

# SCHEDULE/BILL OF QUANTITIES

Tender No: BHU/P&E/09/2024-25/25 DATED 25.09.2024

Name of the work: Construction of Administrative G+2 Building and Regional Business Office  
Ambapua, Berhampur, Odisha

SR.	TRADE	SECTION		TENDER AMOUNT
1	CIVIL WORKS	I		5,15,24,358.49
2	PHE WORKS	II		65,15,397.37
3	ELECTRICAL WORKS	III		88,49,216.30
4	FIREFIGHTING WORKS	IV		57,71,703.73
	<b>Total</b>			<b>7,26,60,675.88</b>
<b>I</b>	<b>CIVIL WORKS</b>			
			<b>Estimated</b>	
SI No	Description	Unit	Qty.	Rate excluding GST
	<b>FOUNDATION</b>			
	<b>EARTH WORK IN EXCAVATION</b>			
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed by EIC including all lift and lead.			
a)	All kinds of soil for Building			
	i) building		681.96	
	ii) For compound wall		171.36	
	iii) Watertank etc		82.53	
	iv) Site development (Road & pavement)		299.71	
		<b>Cum</b>	<b>1235.56</b>	220.59
2	Excavation of ordinary rock by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed by EIC including all lift and lead.	<b>Cum</b>	<b>170.49</b>	536.40

3	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 and for all lift.	<b>Cum</b>	<b>454.64</b>	166.10
4	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-incharge.	<b>Cum</b>	<b>233.42</b>	1279.49
5	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	<b>Sqm</b>	<b>6510</b>	14.92
6	Felling trees of the girth having girth more than 30cm & upto 60cm (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material.	<b>Nos</b>	<b>10</b>	451.10
<b>SAND FILLING</b>				
7	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.			
i)	For Building		993.12	
ii)	For compound wall		160.30	
iii)	Watertank etc		66.23	
iv)	Site development (Road & pavement)		53.40	
		<b>Cum</b>	<b>1273.05</b>	1799.79
<b>ANTI-TERMITE</b>				
8	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) : <b>Along external wall</b> where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300mm including excavation channel along the wall & rodding etc. complete: With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	<b>Mtr.</b>	<b>500</b>	32.98

9	Treatment of soil <b>under existing floors</b> using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor: With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	<b>Sqm</b>	<b>735</b>	262.75
	<b>PCC(1:3:6)</b>			
10	Providing and laying in <b>Position Cement Concrete</b> of specified grade <b>including the cost of centering and shuttering</b> - All work up to plinth level :			
	<b>1:3:6</b> (1 Cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)			
	i) for Building		77.81	
	ii) For compound wall		10.62	
	iii) Watertank etc		4.27	
	iv) Site development (Road & pavement)		11.44	
	v) Side drain		15.26	
		<b>Cum</b>	<b>119.4</b>	6179.41
	<b>PCC(1:4:8)</b>			
11	Providing and laying in Position Cement Concrete of specified grade <b>including the cost of centering and shuttering</b> - All work up to plinth level : <b>1:4:8</b> (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)	<b>Cum</b>	<b>177.62</b>	5772.88
	<b>RCC(M25)</b>			

