

FOR THE CONSTRUCTION OF PROPOSED ICAI BUILDING AT- PURENA, RAIPUR (C.G.)		
CIVIL WORKS , PLUMBING, SANITARY , ROADS, FIRE FIGHTING AND ELECTRICAL WORKS		
SUMMARY - SCHEDULE OF QUANTITIES		
Sr. No.	DESCRIPTION	AMOUNT(Rs.)
1	SITE DEVELOPMENT & EARTH WORK	
2	REINFORCED/ PLAIN CEMENT CONCRETE WORK	
3	MASONARY/BRICK WORK	
4	WALL FINISH	
5	WOOD WORKS	
6	STEEL WORKS	
7	ALUMINIUM WORK	
8	WATER PROOFING	
9	FLOORING WORK	
10	MISC. WORKS	
11	LANDSCAPES WORK	
12	PLUMBING WORK	
13	ROAD WORK	
14	FIRE FIGHTING WORK	
15	RAIN WATER HARVESTING	
16	MAINS ELECTRICAL WORKS	
17	BUILDING ELECTRICAL WORK	
18	CCTV , DATA AND VOICE	
19	LIFT WORK	
20	AIR CONDITIONER WORKS	
	TOTAL RS.	
	DISCOUNT IF ANY	
	<b>GRAND TOTAL(Rs.)</b>	

(Rupees .....)

<b>ABSTRACT SHEET FOR CONSTRUCTION OF PROPOSED ICAI BUILDING</b>	
<b>AT- PURENA, RAIPUR (C.G.)</b>	
<b>CIVIL WORKS , PLUMBING, SANITARY , ROADS, FIRE FIGHTING AND ELECTRICAL WORKS</b>	
<b>BILL OF QUANTITIES</b>	
<b>S.No.</b>	<b>Preambles : General Notes</b>
1	Rates mentioned in BOQ shall be inclusive of all taxes,as of date i.e. Composite VAT, Service Tax & Education Cess, levies, transport, octroi,labour cess , Royalties etc or any other tax as applicable in Raipur is inclusive in rates
2	Rates quoted in this BOQ shall be applicable to any height & any location even if not specified in any item,Including steel ( H frame, Ledger system etc) scaffolding,curing cleanning,rectification
3	Details/ functions/ activities mention in peambles in each section are included in quoted rates and nothing extra shall be paid for it.
4	Watching and lighting arrangements wherever necessary whether ordered by the Employer/ Architects or otherwise is included in items.
5	This bill of quantities is to be read in conjunction with the drawings, specifications, terms & conditions etc .
6	The quanties given are approximate and can vary up to any extent. The contractor will not be entitled to claim any extra on account of this quantity variation. Billing will be on actual measurement as executed and approved.
7	Contractor has quoted the rates after visting the site,and after considering all local factors
8	Rates are inclusive of Carting away debris / Cleaning / Security / statutory/ approval for disposal of debris
9	Rates are quoted for finished items, wastage factor is on contractor part and measurement will be for finished item only
10	The rates shall remain firm till the completion of the work and the contractor shall not be entitled to claim any escalation on any account till the completion of the project, in any respect.
11	Where ever applicable all the material samples should be got approved from engineer incharge for its quality, makes, colour, pattern etc before start of work /mass procurement of material.
12	Manufacturer test certificates/testing from lab and test results will be provided along with the sample for all the materials procured at site .
13	Excavation beyond given depth will be made up by contractor with PCC 1:4:8 at his own cost and nothing extra will be paid on this account.
14	Curing, slurry, scaffolding, etc wherever applicable are included in item .
15	All concreting to be done as per Mix Design (to be got done by contractor at his own cost) and got approved by him by EIC/Architect before hand.
16	For all concrete, Brick, stone, flooring and other works except plastering, sand used shall be coarse sand and for plastering, it would be 50% coarse + 50% fine, unless specified otherwise.
17	All surfaces to be plastered/tiled, hacking of surface after stripping of shuttering is included in items.
18	All cement related works shall be cured for 7 days or more as applicable as per specifications.The rate shall be also inclusive with Hassian cloth and any other form of curing as directed.
19	Protection of all kinds of floorings with POP and polythene sheet etc. is included in item rate and nothing extra shall be paid for this.The rate is also inclusive of removing and cleaning the same after completion of work
20	Holes or pockets in the Brick work for Rain water pipes and other pipes shall be kept or the pipes shall be provided at the time of raising the masonry. These holes or Zarries should be made good after fixing of pipes and nothing extra shall be paid for the same.
21	Chiseling of brickwork, if required shall be done to flush the floor skirting with the wall. Nothing extra shall be paid on this account.
22	Grooves with cement finish up to 12 mm X 6 mm shall be formed in plaster at the junction of slab and beam and slab & brick work without any extra charge. Similar grooves shall be made in plaster at the junction of masonry and wood or steel door or steel window frames or at bottom of beams or chajja, slab projections as drip moulds without extra charge.
23	Septic tanks, Soak pits, Underground sumps, cable trenches of various sizes, chambers having sizes other than specified in BOQ will be measured under relevant items of work.
24	For landscaping work the cost of supply and replacement of good earth, organic manure are included in item rate.
25	Water and electricity for all the work including landscaping work shall be arranged by contractor at his own cost .
26	Bailing out, pumping out or otherwise removing all water which may accumulate in the working areas from any or all causes what so ever.

S.No.	Item Discription	Unit	Quantity	Rate	Amount
<b>1</b>	<b>SITE DEVELOPMENT AND EARTH WORK</b>				
	<b>PREAMBLES :</b>				
i	Excavation either straight, inclined or curved in trenches, footings etc., including marking out, cutting and dressing sides and bottom to true dimensions and depositing excavated stuff beyond three metres clear of the edge of trench or mass excavations for basements or anywhere within the site as directed.				
ii	Clearing all shrubs, roots, vegetation and trees upto 300mm girth from alignment of the buildings.				
iii	Bailing out, pumping out or otherwise removing all water which may accumulate in the excavation from any or all causes what so ever.				
iv	All labour and material required for fencing in and protection against risk of accident to open excavation etc., with necessary shoring, planking and strutting and for providing gangways, with hand rails across open trenches etc., where necessary during the progress of the work.				
v	Battering, benching, forming steps in the sides of foundations, and mass excavations where required and removal of slips and falls.				
vi	Earth work in excavation with mechanical or manual means for all kinds of soil excluding rock over area of basement or foundation trenches, columns pits, sump pits, lift pits, walls etc. including providing required slope to vertical sides, shoring, strutting, trimming of sides ,back filling, disposal / storing of surplus earth with in the site premises to any distance as per direction of engineer in charge. The working space, excavation and back filling of working space beyond and inside of required footprint area ( PCC line) in the plan is also included in the cost.				
(a)	Depth upto 1.5m from existing ground level	CUM	1578.36		
(b)	Depth beyond 1.5m to upto 3.0m from existing ground level	CUM	922.15		
viii	Supplying and Filling in plinth, under floor with fine Jamuna sand including ramming, watering, consolidating and dressing complete as per specification and as directed by the Project Manager.	CUM	2510.16		
vix	Providing and injecting pre constructional anti termite treatment as per IS6313 (part 2 ) latest revision , creating a continuous chemical barrier under and all around the column pits, wall and beam trenches , basement excavation , top surface of plinth filling, Junctions of wall and floor, under floors , along the external perimeter of building , expansion joints , surrounding pipes and conduits etc. complete using CHLORPRYRIPHOS EC 20% or approved equipment with concentration as specified by spraying with pump including all material, equipment . The work shall be carried outstrictly in accordance with IS: 6313 part 2 1981, by a specialised agency and shall carry a performance guarantee on stamp paper for 10 years (Plinth area of building to be measured for payment )	SQM	865.00		
	<b>TOTAL FOR EARTHWORK</b>				
<b>2</b>	<b>REINFORCED/ PLAIN CEMENT CONCRETE WORK</b>				
	<b>PREAMBLES</b>				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(a)	Making all drips, grooves, moulds, curved surfaces and chamfered edges etc., in concrete and /or plaster work as directed.				
(b)	Forming all expansion and/ or construction joints in RCC as directed.				
(c)	PVC or Concrete cover blocks shall be used for the reinforcement, will be as per is standards and specifications , the cost of which is deemed to be included in the item rates of reinforcement.				
(d)	Embedding all electric pipes, boxes, fan box hooks, false ceiling suspensions and inserts of any description etc., in RCC slab, beam, walls etc., as directed.				
(e)	Installing a calibrated cube testing machine at site, getting it calibrated every 3 month and submitting test report to Architects.				
(f)	Preparing test cubes, testing them at site and /or getting tested in an approved laboratory and any fees, costs etc. relating to them.				
(g)	Working up or hacking of concrete surface for providing keys for further concrete work including applying thick cement slurry or mortar as directed.				
(h)	Hoisting to all lifts, carrying to all leads, consolidating by rodding, vibrating, tamping, and curing. Shuttering to be made water tight with ply wood lined timber or by any other means .				
(i)	Design Mix for all concretes will be done by contractor from approved lab or consultant .the same should be approved from project incharge prior to start of concerting at site .				
(j)	Use of shuttering oil and cement slurry over shuttering before commencing barbinding and concreting respectively				
(k)	Providing dowel bars wherever necessary (cost of bars to be paid as reinforcement).				
(l)	Forming cutouts, openings, and concreting of same at a later stage as required.				
(m)	Maintaining of POUR CARDS showing approval of Employer to concrete various components of R.C.C frame.				
(n)	Admixtures in recommended proportions. (As per IS: 9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Employer/ Architect.				
<b>I</b>	<b>Reinforced Cement Concrete</b>				

