata & lowering of 200 mm dia PVC Casting Pipe up to Required Length and Further Drilling of 200 mm dia Bore in all Types of Rocky Strata, Soft Rock & Hard Rock by DTH Rig and Fixing the Bore Plug in all talukas of all districts of zone - III upto 350 mtr (Up to 350 Mtr Depth)	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
347	S.I.T.C. submersible pump set suitable for bore of 150 mm dia or more having 3 phase motor capacity not less than 10 HP with following capacity. Lifting and Lowering taken extra. [C] 25 stage 160 to 100 LPM discharge at 185 to 220 mtr head for 50 mm dia delivery pipe Cat.III	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
348	Supplying & erecting approved make 3 phase motor control cubical panel (Star - Delta) made from 16 G. CRCA sheet duly painted with epoxy powder painted inside and outside with hinged doors and locking arrangement, consisting of suitable size of ON- OFF isolator (AC - 3/23 duty) main fuses, single phasing preventer cum water level. Guard (Complete unit), Toggle switch to by pass Single phase preventer cum WLG, indicating lamps for R- Y- B phases, over load relay, Automatic water level controller, Ammeter & Voltmeter each with two way selector switch incoming wires duly socket Crimped, Panel to be erected on angle iron frame grouted on wall as directed. Star Delta & main contactor, overload relay, thermal / Electronic Star delta cutoff timer, start - stop push buttons. The isolator overload relay & contactors of L& T, Siemens or Cuttler Hamer make only. Panel to be erected on angle iron frame ground on wall. (B) S/D up to 10 H.P.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
349	Lowering of submersible motor pump set at the depth of following ,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 (C)Above 120 mtr.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
350	Providing and erecting ISI marked PVC insulated PVC Sheathed Flat flexible Submersible copper cable approved make of following Size. (D) 3 Core x 6 Sq. mm.	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
351	Supplying of following size of STANDARD UPVC column pipe with coupler and wire lock [D] 50 mm dia	Rmt	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda

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352	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 desired. [D] 50 mm dia	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
353	Providing and fixing of planter/pots of frp or plastic with Natural indoor plants as per selection and complete the work satisfactorily, etc. complete as per drawings and design supplied by architect and instruction given by authority and E.I.C.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
354	Supplying heavy duty hand car Dustbins having standard different colour of size litters 250 of any brand or its equivalent brand as directed by engineer-in-charge etc. complete.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
355	Supplying & Fixing of Photo frame of up to Size 12" x 18" with Slogen Sticker or Any Photo (up to Size 225 Sqinch)	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
356	Supplying of Wall Clock (Size Up to 15") or Table Clock (Size Upto 12" Digital Clock)	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
357	Supplying of Office Table Top Artificial or Indoor Pot (Ht Up to 12")	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
358	Supplying Small Size Door matt (Size Up to 15" x 24")	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
359	Supplying Big Size Door matt (Size : 60" X 24")	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
360	Providing and Supplying of Tripoi (Size : 30" x 18")	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
361	Notice Board / Pin Board Supplying of Notice Board of 3'x 3' (or as specified) with all Fixing Arrangement complete as per drawing and Directed by Engineer In Charge etc complete.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
362	Providing and Fixing Library Name in Gujarati Letter SS304 1mm thick letter 1.5" depth 10" Height with Duco color & fitting as per direction of Architect & EIC.	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda
363	Reading Chair-02 : Providing and Placing Reding Chair - The seat and back are made up of 1.2cm.thick hot pressed plywood upholstered with leather and moulded Polyurethane foam.MID BACK SIZE: 53.0cm. (W) X 73cm. (H)SEAT SIZE: 54.6cm. (W) X 49.0cm. (D)The HR Polyurethane foam is moulded with density=45+/-2 kg/m cube and hardness load 16+/-2 kgf as per IS:7888 for 25% compression. The fixed type mechanism is made with a 0.8 cm thk HR Steel spine-welded to it and black powder coated(D- FT 40-60 microns-).The Understructure is made up of M.S.E.R.W. Elliptical tube of size 4.5 x 1.9 cm x 0.25 cm welded to M.S.E.R.W Tube of dia 1.6 cm x 0.2 cm thick.The understructure is powder coated (DFT 40-60 microns-).The Understructure is made up of M.S.E.R.W. Elliptical tube of size 4.5 x 1.9 cm x 0.25 cm welded to M.S.E.R.W Tube of dia 1.6 cm x 0.2 cm thick.The understructure is powder coated (DFT 40-60 microns-).	Nos	As per seprate specifications sheet attached; Item Wise Technical Specification_Library@Vansda