12	<p>Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but including the cost of centering, shuttering, finishing and excluding reinforcement as per direction of the Engineer-in-Charge; for the M25 grade of concrete, for all works upto plinth level.</p> <p>Concrete of <b>M25 grade with minimum cement content of 330 kg /cum.</b>  <b>For following members</b>  <b>Cement</b>  <b>Make:ACC/Ultra Tech/Dalmia/Lafarge</b></p>			
a	<b>Foundation, Column base &amp; Plinth beam</b>			
	i) for Building		366.7	
	ii) For compound wall		50.86	
	iii) Watertank etc		14.41	
		<b>Cum</b>	<b>431.97</b>	8586.58
b	<b>RCC M25 Wall</b>	<b>Cum</b>	<b>57.64</b>	3639.58
	<b>Foundation (reinforcemet)</b>			
13	<p>Supplying Steel reinforcement(Thermo-Mechanically Treated bars of grade Fe-500D in (Foundation) for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.</p>			
	i) for Building		205.22	
	ii) For compound wall		84.18	
	iii) Watertank etc		114.49	
		<b>Qtl</b>	<b>403.89</b>	9139.83
	<b>Brickwork in Sub Structure of Building</b>			
14	<p>Brick work with common burnt clay selected F.P.S. (non modular) bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement : 6 coarse sand)</p>			
	From ground level upto plinth level	<b>Cum</b>	<b>68.21</b>	6238.43
15	Neat cement punning. Of periphery wall	<b>Sqm</b>	<b>399</b>	67.75
	<b>SUPER-STRUCTURE</b>			

16				
	<p>Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but including the cost of centering, shuttering, finishing and excluding reinforcement as per direction of the Engineer-in-Charge; for the following grades of concrete.</p> <p>All works above plinth level upto floor V level Concrete of M25 grade with minimum cement content of 330 kg /cum</p>			
a	<b>Column &amp; Beam</b>			
i)	Ground floor		70.73	
ii)	First floor		69.15	
iii)	Second floor		69.15	
iv)	Head Room		7.51	
v)	Compound wall		10.73	
vi)	roof beam		26.06	
		<b>Cum</b>	<b>253.32</b>	8688.60
b	<b>LINTEL</b>			
i)	Ground floor		4.72	
ii)	First floor		4.70	
iii)	Second floor		5.00	
		<b>Cum</b>	<b>14.43</b>	8980.34
c	<b>75 mm thick chajjah</b>			
i)	Ground floor		16.67	
ii)	First floor		18.70	
iii)	Second floor		18.70	
		<b>Sqm</b>	<b>54.07</b>	9162.29
d	<b>Staircase</b>			
i)	Ground floor		8.63	
ii)	First floor		8.63	
iii)	Second floor		8.63	
		<b>Cum</b>	<b>25.89</b>	9004.53
e	<b>Roof Slab</b>			
i)	Ground floor		101.88	
ii)	First floor		101.88	
iii)	Second floor		101.88	
iv)	Head Room		5.15	
v)	Boundary wall		6.11	
vi)	UGT		4.28	
		<b>Cum</b>	<b>321.16</b>	9142.08

17	Centering and shuttering including strutting, propping etc. and removal of form from <b>structural members not covered in item no.16</b> for (Super structure only at all levels up to vth floor)	Sqm	252	785.97
<b>Reinforcement (above plinth beam)</b>				
18	Supplying Steel reinforcement (Thermo-Mechanically Treated bars of grade Fe-500D in superstructure for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level up to floor five level.			
i)	Ground floor		233.09	
ii)	First floor		230.38	
iii)	Second floor		230.75	
iv)	Head Room, UGT etc		36.83	
		<b>Qtl.</b>	<b>731.04</b>	9139.83
<b>Brickwork</b>				
19	Providing Masonry/Brick work with clay flyash F.P.S. (non modular) brick of class designation 7.5 in superstructure above plinth level up to floor five level in with Cement mortar <b>1:6 (1 cement : 6 coarse sand):</b>			
i)	For building			
ii)	Ground floor		181.51	
iii)	First floor		188.57	
iv)	Second floor		195.21	
v)	Head Room		26.08	
vi)	Site development		38.15	
vii)	Boundary wall		75.97	
		<b>Cum</b>	<b>705.50</b>	7707.67
20	<b>Providing 15-20 mm cement plaster</b> on the rough side of single or half brick wall of mix with <b>1:6 (1 cement: 6 fine sand):</b>			
	For building			
i)	Ground floor		1056.63	
ii)	First floor		1063.23	
iii)	Second floor		1331.42	
iv)	Head Room		162.68	
v)	For boundary wall		118.63	
		<b>Sqm</b>	<b>3732.59</b>	324.58
21	<b>Providing 12 mm cement plaster</b> on the rough side of single or half brick wall of mix with <b>1:6 (1 cement: 6 fine sand) :</b>			
	For building			
i)	Ground floor		469.77	
ii)	First floor		371.46	
iii)	Second floor		371.46	
iv)	Head Room		130.74	