S.No.	Item Description	Unit	Quantity	Rate	Amount
i	Providing and Laying machine mixed Ready Mix Concrete , R.C.C. of all grades for structures reinforced heavily or lightly all structural elements such as raft,foundations,footings,mass concrete , pedestals, columns, beams, slab , balcony chajja, fins, walls water tank etc, of any size and shape including mixing of any integral compound additives, placing concrete in position at all locations , arrangements of staging, scaffolding, hoisting, transportation of concrete to it's final position, forming pockets, leaving openings, (shuttering for pockets shall be paid separately as per relevant item) providing and fixing sleeves embedding necessary inserts of any description, holding down bolts, hooks, angles, channels, pipes, anchor plates etc. (All holding down bolts, anchor plates, bolts and nuts, sleeves etc. shall be measured and paid separately under relevant items), tamping, vibrating, curing, rendering and finishing, if required, to give a smooth and even surface etc. and also including labour, T&P etc. required for proper completion of work. complete.				
	M25 ( minimum cement content= 330kg /Cum)				
(a)	up to plinth	CUM	376.13		
(b)	above plinth up to any height	CUM	716.78		
<b>II</b>	<b>Plain Cement Concrete</b>				
i	Providing and laying plain cement concrete of specified grade as bed concrete under foundation, bases for rafts, underground water tank, building machine equipments, column footing, under floor, landings, below road and pathways,cill, coping, screeding at roof to required slope and other locations as called for laid, consolidated, vibrating and cured etc. including finishing the top surface to receive the next course/ layer as per specification and drawing including the cost of centering and shuttering etc complete				
(a)	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm down size)	CUM	107.84		
iii	Providing and mixing water proofing material in PCC/ RCC work in the proportion recommended by the manufacturer.	KG	1500.94		
iv	Providing & erecting shuttering of good quality / approved water proof plywood or MS plates including Centering, shuttering, propping and bracing, bolting, welding and keeping the same to the lines and levels indicated on the drawings and removing the same as per specifications, drawings including provisions for grooves, drip, throats, chamfers, inserts, sleeves, conduits, junction box, recesses, projecting dowels etc. at all levels, heights, depths and at all floors etc. ( As per given drawing details.)				
(a)	up tp plinth	SQM	1174.22		
(b)	Above plinth up to any height	SQM	5282.47		
v	Extra for double height in Suspended floors, roofs, landing slab & balconies etc. centering, shuttering per floor wherever required with adequate bracing, propping etc. including cost of deshuttering & decent ring at all level , measured in increment of 4.5 mts above 4.5mts. Only plan area of slab/ part for which double height staging is required shall be considered / measured for payment	SQM	76.48		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
vi	Providing and laying damp proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including providing and mixing of water proofing compound @ 2% of cement content and providing and applying two layers of bitumen of grade 85/25 @ 1.75 kg/ sqm , cleaning, finishing, curing etc complete as directed by the Project Manager.	SQM.	767.87		
vii	Providing convex gola 75x 75mm in cement concrte 1:2:4 ( 1 cement :2 coarse sand :4 garded stone aggregate 10 mm down size ) finished with cement mortar 1:3 (1 cement :3 coarse sand ) with admixture of CICO or approved water proofing compound conforming to IS 2645 as per standard design, complete for all levels and heights.	RMT	88.20		
viii	<b>REINFORCEMENT</b> - Providing Laying and fixing in position steel reinforcement in all reinforced concrete work, including straightening, cutting, removal of loose rust by wire brush and coating with cement slurry, bending, hoisting, laying in position to the shape and profile required at all levels and heights as per drawing and design and/ or as directed, binding with 16 gauge MS annealed steel wire etc. complete. (Quoted rate also to include providing & fixing the binding wire, cement mortar/ pvc spacer,cover blocks etc.) Thermomechanically Treated Reinforcement (TMT) FE 500 grade.	MT	125.68		
<b>TOTAL FOR RCC WORK</b>					
<b>3 MASONRY WORK</b>					
<b>PREAMBLES :</b>					
(a)	Work in English bond or any other bond or design as directed by the Architects				
(b)	Work in square, round and rectangular pillars, flower troughs, under floor drains, making curved and tapered surfaces steps etc.				
(c)	Forming openings, chases, grooves etc.				
(d)	Embedding conduits, boxes, other fixture of any descriptions, hold fasts of doors, windows, glazings etc., no deduction shall be made for cavities so formed.				
(e)	Making all drip courses, projected courses of any description, offsets, setbacks, corbels, architraves or any other feature of any description.				
(f)	Raking out joints, for plastering or pointing or finishing joints flush as directed.				
(g)	Bonding with R.C.C. work.				
(h)	Holes or pockets in the Brick work for Rain water pipes and other pipes shall be kept or the pipes shall be provided at the time of raising the masonry. These holes or Zarries should be made good after fixing of pipes and nothing extra shall be paid for the same.				
(i)	Work in narrow widths, small quantities etc.				
(j)	Over lapping reinforcement and embedding reinforcement in adjoining walls in case of half brick masonry walls.				
(k)	Supplying moulds, taking briquettes, getting tested and any fees, costs etc., relating to the same.				
(l)	Providing 25mmx 300mm GI strips of 20 gauge for anchoring masonry with RCC columns/structural members.				
(m)	Bricks to be tested for efflorescence, compressive strength and any other mandatory tests in the laboratory.				
(n)	No holes for scaffolding will be permitted into the brickwork .				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(o)	Quoted Rates are for all heights, all depths, all levels, including basement to roof (mumty) & all leads and lifts, including curved , circular or any shape masonry work				
i	Providing & laying 200 mm or more thick brick work using good quality of bricks (confirming to IS standards) of class designation 75 in foundation, up to plinth in cement mortar 1:6 (1 cement :6 coarse sand) including joints finished flush/raked to 6 mm depth as work proceeds,curing,cleaing and soaking the bricks at least for 24 hours before use , etc all complete	CUM	21.70		
ii	Providing & laying 200mm or more thick brick work using good quality of bricks (confirming to IS standards) of class designation 75 in superstructure above plinth level in cement mortar 1:6 (1 cement :6 coarse sand ) including joints finished flush/raked to 6 mm depth as work proceeds,curing , cleaning and soaking the bricks at least for 24 hours before use , etc all complete .	CUM	330.23		
iii	Providing & laying 115 mm brick work using bricks of class designation 75 in half bricks walls in plinth or super structure in cement mortar 1:4 ( 1 cement :4 coarse sand ) including joints finished flush/raked to 6 mm depth as work proceeds,curing etc. including hoop iron reinforcement (2 Nos of 6mm dia MS bars) at every fourth course , anchor with RCC column/wall , cleaning and soaking the bricks at least for 24 hours before use , curing etc. all complete at all heights / depth . Cost of 6 MM dia steel bars is Included in the item and will not be measured seperately	SQM	147.60		
viii	GARDEN WALL :Providing & laying 75 mm brick work using bricks of class designation 75 in garden wall for planters by excavating the earth to required level and placing dry brick inclined in a row , then back filling and making good for excavated areas .	RMT	140.00		
<b>TOTAL FOR BRICK WORK</b>					
<b>4 WALL FINISH</b>					
<b>PREAMBLES</b>					
(a)	Making all drip courses, projected courses of any description, offsets, setbacks, corbels, architraves or any other feature of any description. Included in item rate.				
(b)	Raking out joints in brickwork , for plastering or pointing flush as directed.				
(c)	Cleaning of Brickwork for efflorescence , chemical washing will be done as directed ,free of cost				
(d)	Base preperation , cracks , undulation or any other filling required with pop or putty are included in item				
(e)	All the painting work to be carried out as per IS standards & will be done with brushes only unless stated otherwise.				
(f)	Scaffolding for work will be arranged by contractor( only steel scaffolding is allowed )				
i	Providing & laying 12 mm thick cement plaster to walls columns, piers , etc. in cement mortar 1:4 (1 cement : 4 sand ) on plain side of brick wall or R.C.C. surface to any height ,including curing, scaffolding etc including hacking of RCC surface ,racking out junctions of masonry and concrete and other dissimilar materials, treated by pointing and grouting with mortar (1:4) for unfinish work , providing 300 mm wide 24 G chicken wire mesh at treated junctions. complete for all levels and heights.	SQM	1835.76		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
ii	Providing & laying 15 mm thick cement plaster to walls columns, piers etc. in cement mortar 1:4 (1 cement : 4 sand ) on rough side of brick wall or R.C.C. surface to any height including curing, scaffolding including hacking of RCC surface ,racking out junctions of masonry and concrete and other dissimilar materials, treated by pointing and grouting with mortar (1:4) for unfinish work , providing 300 mm wide 24 G chicken wire mesh at treated junctions. complete for all levels and heights.	SQM	1835.76		
iii	Providing and applying 6mm thick plaster to under sides/soffits, RCC slab ceiling at any height in cement mortar 1:4 (1 cement : 4 fine sand ) finished smooth including hacking the surfaces, scaffolding, curing, making grooves, drip course at desired location etc. complete as per drawing.	SQM	1883.47		
v	Providing & finishing with a floating coat of neat cement @ 2.2 Kg/SqM , complete for all levels and heights.	SQM	149.44		
vi	Providing and applying 18 mm thick cement plaster in two coats for external walls ,columns or any structure , under layer 12 mm thick cement plaster 1 : 5 ( 1 cement : 5 coarse sand) a top layer of 6 mm thick cement plaster 1 : 4 (1 cement :4 coase sand) including racking, joints, hacking, curing scaffolding etc. complete i.c. making grooves, bands, drip coarse wherever required etc., complete for all levels and heights.	SQM	1461.29		
ix	Providing and applying OBD paint of approved make (Asian paints or equivalent) and colour to internal walls and ceiling conforming to IS (surface and finish acceptable to the Architect must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); including preparing surfaces, filling up with gypsum and approved crack filler, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two or more finishing coats of paint, required scaffolding, cleaning and protecting till thehanding over of site to the entire satisfaction of the Architect, complete for all levels and heights.	SQM	40.40		
x	Providing and applying plastic emulsion paint of approved make (Asian paints or equivalent) and colour to internal walls and ceiling conforming to IS (surface and finish acceptable to the Architect must be achieved by the contractor and any additional coats if required shall be at the cost of the contractor); including preparing surfaces, filling up with gypsum and approved crack filler, binder; cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two or more finishing coats of paint with rollers , required scaffolding, cleaning and protecting till thehanding over of site to the entire satisfaction of the Architect, complete for all levels and heights.	SQM	5546.23		



S.No.	Item Description	Unit	Quantity	Rate	Amount
xii	Providing and applying 2 coats of Exterior paint (Asian Ultima paint, Apex weather shield , or equivalent make) over one coat of primer on wall in approved shade as specified and directed by Project Manager, including preparing surfaces, filling up with approved crack filler, binder;cleaning and making the surface dust-free, applying a sealer or primer coat of paint as recommended by approved paint manufacturer, applying two or more finishing coats of paint,required scaffolding, cleaning and protecting till the handing over of site to the employer all complete to entire satisfaction of the Project Manager.	SQM	1461.29		
xvi	Providing and finishing two or more coats of synthetic enamel paint of approved manufacture and shade to given surfaces applied evenly to give a uniform finish as approved including preparation of surface, filling up with approved crack filler, binder;cleaning and making the surface dust-free and a coat of primer as specified ,applying two or more finishing coats of paint, required scaffolding, cleaning and protecting till the handing over of site to the entire satisfaction of the Architect, complete for all levels and				
(a)	Window Grill	SQM	129.47		
<b>TOTAL FOR FINISHING WORK</b>					
<b>5 WOOD WORK</b>					
<b>PREAMBLES</b>					
(a)	All the wood used should be well seasoned & free for knots, warping , twisting etc,any substandard material will be replaced free of cost.				
(b)	Anti termite treatment and protective paint is included in the reates.				
(c)	All the flush doors will be of water proof, termite proof quality				
(d)	All the fitting and fixtures will be of approved brand and quality				
(e)	Providing and fixing door frames with Fastners or hold fast as approved are included in the rates				
i	Providing and fixing wood work in frames of doors and other frames, wrought framed of any size, section and shape as shown in the drawings including single / double rebate or mullion member & fixed in position including necessary 40 x 3 mm x 40 cm long MS flat iron hold fast fixed to chowkhat with 10 mm dia MS bolts , nuts , wooden plugs or dash fastner as required and embedding the hold fast in cement concrete block of size 30 x10 x15 cm, mix 1:3:6 ( 1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size ) including seasoning of wood, applying two coats of oil bound ASCU wood preservative on all surfaces abutting masonry / RCC work or embedded portions, including painting or polish all complete,				
(a)	Sal, bijasal, benteak, khair, haldu	CUM	0.73		
(b)	Burma Teak wood	CUM	0.97		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
ii	Fixing of factory made 35mm thick flush door shutters , manufactured from dense, homogenous, high density, fibre plate moulded, decorative panels, jointed with seasoned, treated rubber wood / hard wood stiles and rails with solid core construction; using ISI certified phenol formaldehyde resin as per IS:848:1991 BWP type, meeting minimum product technology specifications including providing and fixing 4 nos. 125 mm long heavy duty stainless steel butt hinges for each shutter with matching screws etc. complete as per directions of the Engineer-in-Charge. Rate inclusive of 12mm thick teak wood lipping all around , priming coat with painting/ polishing as directed.				
(a)	Decorative Teak Veener 3 mm teak finish both side , with malamine polish	SQM	85.89		
iii	Providing & Fixing 10" mortice lock with six levers and a pair of levers handles with necessary screws etc., Godrej make or equevalent, all complete.	NOS.	8.00		
iv	Providing & Fixing SS tower bolt of size with necessary screws etc. complete				
(b)	250 mm X 10mm	NOS.	39.00		
v	Providing & Fixing SS - D Handles of size with necessary screws etc.				
(c)	200 mm X 20 mm	NOS.	80.00		
vi	Providing & Fixing SS door stopper ( piston type ) with rubber shoe as approved with necessary screws etc. complete.	NOS.	8.00		
vii	Providing & Fixing SS sliding door bolt ( al drop) with nuts and screws etc. complete. 300 mm X 16mm	NOS.	39.00		
<b>TOTAL FOR WOOD WORK</b>					

S.No.	Item Description	Unit	Quantity	Rate	Amount
<b>6</b>	<b>STEEL WORKS</b>				
i	Fabricating, supplying and installing in position M.S. railing , grills, ladder /stair, balcony railings, door frames , tenches/ drain frams , nozing angles etc as per drawing using standard sections such as angle sections, T-sections, Channel sections, M.S. tubes,bars , etc. as desired including all incidental operations such as bending, cuting, welding, drilling, grinding etc including D P test. . all complete including hold fast and embedding in position with 1:2:4 cement concrete( 150mmx150mmx150mm) and applying a priming coat of approved steel primer, metallic putty and two coats of approved make and shade of synthetic enamel paint . The hand railing and other horizontal members shall be bent to the correct radius shown on the drawings by appropriate means without losing the profile of the pipe.	KG	814.50		
<b>TOTAL FOR STEEL WORK</b>					
<b>7</b>	<b>ALUMINIUM WORK</b>				
	<b>PREAMBLES</b>				
(a)	Contractor to submit the anodising/ powder coating , EPDM gaskets test reports / certificates				
(b)	samples to be got approved before fabricating / fixing				
(c)	All exposed framing shall be free from scratches and other serious blemishes				
(d)	all alumniun sections/ profiles shall be protected by using masking tapes, which shall be removed as and when required during installation				
(e)	all screws bolts, nuts abd washers to be used be only stainless steel of approved manufacturer				
(f)	the glass shall be free from flaws, specks or bubbles and shall have square corners and straight line				
(g)	the completed installation shall be free from vibration,wind whistless and noice due to thermal, structural movement and wind pressure				
i	Providing and fixing power coated 65 micron aluminium work for Doors/windows /Ventilators with extruded built up standard tubular sections/appropriate Zsections and other sections of approved make( jindal hindalco,balco, ) conforming to IS:733 and IS:1285, with all fittings & fixtures like hinges 125 mm 4 nos , handles as approved, tower bolt, door stopper , window stays, friction hinges, aluminium concealed lock, twin type door stopper wherever required complete fixed with rawl plugs and screws or with fixing clips or with expansions hold fasteners including EPDM rubber gasket , filling gaps with silicon sealent along wall & alumniun section etc system properly sealed including inbuilt approved ventilation and drainage system, packing , glueing and permanent elastic sealing to make the glazing air tight and water tight. etc to prevent water penetration.				
(a)	Overall area treated as fixed	KG	309.78		
(b)	Sliding window with 3/4 rail channel / tracks (2/3 glass shutters + 1/2 mosquito net shutter) including wool piles in track , teflon bearings( as approved)	KG	309.78		
ii	Providing and fixing glass for Doors windows/ ventilators with all fittings gaskets etc ( modi float/ Saint Gobain), complete in all respect.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(a)	5 mm thick clear float glass	SQM	32.58		
(b)	6 mm thick clear float glass	SQM	17.28		
(c)	SS jali instead of glass with required frames	SQM	16.29		
iii	Designing, providing and fixing aluminium frame work made of special aluminium section on building face with M.S. angle iron brackets fixed on RCC structure with S.S. hold fasteners, including providing and fixing two sided structural adhesive tape of appropriate grade (NORTON or equivalent), on aluminium sections for fixing aluminium/glass panel, sealing on periphery of frame work, by providing EPDM gasket, silicon weather sealant between aluminium frame and building structure including hire charges of double scaffolding complete.	KG	523.80		
iv	Providing and fixing laminated glass sheet of 8.76mm thickness in approved sizes on aluminium frame work on face of building. (Frame to be paid for separately).	SQM	34.92		
v	Providing and fixing of twin style fully glazed entrance door and fixed glass as shown in the drawing, frame less type using patch fittings as approved comprising of stainless steel, threaded rod, pivots with plug, top frame with removable pin with cover plate, top porch with plastic socket for top pivot, bottom patch with insert for floor spring spindles/pivot, floor pivot bearing double action floor spring and corner lock Euro profile, cylinder single throw bolt projection with security rosettes suitable for double action swing doors with mechanical back check suitable for 12 mm thick toughened clear float glass for fixed glazed portion with adjustable lock keeper plates in two part, floor sockets over panel strike boxes, to suit corner locks including cost of all materials, EPDM gasket, sealants etc, labour, machinery, fabrication, chasing in the floor, chipping of walls, beams, columns, rectification plaster, painting required erection, installation, transportation all charges etc. complete as per design and drawing and to the satisfaction of Engineer-in-Charge. Floor springs and stainless steel handles shall be paid for separately. (Rate shall include the cost of 12mm thick toughened clear float Glass including crystal clear polishing and grinding in strips.)	SQM	21.00		
vi	Providing and fixing fixed glazing with 12mm thick Toughened clear glass fixed at top with MS Tube of size 50 x 50mm and Aluminium channel of size 20mm X 25mm with silicon sealant filled in and bottom and sides with Aluminium channel of size 20 x 25mm with silicon sealant filled in as per design and drawing. The Aluminium channel at top portion shall be fixed to MS tube with SS screws and sides & bottom Aluminium channel screws fixed to masonry with SS screws. The joints between the glass panels shall be in line and filled with silicon sealant of specified make so as to avoid any air gap and water penetration in between all complete as per design and drawing and to the satisfaction of Engineer-in-Charge.	SQM	25.95		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
vii	Providing and fixing AISI 304 Grade Stainless Steel 50mm dia. handrail , master balustrade 60 dia and balustrade 32 mm fixed at 900 mm c/c and 4 runner pipes 20 mm continuously fixed horizontally/ inclined between the blusters , suitably bend or jointed with SS clamps and bends etc fixed & positioned with Stainless Steel Anchor bolts and SS caps complete in all respect . (Wall thickness of pipes shall be taken as 1.5mm along with all visible components developed in High Grade S.S.) etc. all complete as per detail drawing, specification to entire satisfaction of Project Manager. Work to include preparing shop drawings , fabrication cutting , welding , grinding , buffing and polishing etc complete to the satisfaction of architect/Project Manager.	KG	405.00		
viii	Providing and fixing AISI 304 Grade Stainless Steel 50 mm dia handrail ,continuously fixed horizontally along wall / staircase , suitably bend or jointed with SS clamps and bends etc fixed & positioned with Stainless Steel plate /flange fixed to walls with Anchor fastners, SS bolts and SS caps complete in all respect .Work to include preparing shop drawings , fabrication cutting , welding , grinding , buffing and polishing etc complete to the satisfaction of architect/Project Manager.	KG	80.80		
<b>TOTAL FOR ALUMNIUM WORK</b>					
<b>8 WATER PROOFING WORK</b>					
<b>PREAMBLES :</b>					
(a)	Cutting chases in wall for loose mortar/concrete , and filling chases with cement concrete 1:2:4 (1cement: 2 coarse sand: 4 hard stone aggregate 12.5mm nominal size) is included in item				
(b)	The water-proofed surface shall be tested with 15 cms standing water for 72 hrs.				
(c)	Providing required slope as directed.				
(d)	The water proofing work must be executed by an approved specialised Agency. The Contractor shall give a 10 years guarentee as per instruction of the Project Manager. The Contractor through the specialist agency shall give a guarantee against any leakage for a period of 10 years. Any leakage during the period shall be made good by the contractor at his own cost.				
(e)	The work specified herein shall be executed as indicated in the drawings as per the technical specifications given in the tender documents and as per MANUFACTURER'S SPECIFICATIONS.				
(f)	(Quoted Rates are for all heights, depths, levels, leads and lifts) The operations describe below are only indicative & the item				
<b>Sunken Waterproofing</b>					
i	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proffing cement compound consisting of applying (Note: only plan area to be measured):	SQM	129.30		
(a)	First layer of slurry of cement @ 0.488 kg/sqm mixed with AT-CRETE/TAPECRETE @1:1:1(1cement:1 compound:1 water) . This layer will be allowed to air cure for 4 hours.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(b)	Second layer of slurry of cement @ 0.242 kg/sqm. Mixes with AT-CRETE/TAPECRETE @1:1:1(1cement:1 compound:1 water) . This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.				
(c)	12 mm thick Rendering /plastering as protective layer of cement mortar 1:4 on the surface, with water proofing compound @0.2 kg per 50kg bag of cement .				
(d)	The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.				
	<b>Terrace Roof Slab – Waterproofing</b>				
ii	Providing and doing 120mm thick (average) brick bat coba water proofing as follows :	SQM	770		
(a)	Cleaning of surface and applying cement slurry @ 4.4 kg/sqm mixed with acrylic based water @1:1:1(1cement:1 compound:1 water) proofing compound .				
(b)	Cement mortar 1:3 mixed (1 cement: 3 coarse sand) mixed with acrylic based water proofing compound@ 0.2 kg per 50kg bag of cement , or as per manufacturer specification				
(c)	Brick bats with 15mm to 20mm joints, grouted and jointed with cement mortar 1:3 (1 cement: 3 mixed) with acrylic based water proofing compound.@ 0.2 kg per 50kg bag of cement , or as per manufacturer specification				
(d)	Racking out of brick bat joints upto depth of 20mm				
(e)	Cement mortar plaster 1:4 (1 cement: 4 coarse sand) mixed with non-shrinkage, water proofing compound@ 0.2 kg/ bag of cement finish neat ,complete with grooves pattern 300x300 or as specified				
(f)	treatment for vertical walls upto 300 mm height , gola / watta, junctions of pipes , sleeves, drain etc is part of item.				
iii	Providing waterproofing treatment in basement walls, water tanks walls & base with 20mm thick cement plaster 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions with neat finish using cement slurry @ 2.2 kg/ sqm	SQM	43.60		
iv	Making khurras 45x45cm with average minimum thickness of 5cm concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20mm nominal size) over PVC sheet 1mx1m - 400 micron finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) with a coat of neat cement, punning, rounding the edges and making and finishing the outlet with CI grating complete.	EACH	18.00		
<b>TOTAL FOR WATER PROOFING WORK</b>					
<b>9</b>	<b>FLOOR FINISHING</b>				
	<b>PREAMBLES</b>				
(a)	line and level to be checked and confirm prior to start of work				
(b)	All the samples for stones, marbles, tiles etc shall be got approved prior to start of work and procurement of material in bulk quantity				
(c)	Makes, quality, color, shade of the materials to be used in the work , be got approved prior to start of work.				
(d)	All the flooring ceramic tiles are anti skid , until specified otherwise.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(e)	Clearing and curing of area for work to be done one day in advance. Cleaning of flooring or cladding will be done at site on the same day of work				
(f)	all the joints will be neatly finished, with matching color pigment mixed with white cement even if not specified in the item				
(g)	Protection of all kinds of floorings with POP and polythene sheet etc. is included in item rate and nothing extra shall be paid for this.				
(h)	chase cutting for flush skirting is included in rates				
(i)	finishing and plaster repairing after fixing skirting is included in rates				
(j)	cleaning of POP and polythylene sheet at the time of handing over , washing floor with Mild Acid solution if required .				
(k)	Repairing of all damages shall be made good/ replaced before handing over .				
(l)	tolerance in thickness of granite / marble will be +/- will be 1mm				
(m)	wherever stone / tile cladding / skirting/ dado/ jambs/ risers is to be done , cement plaster specified under finishing section will not be paid.				
i	Providing and laying 25-30 mm thick machine cut, mirror polished approved Kota stone (in uniform shade) flooring in pattern and size as detailed in drawing or as directed . Stone to be bedded in 25mm thick cement sand mortar mix ratio 1:4(1 cement : 4 Coarse sand) including cleaning and preparing the surface for bedding, spreading neat cement slurry by using minimum cement about 2 kg/sqm prior to bedding and spreading cement pasteusing minimum cement about 4.5 kg/sqm over bedding, fixed to required line, level, etc. Mirror polishing all complete at all heights and leads to the satisfaction of the engineer in charge /architect.	SQM	660.91		
ii	Laying of 18mm thick stone of any size and of approved colour as per approved pattern in flooring, cills, copings, soffit, bands, etc or any other horizontal surface laid over 25mm thick cement mortar 1:4 (1cement :4 coarse sand) including grouting with neat white cement slurry mixed with pigment to match shade of stone, grinding, rubbing, mirror polishing including all ancillary works and providing and laying 15mm thick POP including 300 micron polythene sheet laid for floor protection including removal & disposal of the same before final polishing,complete as directed.				
(c)	Polished granite ( Z black or color as approved ) stone	SQM	311.61		
iii	same as item no 9.5 but for dado, skirting or any vertical faces and staircase landing treads, risers in single piece with Stone fixed by grouting back with cement grout mortar mix ratio 1:3(1 cement :3 course sand) to correct line, level and plumb. Joints are well cleaned ,grouted with matching colour approved quality readymade grout, curing, cleaned and where specified or shown in drawing exposed edge of stone/ nozing should by rounded / chamfered and polished etc complete .				
(c)	Polished granite( Z black or color as approved ) stone	SQM	149.34		

S.No.	Item Description	Unit	Quantity	Rate	Amount
iv	Providing and laying approved quality, colour, design and shade fully homogeneous Vitrified tile( 10 mm thickness) (Kazaria, johnsons,somany or equivalent approved, confirming to EN 176 and water absorption less than 0.05%) flooring in pattern as detailed in drawing or as directed . Tile to be bedded in minimum 25mm cement sand mortar mix ratio1:4 (1 cement : 4 course sand) including cleaning and preparing the surface for bedding, spreading neat cement slurry by using minimum cement about 2 kg/Sqm over cleaned surface and spreading neat cement paste using minimum cement about 4.5 kg/Sqm over cement mortar bed, joints to be cleaned and grouted with matching colour approved quality readymade grout, pigments, spacers , curing, cleaning etc. all complete at required line, level and all leads, lifts and heights, plumbing holes ,openings etc is considered to be included in item .				
(a)	Tile size 600mm X 600mm	SQM	902.70		
v	Providing and fixing skirting or dado made out of same tiles as that of flooring fully homogeneous Vitrified tile to walls/columns as shown in drawing or as directed by the engineer in charge . Tiles fixed by grouting back with cement grout mortar mix ratio 1:3(1 cement :3 course sand) to correct line to correct line, level and plumb. Joints are well cleaned and grouted with matching colour approved quality readymade grout and cured, cleaned and including finishing junction of plaster etc. all complete at all heights, lifts and leads .				
(a)	Tile size 600mm X 600mm	SQM	46.33		
vi	CERAMIC tile (8mm to 10mm) thick (Kazaria, johnsons,somany or equivalent approved, confirming to EN 176and water absorption less than 0.05%) and of approved size in flooring in pattern as detailed in drawing or as directed by the engineer in charge . Tile to be bedded in 25 mm cement sand mortar mix ratio 1:4 (1 cement : 4 sand) including cleaning and preparing the surface for bedding, spreading neat cement slurry by using minimum cement about 2 kg/Sqm over cleaned surface and spreading neat cement paste using minimum cement about 4.5 kg/Sqm over cement mortar bed,joints to be cleaned and grouted with matching colour approved quality readymade grout . pigments ,curing, cleaning etc. all complete at required line, level and all leads, lifts and heights to the entire satisfaction of the engineer in charge .				
		SQM	80.12		
vii	CERAMIC tile( 8mm to10mm ) thick make Kazaria, johnsons,somany approved, confirming to EN 176and water absorption less than 0.05%) Dado ( tiles size 1' x2' or as approved ) in pattern as detailed in drawing or as directed by the engineer in charge . Tile to be bedded in cement sand mortar mix ratio 1:4 (1 cement : 4 course sand) including cleaning and preparing the surface for bedding, using minimum cement about 4.5 kg/Sqm over cement mortar bed,joints to be cleaned and grouted with matching colour approved quality readymade grout,curing, cleaning etc. all complete at required line, level and all leads, lifts and				
		SQM	345.42		