	v) For boundary wall		411.44	
	vi) For water tank		57.50	
	vi) Site development		216.16	
		<b>Sqm</b>	<b>2028.53</b>	282.5
22	<b>Providing 6 mm cement plaster on the rough side of ceiling with 1:3 (1 cement: 6 fine sand) :</b>			
	For building			
	i) Ground floor		688.75	
	ii) First floor		688.75	
	iii) Second floor		688.75	
	iv) Head Room		76.06	
	v) For boundary wall		31.60	
	vi) for water tank		74.84	
		<b>Sqm</b>	<b>2248.75</b>	336.14
	<b>FINISHING WORK</b>			
	<b>PUTTY WORK</b>			
23	Providing and applying white cement based putty of average thickness 1-2 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.			
	i) Ground floor		1745.38	
	ii) First floor		1751.98	
	iii) Second floor		2020.17	
	iv) Head Room		238.75	
		<b>Sqm</b>	<b>5756.28</b>	132.25
24	Supplying and applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound ) content. With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre			
	i) Ground floor		2215.15	
	ii) First floor		2123.44	
	iii) Second floor		2391.63	
	iv) Head Room		369.48	
	v) Boundary wall		561.67	
	vi) Site development		216.16	
		<b>Sqm</b>	<b>7877.53</b>	62.67
25	Supplying & applying wall painting two or more coats with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.			
	i) For building			
	i) Ground floor		1745.38	
	ii) First floor		1751.98	

iii)	Second floor		2170.40	
iv)	Head Room		238.75	
		<b>Sqm</b>	<b>5906.51</b>	121.02
	<b>WEATHER COAT PAINT</b>			
26	Supplying, applying and finishing walls with Acrylic Smooth exterior paint of required shade for new work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)			
	For building			
i)	Ground floor		469.77	
ii)	First floor		371.46	
iii)	Second floor		371.46	
iv)	Head Room		130.74	
v)	Boundary wall		411.44	
vi)	Site development		216.16	
		<b>Sqm</b>	<b>1971.03</b>	136.10
	<b>Applying priming coat:</b>			
27	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works			
	For building			
i)	Ground floor		30.42	
ii)	First floor		26.82	
iii)	Second floor		27	
iv)	Head Room		7.92	
v)	Boundary wall		6.6	
		<b>Sqm</b>	<b>98.76</b>	52.03
28	Supplying and applying paints with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade with Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.			
	For building			
i)	Ground floor		30.42	
ii)	First floor		26.82	
iii)	Second floor		27	
iv)	Head Room		7.92	
v)	Boundary wall		14.4	
		<b>Sqm</b>	<b>106.56</b>	191.74
29	Supplying, applying and finishing walls with textured exterior paint of required shade on New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm			
i)	Ground floor		173.07	
ii)	First floor		184.16	
iii)	Second floor		184.16	
iv)	Head Room		67.16	