S.No.	Item Discription	Unit	Quantity	Rate	Amount
viii	Fixing of 18 to 20 mm thick mirror polished, machine cut granite stone slabs for kitchen/ pantry platforms, counters facias and similar locations of required size of approved shade, colour and texture laid over 12 mm thick base cement mortar 1:3 (1 cement :3 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including fixing of 75 mm to 100 mm moulding ( latak) along exposed face ,installation of sink/ basin as instructed, rounding off / nozing with grinding , finishing& polishing as instructed curing etc complete.	SQM	7.56		
ix	Providing and fixing wash basin counter with 19 mm thick machine cut, mirror polished ,aproved light coloured Granite stone about 600mm wide fixed over 25mm thick kota stone( horizontal& vertical supports ), 100mm high granite fascia( latak) fixed with required supports, pins, clamps, GI brackets if any ,rounding of edges / nozing by grinding and polishing as instructed , , grouted in wall, including cutting and finishing smooth and mirror polishing Granite for wash basin, required sealing with silicone sealant etc. circular/ ovel cutting for counter wash basin is included in item.The under counter basin will be provide & measured under relevent item .( plan area will be measured for payment	SQM	9.93		
x	40 mm double stone full round moulding for staircase & landings	RMT	206.70		
<b>TOTAL FOR FLOORING WORK</b>					
<b>10 MISC. WORKS</b>					
i	Providing and fixing at all height false ceiling of 12.5 mm thick tapered edge gypsum board conforming to IS 2095 including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating 600 as per IS: 277 and consisting of angle cleats of size 25mm wide x1.6mm thick with flanges of 22mm and 37mm at 1200mm centre one flange fixed to the ceiling with dash fastner 12.5mm dia x 40mm long with 6mm dia bolts to the angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick botton wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum baord with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling with trap doors as approved by Architect( 12 mm ply board with wooden frame and necessary fittings) . the rates are inclusive of plastic emulsion painting including primer as specified , tapping on joints etc complete in all respect.	SQM	1154.18		
ii	Making holes upto 300 mm or 300X 300 in size in rcc work and filling the same with pcc1:2:4 and finishing the same as per surrounding including scaffolding cutting the reinforcement bars , curing etc complete as directed	NOS.	100.00		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
iii	PLINTH PROTECTION Providing and finishing plinth protection 0.750 mts wide along the building by consolidation and compaction of loose earth then construction 200 high wall 115 mm thick wall at distance of 600 mm from existing wall,12 mm 1:4( 1 cement: 4 course sand) plastered & filling the area with brick bats 100 mm over 100 mm well compacted earth and finished with 100 PCC 1:3:6 ( 1Cement: 3 sand: 6 stone aggregate ) upto the external edge of brickwork including finishing with neat coat of cement , curing etc complete in all respect.	SQM	97.50		
<b>TOTAL FOR MISCELLANEOUS WORK</b>					
<b>11</b>	<b>LANDSCAPE WORK</b>				
	<b>Lawn</b>				
i	Grassing / plantation of lawn, planted in rows of 100 mm or less by excavating the ground to the depth of 15 cms ,removing excavated material from site, back filling with garden earth,adding prescribed quantity of organic manure, bedding before plantation of the grass,leveling, watering , cleaning till the grass form a thick uniform layer free from weeds and fit for mowing as required . The rates shall include mortality replacement and maintainance of lawn for period of 6 months or handing over of the project , which ever is later.				
(a)	Carpet grass (well developed)	SQM	238.00		
	<b>Trees</b>				
ii	Supply and plantation of trees of minimum 7' height like Neem, Silver Oak, Kanak Champa, Kadam, Gulmohar,etc or others as per selection by excavating the ground 0.90m x 0.90m x 0.90 m size, removing excavated material from site, back filling with garden earth,adding prescribed quantity of organic manure, bedding before plantation ,leveling, watering , cleaning , free from weeds as required . The rates shall include mortality replacement and maintainance for period of 6 months or handing over of the project , which ever is latter.	NOS	100.00		
iii	Providing and filling and/ cutting or spreading Garden soil upto the desired level over abd above depth mention is 11.1 to 11.6 levelling of same for plantation, weeding till plantation, complete.	CUM	122.40		
iv	Irrigation Scheme Semi Automatic irrigation for above landscaping as per following specification				
(a)	P & F G.I. Pipes (External Work) with G.I. fittings including union (IS : 1239 Mark), trenching & refilling earth etc.				
(a)1	25mm dia nominal bore "B' Class	MTR	80.00		
(a)2	32mm dia nominal bore "B' Class	MTR	30.00		
(a)3	40mm dia nominal bore "B' Class	MTR	20.00		
<b>TOTAL FOR LANDSCAPING WORK</b>					
<b>12</b>	<b>PLUMBING WORK</b>				
	<b>PREAMBLES</b>				
(a)	All the C.P. fittings & sanitary ware will be of approved make and catalog no. to be got approved from Architect/ Engineer Incharge before start up work , prior to procurment.				
(b)	All pressure testing smoke test to be done by contractor free of cost				

S.No.	Item Discription	Unit	Quantity	Rate	Amount
(c)	for concealed pipe line, before filling zeries / back filling earth, the necessary testing is to be carried out witnessed by engineer incharge.				
(d)	Shop drawings to be submitted and got approved from architech/ consultant before start of work .				
(e)	All fixtures are Crome plated brass unless otherwise specified.				
(f)	All fitting for pipe line , UPVC or CPVC lines are inclusive of Union and other required fittings even if not specified				
(g)	As built drawings to be got approved and submitted by contractor both is soft and hard copy prior to rasing final bill				
i	Providing & fixing wall hung type white/coloured vitreous china European wall hung water closet of approved make syphonic wall mounting with concealed 'P' or 'S' trap, seat & lid white or as approved with (heavy duty) with Two Way Bib Cock with Health fuacet 1.0 Meter Long PVC Tube & Wall Hook having all internal fittings, China ware dual flushing cistern 10/5 ltr , C.P. brass hinges & rubber buffer with fittings C.I. / M.S. bracktes 40 mm diameter C.P. flush bend with fitting & clamps, overflow arrangment with special and mosquito proof coipling of approved municipal design complete including painting of fittings & brackts cutting & making good the wall or direction of engineer incharge.	EACH	17.00		
ii	Providing & fixing vitreous china urinal of approved make of size 645x410x425mm with automatic flush valve sensors(of specified make) with fitting, C.I. / M. S. brackets standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with bottle trap (of specified make) one piece casted European type and union 32mm and other couplings in C.P. brass including painting of fittings and brackets cutting and making good the wall and floor wherever required.	EACH	12.00		
iii	P&F Marble Urinal Partition slab Makrana II quality marble having light spotsboth sides polished of approved design cut from marble size 20mm thick 900x600mm, including all fixing arrangement, cutting and making good the walls wherever required.	EACH	10.00		
iv	SITC of White Viterous China ware wash basin Size 550 mm x 400 mm (1st quality, I.S. : 2556 ) of approved make with C.I. brackets (duly painted with 2 coats of paint over a coat of primer), 1 No. 15 mm C.P. Pillar cock (IS : 8934 Mark) & , 32mm C.P. brass waste coupling of standard pattern of approved make including C.P.Angle valve with C.P. cap , copper connection ,C.P. cast brass bottle trap 40 mm with extension piece, rubber adaptor, wall flange, union, C.P. brass chainrubber plug painting of fitting and brackets, supporting, cutting and making good the wall wherever required.	EACH	21.00		
v	-Do- as per item no 9 but with Basin Mixer instead of Pillar cock with required associated connections, pipes etc	EACH	21.00		
vi	Providing fixing 6mm thick bevelled edge mirror of approved make/quality and size with 0.5" water proof ply backing with 3"x1.5" thick Ivory coast teakwood frame all around spririt polished.	SQM	16.07		
vii	Towel rail/ ring				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(a)	Providing fixing 600x20mm CP brass towel rail of approved make with CP brackets fixed to wooden cleats, PVC rawl plug with CP brass screws etc. including cutting and making good the wall wherever required.	EACH	2.00		
(b)	Providing fixing CP brass towel ring circular or any other shape of approved make with CP brackets fixed to wooden cleats, PVC rawl plug with CP brass screws etc. including cutting and making good the wall wherever required.	EACH	6.00		
viii	P & F C. P. brass Toilet Paper Holder with rod of approved quality/make, with CP brass screws & rawl plugs as approved	EACH	17.00		
ix	P & F Inlet Connection (Angle Valves) Superior quality, of approved make, with CP wall flange, Nut and Washer etc complete as required for cistern, Gyser etc. complete including cutting & making good the wall/counter etc.	EACH	21.00		
x	C.P. Inlet connection 15mm.Brass 450 mm long (IS : 8931 marked)	EACH	33.00		
xi	P & F Bib Cock (IS : 8931 Mark), Superior quality of approved make:	EACH	17.00		
xii	Providing fixing stainless steel liquid soap dispenser with bottle size 75mm dia and 160mm height capacity 450ml of approved make. Including screws, washers and rawl plug etc.	EACH	33.00		
xiii	P & F C.P. brass heavy and superior quality Soap Dish holder or Tray of approved quality/make	EACH	16.00		
xiv	providing and fixing standard non metal tissue paper dispenser in toilets as approved	EACH			
xv	Prividing and fixing C.P. Brass stop cock (concealed ) of standard design and of approved make confirming to IS 8931 15 MM nominal bore	EACH	12.00		
xvi	Providing and fixing chlorinated polyvinly chloride (CPVC) CTS SDR 11 Hot & Cold Water pipes conforming to IS capable to withstand 27.6kg/cm <sup>2</sup> at room tempreature water and 7.03 kg/cm <sup>2</sup> at 82°C and all fittings of CPVC SDR 11 like elbow, tee, reducers, couplers, brass threated Male & female (adapoters,elbow, tees).The pipe fitting joining to be done with solvent cement as per manufacturers specifications & recommendations. The above includes chaise cutting fixing of pipes fittings, clamps , testing of Assembly and finally making good the wall to the satisfaction of Engineer In Charge.				
I	<b>CONCEALED PIPING</b>				
(a)	15mm Nominal Outer Dia	RMT	120.00		
(b)	25mm Nominal Outer Dia	RMT	50.00		
II	<b>EXPOSED/INTERNAL PLUMBING</b>				
(c)	32mm Nominal Outer Dia	RMT	60.00		
(d)	40mm Nominal Outer Dia	RMT	50.00		
xvii	Providing, fixing & testing uPVC SWR pipes confirming to IS 13592 (Type B) ,minimum 6 kg pressure alongwith all required fittings like tees, bends, offsets, 'Y', crosses with or without access doors, cowls , etc , jointed with approved solvent cement as per manufacturer's recommendations, fixed to walls and ceilings with clamps complete including cutting and making good the floors and walls where required complete of outer diameter.				
(a)	75 mm dia	RMT	80.00		
(b)	110 mm dia	RMT	120.00		

S.No.	Item Description	Unit	Quantity	Rate	Amount
xviii	SITC of Unplasticized Poly Vinyl Chloride (UPVC) SWR Pipes fittings type B for sciland waste discharge system (IS:13592 : 1992 Marked) of approved quality /make, including complete including cutting and making good the wall/Floor:				
(a)	Multi floor trap with C.P.jali 4" dia				
	110mmx75mm dia ( with 3 inlets)	EACH	50.00		
(c)	Nahni Trap with C.P. Jali 4" dia				
	110x75 mm dia	EACH	50.00		
xix	Providing and fixing square mouth (S.W) gully trap grade `A' complete with C.I. grating brick masonry chamber with bricks of class designation 75 and water tight double seal C.I. cover with frame of 300 x 300 mm internal size. The weight of cover to be not less than 4.5 kg and frame to be not less than 2.70 kg. as per standard design.				
(a)	150 x 100 mm size 'P' type.	EACH	6.00		
xx	Providing and constructing 75 class brick masonry road gully chamber 600x 600mm depth up to 1000mm 230 mm thick walls in cement mortar 1:5 (1 cement : 5 coarse sand) including 500 x 450 mm S.F.R.C. grating and frame (heavy duty) fixed with 100 mm P.C.C. 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) 100 mm thick PCC bed concrete 1:4 : 8 (1 cement : 4 sand : 8 graded stone aggregate of 40 mm nominal size), 50 mm thick in C.C. 1:2:4 at base including necessary excavation, backfilling and disposal of surplus earth, 12 mm thick cement plaster with cement mortar 1:3 (1 cement : 3 coarse sand) with a floating coat of neat cement finish to inside and exposed outside surfaces, complete with all respects.	EACH	6.00		
xxi	Providing and laying, jointing, fixing, testing G.I. Pipe Lines B- Class, including cost of Specials such as tees, bends, sockets elbow etc., cutting, threading and testing in trenches in the ground complete. (Including Water Body)				
	25mm i/d	EACH	35.00		
xxii	Providing, fixing and jointing gun-metal peet valves (Heavy Pattern) with hand wheels, on G.I. Pipe lines laid in the ground or inside buildings including all carriages complete.				
	25mm i/d Gun Metal peet valve heavy pattern.	EACH	10.00		
<b>Total Plumbing &amp; Irrigation</b>					
<b>13</b>	<b>ROAD WORK</b>				
	<b>Sub base preparation</b>				
i	Preparation and consolidation of sub grade with power road roller of 8 to 12 ton capacity after excavating /filling earth to an average of 30 cm depth, dressing to camber and consolidating each deposited layer by mechanical means, ramming and watering including achieving 95% Standard Proctor density as per IS specifications at all depth, levels and disposal of surplus earth with in lead of 2KM	SQM	747.90		
	<b>Back Filling</b>				

S.No.	Item Description	Unit	Quantity	Rate	Amount
ii	Filling with Murrum brought from outside in plinths/ under roads or any other location as specified , and shall be done in layers, not exceeding 20cm in depth and consolidating each deposited layer by mechanical means, ramming and watering including achieving 95% Standard Proctor density as per IS specifications (Net consolidated area fill volume will be computed from the initial and final levels. Volume in slopes, embankments etc. will be computed applying appropriate formula, as per CPWD specification).	CUM	149.58		
	<b>Subgrade (dry rubble soling)</b>				
iii	Laying, spreading and compacting stone aggregate of specified sizes STONE SOILING 200 mm thick finished , specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / stone chippings and murrom as binding material to fill up interstices of coarse aggregate, watering and compacting to the required density (Consolidated thickness shall be measured and paid for)	CUM	193.04		
iv	Providing and laying WBM in single layer of 100mm finished consolidated thickness with 63-40 mm sized stones aggregate (1.35 cum/ 10 sqm) including sorting, spreading to template, packing with smaller stones, rolling, blinding with moorum, watering and consolidating with road roller of 8-10 T capacity including supplying, spreading and consolidating the blinding material as directed (Consolidated thickness shall be measured and paid for).	SQM	747.90		
	<b>Plain Cement Concrete</b>				
v	Dry Lean Cement Concrete Sub-base as per IRC:SP-49 (Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 26.5 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing as per clause 601.)	CUM	74.79		
vi	<b>Providing and laying Trimix Concrete for roads Flooring.</b>				
(a)	Providing and laying Vacuum Dewatered Flooring - VDF / TRIMIX using pumpable grade RMC M 20 of as per detailed technical specifications, including making bunds, 8 mm dia MS reinforcement @ 200 c/c or as given in the drawing, necessary formwork, finishing the same to BROOM FINISH and to the satisfaction of Project Manager / Architect etc. all complete including necessary curing. The rate shall include Providing and laying separation layer of 0.6 mm thick POLYETHYLENE SHEET to be placed with over lapping and laid on the PCC slab / sub grade before casting.( reinforcement to be measured and paid under relevant item )				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(b)	TRIMIX APPLICATION- Vacuum dewatering operation including setting of channel shuttering online & level, vibrating concrete with double beam screed , vibrator, levelling with trimix surface vibrVacuum Dewatering with Trimix vacuum pump, floating and further compaction with				
(c)	floating disc, machine troweling using approved machinery before application of broom finish.				
(d)	Cutting the cured concrete for contraction / expansion joints of sizes 6 mm wide and 8 mm deep to with mechanized cutter as directed by the Architect or complete.				
(e)	For expansion joint angle section 65x65x5 will be fixed with hold fast 12mm dia 300mm long @600 c/c with 40 mm gapping filled with 40mm shelitex board cut to size .				
(f)	Gradient at the top, size of panel & location of the groove shall be as specified by the architect.				
(g)	Each Panel shall be of size (3500 x 3500 mm) or as directed by the Architect. Reinforcement Steel shall be measured and paid separately under relevant items	SQM	747.90		
vii	Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub-base, coarse and fine aggregate conforming to IS:383, and graded as per table 600-3, mixed as per approved mix design at site, laid, spread, vibrated, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, de-bonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per clause 602.) With Cement concrete grade M-30 and minimum cement content @ 375 kg/cum.	cum	149.58		
	<b>Interlocking Paver Blocks</b>				
viii	Providing and laying <b>interlocking cement concrete paver blocks of approved shape , color &amp; size</b> with specified pattern, <b>80 mm thk.</b> having compressive strenght not less than 350 kg /sqcm.manufactured by mechanised block molding machine, laying the blocks with proper line and level over required course sand and subbase at least 50mm thick, complete, filling the joints with fine sandas directed				
(b)	Coloured paver blocks	SQM	217.30		
	<b>Drain Channel</b>				
ix	Construction of RCC drain 0.30m x 0.45m inside dimension lined with 100 mm thick RCC M-20 walls and Drain Cover , 120 mm thick CC M-20 foundation, over 100 mm thick (Av) leveling course in PCC M-15 including excavation , dressing of sides and bottom, provision of HYSD reinforcement consisting 8 mm dia horizontal bars @ 150 mm c/c and L-shaped 8 mm dia vertical bars @ 150 mm c/c (L= 400 mm) including cutting , bending and binding wire, placing in position , providing shuttering and concreting by using concrete mixer, compaction by vibration etc complete as per drawings and technical specifications.	RMT	135.00		

S.No.	Item Description	Unit	Quantity	Rate	Amount
x	Construction of RCC drain 0.45m x 0.60m inside dimension lined with 100 mm thick RCC M-20 walls and Drain Cover, 120 mm thick CC M-20 foundation, over 100 mm thick (Av) leveling course in PCC M-15 including excavation , dressing of sides and bottom, provision of HYSD reinforcement consisting 8 mm dia horizontal bars @ 150 mm c/c and L-shaped 8 mm dia vertical bars @ 150 mm c/c (L= 600 mm) including cutting , bending and binding wire, placing in position , providing shuttering and concreting by using concrete mixer, compaction by vibration etc complete as per drawings and technical specifications.	RMT	170.00		
xi	Providing, laying, jointing and testing RCC pipes (NP2 class) conforming to IS 458 with necessary collars jointed with stiff mixture of cement mortar in the proportion of 1:2 ( 1 cement : 2 sand) laid to correct levels below ground in trenches upto required depth (1mts ) for culvert , road crossings, storm water drain, waste water,cutting of pipes if required,including excavation in all kind of soil (hard / soft), dewatering, refilling, watering, ramming and removing the surplus excavated material and making good the same complete as required. hunching / benching with base width ( external dia of the pipe + 100 mm on both sides ) and 100 mm all around with 1:4:8 ( plain cement concrete )				
(a)	150 mm dia ID	RMT	50.00		
<b>TOTAL ROAD WORK</b>					
<b>14 FIRE FIGHTING WORKS</b>					
<b>PREAMBLES</b>					
The rate of each item of work for Fire Detection and Alarm System shall also include the following :					
(a)	All materials, fixing materials, accessories, appliances, tools and equipment.				
(b)	Approved cover plates for inspection, junction and outlet boxes.				
(c)	1.6 mm thick outlet boxes and junction boxes.				
(d)	All fixing accessories such as clips, nails, screws etc.				
(e)	Providing and fixing approved saddles, hooks and grouting the same as required, in the case of all exposed conduit work.				
(f)	Providing ,fixing and embedding conduits of suitable dia and accessories in wall, floors etc. during construction and / or cutting chases and making good as necessary in the case of all concealed conduit work.				
(g)	Testing and commissioning of each device, circuit as per the requirements of NFPA 72, TAC, local authorities and to be witnessed by the Construction Manager / Architect / Consultant / Client's Site representatives and or fire protection consultant.				
<b>HYDRANT SYSTEM</b>					
i	Supplying and fixing Fire Brigade Connection of CI body with Gun Metal male instantaneous inlet couplings complete with cap and chain as required for 150mm dia MS pipe connection, conforming to IS 904 as required of following way :				
(a)	4 Way (for Inlet)	EACH	1.00		



S.No.	Item Description	Unit	Quantity	Rate	Amount
ii	Supplying and fixing 63 mm dia, 15 mtr. Long RRL hose pipe with 63 mm dia male and female Gun metal couplings duly binded with GI wire, rivets etc. conforming to IS 636 (type-A) as required.	EACH	3.00		
iii	Supplying & fixing 63 mm dia Gun metal 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	EACH	3.00		
iv	Providing & fixing 100mm dia bourden type, Stainless steel dial type pressure Gauge (0 - 16 Kg ) range, 3 / 8 " BSP bottom entry on Pump Delivery Line complete with Ball valve	EACH	3.00		
v	Supplying and fixing first -Aid hose reel wall mounted swinging type with MS construction spray painted in post office Red, conforming to IS 884 with upto date amendments, complete with the following as required.(A) 30 m long 20 mm (nominal internal) dia water hose Thermoplastic (Textile reinforced) Type -2 as per IS: 12585 (B)20 mm (nominal internal) dia gun metal globe valve & nozzle.(C)Drum and brackets for fixing the equipments on wall.(D) Connections from riser with 40 mm dia stop valve (gun metal) & M.S. pipe	EACH	3.00		
vi	Supply & Fixing of Fire Man's Axe with heavy Insulated rubber tested up to 20 KV and confirming to IS ;926	EACH	3.00		
vii	Providing, laying, testing & Commissioning of 'C' class heavy duty MS pipe conforming to IS 3589 / 1239 for hydrent and sprinkler applications including fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. fixing the pipe on the wall/ceiling with suitable clamps and including painting of two coats of Red Oxide , painting with two or more coats of synthetic enamel paint of Post office red shade complete as required.The installation includes all civil openings ,breakages and making good the same.				
(a)	100mm dia.	MTR	25.00		
(b)	65mm dia.	MTR	3.00		
viii	Providing, laying, testing & Commissioning of 'C' class heavy duty MS pipe conforming to IS 3589 and 1239 for hydrent and sprinkler underground rings including all accessories such as screwed/ welded flanges, tees, reducers etc. Conforming to IS : 1239/3589 complete including , welding, jointing with compressed asbestos gaskets, nuts, bolts etc. as required. with cleaning,wrapping and coating of the pipe with 4 mm thick tar based plymaric corrosion protection tape or equivalent including applying uniform coat of cold pipekot primer as per IS; 10221 for protection against corrision suitable for all kind of soil at 1.0 M depth including excavation and making good the same as required at site .				
(b)	100 mm dia	MTR	10.00		
ix	Providing, installation, testing and commissioning of dual plate non-return valve of following sizes confirming to IS:5312 complete with rubber gasket, G I bolts, nuts, washers etc. as required.				
(a)	100mm dia.	EACH	1.00		
x	Supplying, fixing, testing commissioning of butterfly valve PN 1.6, with Bronze/ Gunmetal seat duly ISI marked complete with Nuts, Bolts, washers, gaskets, conforming to IS 13095, of following sizes as required.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(a)	100mm dia	EACH	1.00		
xi	Providing, installation, testing and commissioning of Brass ball valves of following sizes as required.				
(a)	25 mm dia.	EACH	1.00		
	<b>FIRE ALARM SYSTEM</b>				
i	SITC of microprocessor based loop (each loop accessing 127 addressable detectors and 127 devices ) UL Addressable Fire Alarm Control Panel as per NFPA 72 approval. The Panel shall be able to give pin point location of addressable units via the address code for each unit. The Panel shall also be able to automatically switch off all control switches whenever any Alarm is triggered. . The Panel shall have built in buzzer, SMF batteries for min. 24 Hrs.back up, battery charger, rectifier. Loop interface cards, communication module, LCD unit to indicate Fire / Fault Signal of individual unit, option for external printer, to log all incoming data etc complete in all respect.				
(a)	3 - Loop	EACH	1.00		
ii	Supply , installation testing and commissioning of following modules suitable for UL Addressable fire Alarm Control panel taken				
(a)	Control modules for floor wise activation of hooters	EACH	3.00		
iii	SITC of Addressable type manual fire alarm boxes (MCP/Pull Station ) shall, on command from the control panel, send data to the panel representing the state of the manual switch and the addressable communication module status. Manual fire alarm boxes shall be constructed of Lexan with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in raised letters, 1.75 inches (44 mm) or larger. etc. as required.	EACH	3.00		
iv	SITC of Hooter suitable for addressable type fire alarm system with storb light with minimum 85 db audible etc. as required.	EACH	3.00		
v	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required.The rates are inclusive of P&F condute of suitable size, as per dwg/ instruction of engineer in charge				
(a)	2 x 1.5 sq.mm	MTR	500.00		
vi	SITC Addressable analogue Optical type Smoke Detector with mounting base, two LED's etc. as required.	EACH	15.00		
vii	SITC of Rate of Rise cum fixed temperature thermister type Heat Detectors with LED, mounting base etc. as required.	EACH	10.00		
viii	Wiring to speakers in existing conduit. 24 / 0.20 mm PVC insulated twin twisted flexible annealed tinned copper wire.The rates are inclusive of P&F condute of suitable size, as per dwg/ instruction of engineer in charge .	RMT	500.00		
	<b>FIRE EXTINGUISHERS</b>				
ix	Supply & Fixing ISI marked ( IS : 15683 ) Portable Fire Exitnguisher, ABC type,finished externally with red enamel paint, complete in all respects including initial fill and wall suspension of following capacity.				
(a)	6 kg	EACH	2.00		
	<b>TOTAL FIRE FIGHTING SYSTEM</b>				

S.No.	Item Description	Unit	Quantity	Rate	Amount
<b>15</b>	<b>RAIN WATER HARVESTING</b>				
<b>i</b>	Providing Material & labour for constructing Silt trap of size 1500mm x 3000mm x 3000mm deep in brick masonry with bricks of class designation 7.5 ( 345mm up 1000 mm & 230 thick for rest portion in cement mortar 1:6 (1 cement: 6 coarse sand) including necessary excavation and foundation concrete 150mm thick in 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 40mm nominal size), inside plaster 12 mm thick and outside 15 mm in cement mortar 1:4 (1 cement : 4 coarse sand) finished with a floating coat of neat cement, 75 mm C.C. floor(1:2:4), RCC slab in mix 25 with nominal reinforcement of 8 dia 200 c/c in two layers & RCC baffle wall including reinforcement, centering & shuttering etc,and SFRC manhole cover and frame 610 x 455 mm heavy duty HD 10 conforming to IS: 12592 complete in all respects.all the inlet pipes , outlet pipes or any other fittings as required is included in the item	NOS	1.00		
<b>ii</b>	Providing Material & labour for constructing Brick masonry percolation pit 3m dia and 5m deep with bricks of class designation 7.5( 345 mm up 3000 mm & 230 thick for rest portion) in cement mortar 1:6, base concrete 150 mm thich 1:2:4 with nominal steel , including with of necessary excavation in any type of soil, back filling as required in 20cm thick layers, shuttering and shoring and disposal of surplus excavated material within the plot. 1 nos. 300mm dia boring to a depth of 25 metre (to be measured from the bottom of the percolation pit), provisioning and fixing 160 O.D. PVC pipes, tested to 6kg/sqcm, in each bore and upto the height of 300mm above the RCC top slab. The PVC pipe shall be slotted except 3.0 metres at the top and 3.0 metres below from the bottom of the percolation pit, which shall be blind. Top of the PVC pipe shall be covered with PVC Socket & plug. Each bore around the PVC pipe shall be filled with pea gravels. The percolation pit shall be filled with river stone/pebbles. The top slab shall be 150mm thick with RCC( M- 25 ) including nominal reinforcement and 2 nos	NOS	1.00		
<b>iii</b>	Extra for each 1m boring or part thereof beyond 25m depth for the bore including provisioning, providing and fixing of PVC slotted pipes.	Metre	10.00		
<b>TOTAL RAIN WATER HARVESTING</b>					
<b>16</b>	<b>MAIN ELECTRICAL WORK</b>				
<b>PREAMBLES- General Notes</b>					
(a)	The items given in this schedule are provisional. The Tenderer shall be paid for the actual quantity of work executed as measured at the site at the rates tendered. The Client reserves the right to increase or decrease any of the quantities, or to ommit totally any item of work. Any claim by the Tenderer on these accounts will not be entertained.				
(b)	All the items of work given in this schedule of quantities shall be executed strictly in accordance with the latest Indian Standard Specifications and the requirements of the Electricity Supply Authority read in conjunction with the relevant drawings and Specifications.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(c)	The Tenderer shall visit the site and shall satisfy himself as to the conditions under which the work is to be performed. He shall also check and ascertain the location of any existing structure or equipment or any other situation which may affect the work. No extra claim as a consequence of ignorance or on ground of insufficient description will be allowed at a later date.				
(d)	All equipment and material shall be IS approved.				
(e)	All approvals shall be obtained from Client / Consultant				
(f)	All equipment and material shall be inspected at manufacturer's works as per relevant IS by the Client or his representative before despatch to site.				
(g)	All vendor drawings shall be approved by the Client /Consultant before fabrication work starts.				
(h)	All Testing and Commissioning shall be as per relevant IS for equipment and IS:732:1989 for the installation. All testing records are to be maintained and submitted for Client's representative.				
<b>A</b>	<b>CIRCUIT CUM POINT WIRING (IN RECESSED / SURFACE MS / PVC CONDUITS)</b>				
	The rates for all point wiring items shall also include supplying, fixing, testing and commissioning of the				
(a)	Conduits, conduit specials, brass bushes (bends, pull boxes, junction boxes) and other fittings.				
(b)	Approved GI saddles and grouting the same for exposed conduit work.				
(c)	1.6 mm thick Outlet boxes and junction box.				
(d)	All fixing accessories such as clips, brass screws pull boxes etc. complete in all respect.				
(e)	All work necessary for wiring a point circuit of any length from the Final Distribution Board to connector via switch and shall include the circuit wiring also except where identified.				
(f)	Embedding conduits and accessories in walls and floors etc. during construction and / or cutting chases (with chase cutting machine) and making good the same as necessary in the case of concealed conduit work.				
(g)	Switch, socket outlet and necessary blank plates wherever required.				
(h)	PVC insulated copper conductor stranded flexible PVC insulated FRLS wire of Green colour with yellow bands for earthing of fixtures, outlet boxes and third pin of socket outlet.				
(i)	Repainting of MS conduits, outlet boxes and junction boxes where ever damaged.				
(j)	All wires shall be IS approved, 1100 volt grade, stranded flexible PVC insulated FRLS.				
(k)	All sockets shall be shuttered type with earth terminal.				
(l)	Suitable rating of plugs top shall be provided for all Industrial type splash proof socket outlets.				
(m)	Separate neutral and earthing wire shall be provided for each circuit.				
(n)	Lighting and power circuit to be kept separate.				
(o)	Different colours plates / switch socket shall be provided for UPS and raw power supply.				
(p)	Expansion joints for conduiting etc. shall be provided in case of crossing of building expansion joint and as approved by engineer in-charge.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(q)	Conduits shall be terminated in switch & socket boxes / DB's with good quality nuts & check nuts and brass bushes.				
(r)	Circuit cum point wiring shall be as per specification and also Indian Electricity Act				
<b>B.</b>	<b>For CABLES, MAINS AND SUB MAINS</b>				
	The rate shall also include the following :				
(a)	Providing and fixing junction boxes with covers including painting.				
(b)	Effecting adequate and proper connections at terminations.				
(c)	Providing all fixing accessories such as clamping devices nuts, bolts and screws.				
(d)	Excavation laying of cable filling of sand, brick protection, back filling of earth, watering, ramming and making good.				
(e)	Wherever the cables are of aluminium and bus bars of copper bimetallic lugs shall be used.				
(f)	All cable shall be laid with one diameter gap.				
(g)	All cables shall be IS approved.				
(h)	Fire retardent paint one meter on both side of wall penetration and at termination as per specifications.				
(i)	Burried LT cables to be laid atleast 750 mm below ground.				
(j)	All cutouts / Sleeves shall be sealed with fire redardant sealent as per specification.				
<b>C.</b>	<b>CABLE TRAYS :</b>				
	The cable management system shall comprise:				
(a)	Ladder cable trays and supports.				
(b)	Perforated cable trays and supports.				
(c)	Surface mounted wire ducts with brackets / supports.				
(d)	All cuts/perforations/folded sections where contact with wires/cables in expected shall be burr free.				
(e)	Zinc coating shall be 120 gm / square meter or more. The materials shall conform to relevant IS / BS standards for the category / application specified.				
(f)	The cable tray shall be factory built. Only cutting to achieve assembly system length shall be permitted at site.				
(g)	Accurate fabrication formed section with tolerances of + 2 mm on width and + 5 mm on length expected.				
(h)	Dimensional and general arrangement drawing of the system are expected to be provided by tenderer / cable tray / duct supplier.				
(i)	The system shall be designed for installation with a temperature classification of + 60 deg.C.				
(j)	The cable tray/duct systems shall be suitable for against corrosion.				
(k)	Details of fixing supports etc. shall be submitted for approval.				
<b>D.</b>	<b>MAIN LT PANEL AND FINAL DISTRIBUTION BOARD</b>				
	The rates for the distribution boards from the Breakers and instruments shall also include the following :				
(a)	Supporting rigid steel framework.				
(b)	Cubicle type, 14 gauge CRCA sheet steel enclosed & Type 3b modular construction.				
(c)	Complete with interconnections and distribution bus bars along with connector strip.				
(d)	Proper bonding to earth as per standard.				
(e)	Painting/lettering on Breakers and distribution boards, the location they serve, providing on each panel its circuit diagram.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(f)	Providing cable clamps / supports within distribution boards cable alley.				
(g)	TPN ACB's / MCCB's shall mean 3 pole ACB's / MCCB's with adequate size of neutral link.				
(h)	All MCB's shall be of minimum 10 KA breaking capacity.				
(i)	The breaking capacity of MCCB's are mentioned panel wise. All MCCB's shall be with microprocessor releases as per BOQ.				
(j)	Distribution panels / bus ducts / bus trunking shall be Powder Coated with Siemens gray paint shade no. RAL-7032 of IS-5.				
(k)	Degree of protection for following type of distribution panel enclosure shall be as per IS:13947-1993.				
(k)1	IP 42 for indoor panels.				
(k)2	IP 55 for outdoor panels.				
(l)	All MCCB's shall be provided with operating mechanism for door interlock.				
(m)	Current density of aluminium shall be 1sq mm for 1.0 Amps for rated current of bus bars.				
(n)	GI earth bus shall be provided through out the length of each board as per schematic diagram.				
(o)	All measuring instruments (Meters) shall be of digital electronic (LED Type) of approved make and compatible with BAS.				
(p)	All hinged door shall be earthed through 2.5 sq mm tinned braided copper wire.				
(r)	All panels shall have provision of the following:				
(s)	Pad locking of MCCB's handles in "OFF" Position.				
(t)	All MCB's used for protection of resistive and lightly inductive load shall be type "B" characteristic and inductive (motor) load shall be of type "C" characteristic and discharge lamps and UPS etc. shall be of type D characteristic.				
(u)	All incoming and outgoing air circuit breakers shall be placed on middle portion of the vertical in single tier formation.				
(v)	Releases for Air Circuit breakers shall be communicable type.				
(w)	CT's shall be properly mounted and clamped. Connection of CT's for measuring instrument / relays shall be done through connector / terminals.				
(x)	Model, current capacity location and frame size of switchgear shall be written inside of the panel doors with paint / permanent marker as approved shop drawings / site requirement.				
(y)	Compliance to the technical specifications.				
(z)	Capacity of capacitor with detune filter shall be decided after Harmonic study analysis.				
<b>E.</b>	<b>CAPACITOR BANKS WITH AUTOMATIC CONTROL PANELS</b>				
	The rates for the capacitor bank panels apart from the switches and instruments shall also include the following :				
(a)	Supporting rigid steel framework.				
(b)	Cubicle type, 14 gauge CRCA sheet steel enclosed.				
(c)	Complete with interconnections and distribution bus bars.				
(d)	Proper bonding to earth.				
(e)	Providing cable clamps/supports within panels cable alley.				
(f)	All MCB's shall be of minimum 10 KA breaking capacity.				
(g)	The breaking capacity of MCCB's are mentioned panel wise. MCCB's shall be with thermal magnetic releases.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(h)	Automatic capacitor control panels shall be powder coated with Siemens Grey RAL 7032 of IS-5.				
(i)	Enclosure of all capacitor control panel shall be as per IS 13947-1993.				
(j)	All MCCB shall be provided with operating mechanism for door interlock.				
(k)	Current density of aluminium shall be 1sq mm for 1.0 Amps for rated current of bus bars.				
(l)	TPN MCCB shall mean 3 pole MCCB with adequate size of neutral link.				
(m)	GI earth bus shall be provided through out the length of each panel.				
(n)	All capacitor automatic control panel shall have provision for the following:				
(n1)	Padlocking of Switch board doors.				
(n2)	Padlocking of MCCB's handles in OFF position.				
(p)	All hinged door shall be earthed through 2.5 sq.mm tinned braided copper wire.				
(q)	All bus bars section / backside panels shall have pad locking facility and hinged type doors.				
<b>F.</b>	<b>EARTHING INSTALLATION (FOR DISTRIBUTION SYSTEMS )</b>				
	Rates shall also include the following :				
(a)	All fixing accessories such as brass saddles, brass screws rawl plugs etc.				
(b)	Jointing by rivetting and brazing after rivetting in case of copper and welding / bolting in case of GI earthing.				
(c)	Cutting chases holes and making good the same wherever required.				
(d)	Effecting adequate and proper interconnections.				
(e)	Use of copper thimbles.				
(f)	Earthing system shall comply to IS:3043-1987.				
(g)	All earthing pits shall be interconnected.				
(h)	All equipment motors, DB's, panels to be connected on either ends (double earthing) with suitable strip / wires.				
<b>G.</b>	<b>INSTALLATION OF LIGHTING FIXTURES ( As supplied by Client )</b>				
(a)	The rates shall include all components that may be required to make the installation complete in all respects such as :				
(a1)	Suitable length of GI down rod, hanger and connecting wires where called for including painting , in instructed.				
(a2)	Internal wiring between accessories.				
(a3)	Wires for connecting the fixtures to the point through connector block.				
(a4)	All metal blocks to serve as base of fixtures.				
(a5)	Bonding with earth wires.				
(b)	Drilling holes in supports wherever required.				
(c)	Fixing clamps, GI bolts and nuts, brass screws, saddles, rawl bolts and other fixing accessories as required.				
(d)	Testing of all fixtures & fans before and after installation.				
<b>H. (I)</b>	<b>HV INSTALLATION</b>				
	SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF SUB-STATION EQUIPMENT				
	The rates under this section shall also include:				
(a)	Supporting rigid frame work.				
(b)	2 mm thick MS housing complete with dust and vermin proof covers and lockable doors as called for.				
(c)	All fixing accessories such as foundation bolts, nuts and bolts etc as required.				

S.No.	Item Description	Unit	Quantity	Rate	Amount
(d)	Touching up all damaged paint with approved paint shade.				
(e)	All protection relays shall be numerical type				
(f)	Provision shall be required for all HT breakers status indication to be hooked up with BAS.				
(g)	Compliance of technical specifications.				
<b>H. (II)</b>	<b>HT CABLES &amp; LT CONTROL CABLES</b>				
	The rates under this section shall also include the following:				
(a)	Providing and fixing approved cable supports and grouting the same as required.				
(b)	Effecting proper connections at terminations.				
(c)	Ensuring that provision is left in buildings and trenches as the work proceeds, for incorporating of cable supports at a later date.				
(d)	Providing all, fixing accessories such as clamping devices, nuts and bolts etc.				
(e)	Clamping to supports where laid in trenches.				
(f)	Providing proper supports for cable terminals as called for.				
(g)	Wherever cables cross walls provide proper sleeves at the time of civil work.				
<b>H. (III)</b>	<b>EARTHING FOR SUB-STATION EQUIPMENT</b>				
	The rates for earthing items include :				
(a)	All fixing accessories such as brass, saddles, brass screws, rawl plugs etc.				
(b)	Jointing by riveting and brazing after tinning.				
(c)	Cutting chases, holes and making good the same wherever required.				
(d)	Effecting adequate and proper interconnections.				
(e)	Use of copper thimbles.				
(f)	Excavation of earth, refilling, watering and ramming and making good as approved in all kinds of soil.				
(g)	All earthing pits shall be interconnected.				
(h)	Earthing shall be as per IS-3043-1987				
<b>I.</b>	<b>SUPPLY, INSTALLATION OF LIGHTING FIXTURES &amp; CABLES FOR EXTERNAL / LANDSCAPE LIGHTING</b>				
	Rate for supply and installation of fixtures shall also include the following :				
(a)	All component that may be required to make the installation complete in all respects, such as :				
	* Suitable length of connecting wires.				
	* Internal wiring between accessories.				
	* Connecting wires to the point through connection block.				
	* Bonding to earth wires.				
(b)	Drilling holes in supports wherever required.				
(c)	Fixing clamps, GI bolts and nuts/brass screws, saddles, rawl bolts and other fixing accessories as required.				
(d)	Painting with enamel paint of clamps and other fixing accessories.				
(e)	Testing of all fixture after installation.				
<b>J.</b>	<b>CONDUITING WIRING AND CABLING FOR VOICE / DATA SYSTEM</b>				
	Supply, installation, testing and commissioning of all conduiting and cabling for telephone system including providing and fixing of the following:				
(a)	All necessary specials and fittings, brass bushes etc.				
(b)	Approved cover plates for inspection, junction and outlet boxes.				
(c)	2 mm thick outlet boxes and junction boxes.				
(d)	All fixing accessories such as clips, nails, screws etc.				



S.No.	Item Description	Unit	Quantity	Rate	Amount
(e)	Providing and fixing approved saddles, hooks and grouting the same as required, in the case of all exposed conduit work.				
(f)	Supply ,fixing & embedding conduits of suitable dia and accessories in wall, floors etc. during construction and / or cutting chases and making good as necessary in the case of all concealed conduit work.				
(g)	Providing 14 SWG GI pull wire in all conduit work.				
(h)	Repainting of MS conduit, outlet boxes and junction boxes when ever damaged.				
<b>K.</b>	<b>INTELLIGENT ADDRESSABLE FIRE DETECTION, ALARM &amp; DIGITAL VOICE EVACUATION SYSTEM</b>				
	The rate of each item of work for Fire Detection and Alarm System shall also include the following :				
(a)	All materials, fixing materials, accessories, appliances, tools and equipment.				
(b)	Approved cover plates for inspection, junction and outlet boxes.				
(c)	1.6 mm thick outlet boxes and junction boxes.				
(d)	All fixing accessories such as clips, nails, screws etc.				
(e)	Providing and fixing approved saddles, hooks and grouting the same as required, in the case of all exposed conduit work.				
(f)	Providing ,fixing and embedding conduits of suitable dia and accessories in wall, floors etc. during construction and / or cutting chases and making good as necessary in the case of all concealed conduit work.				
(g)	Testing and commissioning of each device, circuit as per the requirements of NFPA 72, TAC, local authorities and to be witnessed by the Construction Manager / Architect / Consultant / Client's Site representatives and or fire protection consultant.				
	<b>SUB STATION EQUIPMENT (11 KV)</b>				
<b>i</b>	<b>Supply, Installation, Testing &amp; Commissioning Of 11KV. Sub-Station Equipment</b>				
(a)	Main HT Switch Board				
(b)	11 KV, 50 Hz 3 phase, 630 Amps indoor drawout type switchboard with 26.3 kA VCB circuit breaker as per specifications and with following:				
(c)	Incomer & Outgoing One number consisting of				
(d)	MS sheet enclosed cubicle type panel with main bus rated for 630 A and droppers rated for 630 A				
(e)	630 Amps electrically operated trip free type vacuum circuit breaker at 50 deg.C ambient.				
(f)	Breaker control switch.				
(g)	Set of ON/OFF indicating lamps.				
(h)	Clear lamp for trip circuit health supply.				
(i)	Digital electronic ammeter with selector switch.				
(j)	Digital electronic Voltmeter with selector switch.				
(k)	Digital electronic Trivector meter				
(l)	Aux. relays for Anti Pumping & indication.				
(m)	Trip circuit supervision relay.				
(n)	3 over current & Earth Fault IDMT relay with instantaneous high set element range 500 – 200%				
(o)	3 Nos. Cast resin CTs of dual ratio 20 – 40 / 5 Amps CL:1, 5P10, 15 VA.				
(p)	3 Nos. Cast resin drawout type PTs 11 kV / $\sqrt{3}$ / 110 $\sqrt{3}$ , class 1, 100 VA.				

S.No.	Item Discription	Unit	Quantity	Rate	Amount
(q)	Suitable space for termination of 1 No. 11 kV, 3 C x 120 sq.mm XLPE cable as incoming				
(r)	Common 12 window alarm annunciator with windows and buzzer, ACK, rest, test push button for all transformer faults and electrical faults.				
(s)	Suitable space for termination of 1 No. 11 kV, 3 C x 120 sq.mm XLPE cable as outgoing				
	11 KV Switch Board described as above				
<b>ii</b>	<b>Supply and installation of 24V. power pack Suitable for above VCB.</b>				
(a)	Supply & Installation of D.P. Structure With AIR BREAK SWITCH having following specifications:				
(b)	DP :double pole structure on 2 no ISMB 125 x 70 mm, 10 mtr high using 7 no MS channel each of size 100 mm x 50 mm x 2500 mm complete in all respect with nuts, springs washers, clamps as required.				
(c)	GO:Off load type gang operated 3-pole vertical flute type switch suitable for 11KV ; 400A ,3-ø, central post rotating double break isolator complete with MS hardware , copper moving & fixed contact ,assembly of 9 nos pin insulator ,GI pipe of suitable length for operation.				
(d)	DO: 3nos Vertical / Horizontal mounted 11kv horn gap fuse set /drop out 11kv barrel fuses mounted on 6no pin insulators				
(e)	LA: 3 piece non linear resistor type. lighting arrestor of approved make suitable for 3 wire, 11kv Overhead line with rated voltage of 9kv rms & nominal discharge current rating of 5 ka & complete with galvanized clamping arrangement GI bolts, nuts, washer etc as required.				
(f)	JUMPERS: 3 no 11kv acsr conductors mounted on pin type insularors as required. 6.GENERAL:The go shall be operated by hand operated liver properly earthed with provision for locking mounted at 3'				
i	P & Laying XLPE insulated IS:7098/II/85 of Group1 and approved make H.T.cable for working voltage 11 K.V.Earthed direct in ground including excavation of 30cmx100cm size trench, 25cm layer of river sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size.				
	3 core 95.0 Sq.mm	MTR	200.00		
ii	Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of Group1 and approved make suitable for XLPE insulated 11 KV / 33 KV cable, with required components, prepration of cable ends,testing etc. as required of following sizes .				
(a)	11 KV End Termination Kit Indoor type				
	3 core 95 Sq.mm	SET	2.00		
(b)	11 KV End Termination Kit Outdoor type				
	3 core 95 Sq.mm	SET	2.00		
(c)	11 KV Straight Through Joint Kit				
	3 core 95 Sq.mm	SET	2.00		
	<b>Transformer</b>				

S.No.	Item Description	Unit	Quantity	Rate	Amount
iii	S I T C of Copper wound Transformer conforming to IS: 2026 & Losses as per Discom's CTL ( CTL Test certificate to be attached ) of rating 11/0.433KV Delta-Star Connected, Vector Group Dyn 11, standard accessories like conservator, silica gel breather, radiator, fins, HT bushing & LT cableboxes, Off -LTC (+/- 5% in steps of 2.5%) winding temperature rise of 50/55 C, ISI marked drain valve, Dial type Temperature gauge, first fill of oil, Epoxy based paint, including carrying of pre-commission Testing & Charging of Transformer. ( See table - 08 for CTL Losses )				
	<b>200 KVA</b>	NOS.	1.00		
iv	<b>DG SET</b>				
(a)	SITC of Silent DG Set complete with 1500 RPM Diesel Engine of suitable BHP & AC Brush less SPDP Alternator mounted on a common base Frame & coupled through a flexible coupling or close coupled. Alternator shall be self regulated with standard Alternator Protection( Over voltage , over speed & under voltage, under speed warning & shutdown). Engine shall have residential silencer, up to 3 M exhaust piping , electronic / Mechanical governor, Manual & electric Start ,Batteries, Engine instruments panel, AVM and with Weatherproof, powder coated Accoustic enclosure for DG set for sound attenuation fabricated from 2.0 mmCRCA sheet steel (structure) with side wall fabricated from 2.0 mm CRCA sheet & filled with 100mm thick glass wool(96Kg/m3)/Foam. as per IS 8183 the doors of 100 mm thick and fabricated from 1.6mm CRCA sheet packed with accoustic material, canopy fixed with axial flow fan , All doors/ opening are sealed with neoprene/EPDN gaskets. The enclosure has built in fuel tank, residential silencer (isolated from main DG chamber) with protection and tripping of DG set				
	Radiator Cooled & Turbo Charged /AC				
v	200 KVA at 0.8 pf 415V 50Hz 3-ø	EACH	1.00		
vi	Supply & fabrication steel structure with MS channel / angle / joist / ISMB / sheet etc. including welding, rivetting, cutting, nut & bolt , Painting etc. as required.	KG.	200.00		
vii	Supplying and fixing of chain link fencing with angle iron posts 50x50x6mm placed at every 3 Mtr. apart 30cm in ground embedded in cement concrete 1:3:6 (30x30x45cm) corner and every tenth post to be strutted with (50 x 50 x 6cm) angle iron provided and fixed and fitted with posts including earth work in excavation etc. complete with chain link size.				
	50mm x 50mm x 3.15mm	SQM	60.00		
	<b>Misc. Items</b>				
viii	Supply and fixing in position the fire extinguishers carbon-dioxide type 4.5 Kgs capacity.	NOS.	1.00		
ix	Supply and fixing of in position the fire extinguishers dry chemical power (ABC) 5 kg capacity.	NOS.	1.00		
x	Supply and fixing in position the best quality Danger Boards of approved shape and size as specified by Local Electricity Authorities written in English & Local Languages.	NOS.	2.00		
xi	Supply of fire buckets 5 NOS. in each set duly filled with fine sand and fixed on an angle iron frame as per requirement of local authorities. Fire buckets shall be painted red from outside and white from inside with additional handle at the bottom.	SET	1.00		
	<b>Panel Items</b>				

S.No.	Item Discription	Unit	Quantity	Rate	Amount
xii	SITC of wall/ free standing floor mounted dust and vermin proof compartmentalised cubical panel made out of CRCA sheet , required hardware ,duly treated for derusting in 7 tank process with dephosphating and with powder coating on both side of panel in desired shade The panel having PU/ Neoprene rubber gasket of not less than 3mm thickness , separate detachable gland plate M.S. base channel ,hinged door with locking arrangement for equipment/switchgear . Thickness of sheet shall not be less than 1.6 mm up to 600 mm length / width of any compartment and be of 2.0 mm above 600 mm. Load bearing structure shall be of 2.0 mm thick sheet supported by base M.S. channel if required . Side walls and cable alley compartments having bolted type doors with / without detachable extension type structure. (only outer area on all sides shall be measured & panel to be fabricated from CPRI approved fabricator)	SQM	6.00		
xiii	SF of 110/220 V, LED (22.5 mm dia ) Indicating lamp with integral circuit, terminal block, including connection etc. as required.				
(a)	Red/yellow/Green colour	EACH	6.00		
(b)	Blue colour	EACH	2.00		
xiv	SF of Current Transformer , with all necessary support in existing panel including connection etc. as required .				
(a)	from 200 / 5 to 400/5 Ratio , 10 VA , class 1 accuracy	EACH	3.00		
(b)	0.5 A to 4 A rating (Protection MCB)	EACH	5.00		
xv	SF of CT operated direct reading type Ampere meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required.				
	Digital type Below 500 A	EACH	1.00		
xvi	SF of (0-500) V range Volt meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required.				
	Digital type	EACH	1.00		
xvii	SF of selector switch of 10 A for voltmeter (4 position ) including making connection etc. as required .	EACH	1.00		
xviii	SF of CT linked selector switch of 10 A for Ampere meter (4 position ) including making connection etc. as required .	EACH	1.00		
	<b>LT CABLE</b>				
xix	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with Armoured aluminium conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,Ind class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size.				
(a)	300.0 Sq.mm/3.5 core (MV panel to Main Building Panel)	MTR.	10.00		
(b)	150.0 Sq.mm/3.5 core (MV panel to Hostels )	MTR.	300.00		
(d)	16.0 Sq.mm/ 4 core (external Street lighting & Compound wall Lighting)	MTR.	100.00		
xx	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, heavy duty aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.				
(a)	3.5 x 300.0 sq.mm	SET	8.00		
(b)	3.5 x 150.0 sq.mm	SET	16.00		
(d)	4 x 16.0 sq.mm	SET	100.00		

S.No.	Item Description	Unit	Quantity	Rate	Amount
xxi	<b>Cable Tray</b>				
	Supply, Fabricating & installing following sizes of powder coated perforated M.S. cable trays including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling with M.S. suspenders, fastners, supports etc. as required.				
(a)	150mm x 50mm x 1.6mm	MTR.	20.00		
(b)	300mm x 50mm x 1.6mm	MTR.	20.00		
	<b>Earthing</b>				
xxii	Maintenance free Gel Earthing with Pipe in pipe / Pipe in strip technology filled with anti corrosive conductive compound ( CPRI Tested ) below the ground in 150 - 200 mm dia. earth pit & surrounding filled with required mineral filling compound ( MFC should have hygroscopic property to retain the moisture for long time to create low resistance zone ) and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete testing of earth resistance as required. of following sizes.				
	With Pipe in Pipe Technology (Inner pipe dia. / Outer pipe dia. ) 80 - 100 micron GI Coating				
	GI pipe 3000 mm long, 50 / 25mm, Terminal 14 mm GI Strip	SET	10.00		
xxiii	Plate Earthing as per IS:3043 with copper Earth plate of size 600mm x 600mm x 3.0mm by embodying 3 to 4 mtr. below the ground level with 25 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple ,wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required.	SET	4.00		
xxiv	S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required.				
(a)	8 SWG G.I. ( Hot Dipped ) Wire	MTR.	50.00		
(b)	25mm x 6mm G.I. ( Hot Dipped ) Strip	MTR.	100.00		
(e)	25mm x 5mm copper strip	MTR.	100.00		
<b>TOTAL FOR MAINS ELECTRICAL WORKS</b>					

S.No.	Item Description	Unit	Quantity	Rate	Amount
17	<b>BUILDING ELECTRICAL WORK</b>				
	<b>Point Wiring &amp; Conduits</b>				
i	Wiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm nominal size FRLS PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles, Hot Dipped Galvanized Modular Box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A Modular switch, Modular plate with grid plate, screws, making connections, testing etc. as required.				
(a)	Short point (up to 3 mtr.)	P. point	100.00		
(b)	Medium point (up to 6 mtr.)	P. point	100.00		
(c)	Long point (up to 10 mtr..)	P. point	110.00		
ii	Wiring of twin control light point with 1.5 sq. mm nominal size FRLS PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tles, Hot Dipped Galvanized M.S Modular box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way Modular switch, Modular plate with grid plate, screws, making connections, testing etc. as required.				
(a)	Short point (up to 3 mtr.)	P. point	5.00		
(b)	Medium point (up to 6 mtr.)	P. point	5.00		
(c)	Long point (up to 10 mtr..)	P. point	10.00		
iii	Wiring of 3 pin 5 amp. Light plug point with 1.5 sq. mm nominal size FRLS PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, Hot Dipped Galvanized M.S Modular box with earth terminal, screwless cage connectors for neutral looping in switch board , 6 A modular switch, 6 A modular socket, Modular plate with grid plate, screws, making connections, testing etc. as required.				
(a)	On board	P. point	103.00		
iv	Supplying and fixing of power plug point Modular accessories on hot dipped galvanized modular on surface or in recessed with suitable size of grid plate with cover plate including cost of modular 16 amp. Switch and 6/16 A socket outlet , making connection , testing , etc. as required.	EACH	46.00		
v	Supplying and fixing of power plug point Modular accessories on hot dipped galvanized modular on surface or in recessed with suitable size of grid plate with cover plate including cost of modular 25 amp. Switch and socket outlet , making connection , testing , etc. as required.	EACH	46.00		
vi	P & F IS:371 marked 6 amp surface type ceiling rose including making connection testing etc. as required.	EACH	156.00		
vii	P & F ISI marked 6 amp bakelite batten/angle holder including making connection testing etc. as required.	EACH	40.00		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
viii	S&F following sizes (dia.) of ISI marked medium duty PVC conduit along with accessories in surface / recessed using saddles, clamps, fastener as required including cutting the wall, covering conduit with Wire mesh and making good the same as required.				
(b)	25 mm	MTR.	100.00		
(c)	32 mm	MTR.	150.00		
(d)	40 mm	MTR.	200.00		
ix	Supplying and drawing FRLS PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required.				
(a)	3x 1.5 sq.mm	MTR.	500.00		
(b)	2 x 2.5 sq. mm. + 1x1.5sqmm	MTR.	250.00		
(c)	2 x 4.0 sq. mm. + 1 x 2.5 sq. mm.	MTR.	200.00		
(d)	3 x 4 sq. mm.	MTR.	200.00		
	<b>Distribution Boxes &amp; It's Accessories</b>				
x	P&F Recessed/ Surface mounting heavy duty horizontal type prewired sheet steel Distribution board phophatised / powder painted complete with suitable rating insulated copper bus bar, shorting link , neutral link, earth link and din bar,masking sheet, loose wire box, terminal block , duly prewired with suitable size FR PVC insulated copper conductor up to terminal blocks conforming to IS:13032 & IS:8623 including making internal DB terminations with copper lugs , testing etc. as required.				
(b)	Double door (Three phase)				
	4 Way	EACH	5.00		
	6 Way	EACH	2.00		
xi	P&F 240/415 V AC MCB with positive isolation of breaking capacity not less than 10 KA (B/ C/ D tripping characteristic) ISI marked IS 8828(1996)]/ conforming to IEC 60898 in existing board/sheets including making connections with lugs, testing etc. as required.				
(a)	Single pole MCB				
	6 A to 32 A rating	EACH	60.00		
(c)	Triple pole & neutral MCB				
	40 A 63 A rating	EACH	7.00		
(d)	Triple pole MCB				
	6 A to 32 A rating	EACH	12.00		
xii	P&F 240/415 V Residual current circuit breaker conforming to IS:12640:1988/ IEC 61008 on existing board/sheet including making connections with lugs, testing etc. as required				
(a)	Two pole 100/300mA sensitivity				
	40 A rating	EACH	17.00		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
	<b>Lighting Fixtures &amp; Fan</b>				
xiii	SITC of IP20 LED Recessed / Surface Mounted Round / Sqaure Non-Dimmable Downlight with die-cast aluminum housing & Heat Sink for heat dissipation, high purity reflector with external driver having efficiency > 85% and in compliance to IEC standards. (supplied together w/ luminaire). Power Consumption of ≤ 16W / 20W / 30Wwith ~800/1000/2000 lumens, System Lumen efficacy of 60 - 70 lm/Watt output suitable to replace 1x18W / 2x18W / 2x 26W CFL Downlights, life time of 50000 Burning Hours with 70% of intial Lumen maintaned. CCT 3000K & 4000K. Fixture shall be CE and KEMA compliance				
(a)	Recessed Mounting				
	LED Downlight round replacing 1x18W CFL (min 600 lumens)	EACH	28.00		
xiv	P & F Night lamp making connection testing etc. as required.	EACH	40.00		
xvii	SITC of Star rated double ball bearing capacitor start, aluminium body & blade ceiling fan with down rod up to 30 cm with 3 x 1.5 sq.mm pvc insulated flexible copper conductor with five step electronic regulator making connection testing etc. as required.				
	1200 mm Sweep 5 Star rated	EACH	86.00		
xviii	P & F 18 swg M.S. Recessed fan box, hexagonal/ round of size 130 mm dia, depth 75mm, 12 mm dia rod fan hook with 100 mm length extended on each side .	EACH	86.00		
xix	P & F capacitor start, three speed, oscillating type pedestal fan with adjustable height, of following size with cord and plug top as required.				
	400 mm sweep	EACH	10.00		
xx	SITC of Double ball bearing, capacitor start single phase metallic blade fresh air fan, in existing opening including cost of hardware , flexible copper conductor ,making connections, testing etc. as required.				
	225 mm sweep	EACH	9.00		
xxi	SITC of ISI marked single tone electronic call bell including making connection testing etc. as required.	EACH	10.00		
<b>TOTAL FOR BUILDING ELECTRICAL WORKS</b>					
<b>18 CCTV,DATA &amp; VOICE</b>					
i	Supplying and drawing PVC/ Polythene insulated and PVC sheathed unarmoured/ armoured telephone cable with 0.5 mm dia. Tinned / annealed copper conductor taped &confirming to ITD specification S/WS -113C of approved make in existing surface or recessed conduit/casing capping.rates are inclusive of P&F of condutes of suitable size as instructed				
ii	Unarmoured Telephone cable in existing surface or recessed conduit/casing capping.				
(a)	2 pair	MTR.	300.00		
(c)	RJ-11 telephone jack double two line	EACH	300.00		
iii	P & F following size hot dip galvanized M.S. box with earthing terminal in recess/ surface suitable for modular accessories as required.				
	1-2 Module	EACH	5.00		
iv	P & F following size mounting grid plates with cover plates				
	1/2 Module	EACH	5.00		



S.No.	Item Description	Unit	Quantity	Rate	Amount
v	Supply , Drawing and Testing of 4 pair, 24 AWG UTP Cat 6 Cable as per latest ammendments of TIA /EIA 568 B.2-1 Specifications in existing MS/PVC Conduits including making connections to Information outlets and Patch Panels with ferruling at both ends for identification with necessorry tools for punching, stripping, crimping and testing required.The rates are inclusive of P&F condute of suitable size, as per dwg/ instruction of engineer in charge	MTR.	250.00		
vi	SITC of Faceplate for Flush / Surface Mount Information Outlets Single Aperture with screw hole covers & Icon Tree Size 86mmX86mm				
	Single Aperture	EACH	25.00		
vii	Supplying and drawing PVC jacketed with annealed bare copper inner conductor & tinned copper conductor shielding foam PE dielectric coaxial cable of approved make in existing surface or recessed conduit/casing capping including making connections as required.The rates are inclusive of P&F condute of suitable size, as per dwg/ instruction of engineer in charge				
(a)	RG - 6	MTR.	300.00		
(b)	SITC of T.V. coaxial socket	EACH	10.00		
	<b>CCTV SYSTEM</b>				
viii	SITC of 1/3" CCD camera (Ceiling or Wall Mounted ) with night vision of sony chip having resolution of 400 mpx with 21 IR LED capture/electronic eye/advert. 10 mtr. Range	NOS.	3.00		
ix	Supply, installation and commissioning of 16-Channel Video, 1-Ch audio Embedded DVR, Each DVR with 400ips display and 400 ips recording, 1TB HDD built, CDRW, PAL, capable of 8 Internal HDD's.	NOS.	1.00		
x	Supply, Installation and commissioning of 21" Color Monitor	NOS.	1.00		
xi	Supply , Drawing and Testing of 4 pair, 24 AWG UTP Cat 6 Cable as per latest ammendments of TIA /EIA 568 B.2-1 Specifications in existing MS/PVC Conduits including making connections to Information outlets and Patch Panels with ferruling at both ends for identification with necessorry tools for punching, stripping, crimping and testing required.The rates are inclusive of P&F condute of suitable size, as per dwg/ instruction of engineer in charge	MTR.	200.00		
<b>TOTAL FOR CCTV,DATA &amp; VOICE WORKS</b>					
<b>19</b>	<b>LIFT</b>				
i	Suppy, installation, testing & commissitioning and putting into operation and final testing of automatic lift complete with ARD and all standard equipments, accessories and control equipments as per manufacturer's design and as per CPWD specification (Part III LIFTS) and fulfilling following requirments on turn key basis.□				
	A. Type : Passenger lift B. Load : 8 passenger/ 544 Kg C. Speed : 1.0 metre per second D. Contol : AC2 E. Operation : Microprosser based simplex collective selective with/without lift attendant F. Total rise : About 9 mtrs G. Landings : 4 All on same side H. Floors served : G,1,2,3				

S.No.	Item Description	Unit	Quantity	Rate	Amount
	I. Signals : Digital car position indicator, car travel direction indicator in car & at all landings J. Lift shaft size : About 1900 mm width X 1900 mm depth, finished with plaster K. Lift car size : About 1300 mm width X 1100 mm depth L. Car entrance : Minimum Clear opening 800 mm wide X 2000 mm high protected with car door				
	M. Landing entrance: Clear opening 800 mm wide X 2000 mm high protected with landing door N. Car door : Stainless steel two pannel centre opening flush type O. Landing door : Mild steel two pannel centre opening flush type P. Door operation: Automatic electric power operated door with infra red protection Q. Car interior : Stainless steel pannel with hair line/ moon rock finish on all sides				
	R. Car floor : Hard wood covered with PVC/ marbled tiles S. Car ceiling & lighting : Fluorescent lighting concealed by suspended false ceiling with plain acrylic diffuser. The frame of suspended false ceiling shall be of powder coated aluminium T. Car ventilation : Pressure fan with anodised aluminium grill U. Emergency lighting in car: Battery operated Emergency				
	V. Intercom system : Battery operated Intercom system in lift car, machine room and control room W. Emergency alarm : Battery operated alarm bell system in lift car & control room X. Position of machine room: Directly above the lift shaft Y. Electric power supply : AC 415 Volts 3 phase 50 Hz terminated in machine room Z. Fire man switch : Fire man switch at main landing terminal	Job	1.00		
<b>TOTAL FOR LIFT WORKS</b>					
<b>20</b>	<b>AIR CONDITIONER</b>				
i.	Supplying of approved make split type Air Conditioner unit with cooling unit and condensing unit with standard length of upto 3 metre of copper piping with insulation etc complete as required: 2.0 ton split type capacity 6000 kcal / hr (3 star).	EACH	39.00		
ii	Installation of split type Air Conditioner unit, cooling unit on wall inside and condensing unit on out side wall/ ceiling/ floor at desired locations with existing standard length of copper piping with insulation and power cable including providing and fixing necessary good quality powder coated MS frame etc complete as required. (Extra length of copper piping and power cable shall be paid extra on linear basis)	EACH	39.00		
iii	Supply and fixing of approved make wall mounting type voltage stabilizer with input volts 160-250, output volts 200-240 volts and double step relay on desired location with necessary fixing material including connection etc complete as required. 4 KVA	EACH	39.00		

S.No.	Item Discription	Unit	Quantity	Rate	Amount
iv	Supply, connecting and fixing extra length of copper piping for split type air conditioners of following dia and approved quality with insulation sleeve etc complete as required				
	5/8 "	MTR	120.00		
	1/2 "	MTR	123.00		
	1/4 "	MTR	135.00		
v	Supplying and fixing good quality powder coated MS frame for installation of out door unit of split type Air Conditioner at desired location with atleast 6 nos steel fastners etc complete as required	SET	39.00		
vi	Supplying, connecting and fixing 15mm dia PVC flexible drain pipe (reinforced with nylon threads) in drain outlet of split type air conditioners etc complete as required	MTR	390.00		
vii	Annual servicing of all type and capacity of split air conditioners (both condenser and cooling unit) as per manufacturers specification including checking for leakage etc complete as required	EACH	39.00		
<b>TOTAL FOR AIR CONDITIONER WORKS</b>					
<b>TOTAL FOR COMPLETE PROJECT</b>					