		<b>Sqm</b>	<b>608.55</b>	<b>189.49</b>
30	<p>Providing and fixing factory made single extruded <b>WPC (Wood Polymer composite)</b> solid door/window/Clerestory windows &amp; other <b>Frames/Chowkhat of size 50x100mm</b> comprising of virgin PVC polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) fabricated with miter joints after applying PVC solvent cement and screwed with full body threaded star headed SS screws having minimum frame density of 750 kg/cum, screw withdrawal strength of 2200 N (Face) &amp; 1100 N (Edge), minimum compressive strength of 58 N/mm<sup>2</sup>, modulus of elasticity 900 N/mm<sup>2</sup> and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixed in position with M.S hold fast/lugs/SS dash fasteners of required dia and length complete as per direction of Engineer-In- Charge. (M.S hold fast/lugs or SS dash fasteners shall be paid for separately).</p>			
	<p>Note: For WPC solid door/window frames, minus 5mm tolerance in dimensions i.e depth and width of profile shall be acceptable. Variation in profile dimensions on plus side shall be acceptable but no extra payment on this account shall be made.</p>			
i)	Ground floor		41.2	
ii)	First floor		36.05	
iii)	Second floor		36.05	
		<b>Rmt.</b>	<b>113.3</b>	<b>803.14</b>

31	<p>Providing and fixing factory made single extruded <b>WPC (Wood Polymer composite)</b> solid door/window/Clerestory windows &amp; other Frames/<b>Chowkhat</b> of <b>size 65 x 125 mm</b> comprising of virgin PVC polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) fabricated with miter joints after applying PVC solvent cement and screwed with full body threaded star headed SS screws having minimum frame density of 750 kg/cum, screw withdrawal strength of 2200 N (Face) &amp; 1100 N (Edge), minimum compressive strength of 58 N/mm<sup>2</sup>, modulus of elasticity 900 N/mm<sup>2</sup> and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixed in position with M.S hold fast/lugs/SS dash fasteners of required dia and length complete as per direction of Engineer-In- Charge. (M.S hold fast/lugs or SS dash fasteners shall be paid for separately).</p>			
	<p>Note: For WPC solid door/window frames, minus 5mm tolerance in dimensions i.e depth and width of profile shall be acceptable. Variation in profile dimensions on plus side shall be acceptable but no extra payment on this account shall be made.</p>			
i)	Ground floor		38.97	
ii)	First floor		38.97	
iii)	Second floor		57.57	
	Head Room		12.4	
		<b>Rmt.</b>	<b>147.91</b>	1170.85

32	Providing and fixing factory made single extruded <b>WPC (Wood Polymer Composite)</b> solid plain <b>flush door shutter</b> of <b>30mm thick</b> size comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/mm <sup>2</sup> , modulus of elasticity 850 N/mm <sup>2</sup> and resistance to spread of flame of Class A category with property of being termite/borer proof, water/ moisture proof and fire retardant and fixing with stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-In-Charge. (Note: stainless steel butt hinges and necessary S.S screws shall be paid separately)			
	i) Ground floor		13.2	
	ii) First floor		11.55	
	iii) Second floor		11.55	
		<b>Sqm</b>	<b>36.3</b>	3683.64
33	Factory made 30mm/32mm <b>Flush door shutter</b> (non-sal hard wood frame fixed with 4mm BWR ply on both sides of frame ) complete with iron fittings and wooden hinged cleats etc. fitted and fixed in position including all labour but excluding cost of glass panes and iron fittings.			
	i) Ground floor		27.87	
	ii) First floor		26.22	
	iii) Second floor		59.70	
	iv) Head Room		7.92	
		<b>Sqm</b>	<b>121.72</b>	2520.69
	<b>SLIDING WINDOWS</b>			

34	<p>Providing and fixing of 3T3S Sliding having 87mm outer frame depth and slim interlock slider with 33 mm visible aluminium Interlock in centre. The Extruded Aluminium section should be made from 6063-T6 alloy and tempered frame section having 45mm depth, shutter Section 60mm face width &amp; Interlock Section having 33mm face width &amp; Top Bottom Section having 60mm Face width. Frame sections should be joined in 45 degree and the shutter sections in 90 degrees. The dimension tolerances should be in compliance with UNI EN 12020-2 standards. All the gaskets used are both static and dynamic, should be made of EPDM. U Shaped glazing gasket ensures perfect watertightness. Wool pile brush made of high-quality polypropylene multifilament yarn and has a central polypropylene fin to be provided for additional protection for tightness . Wool piles should be extended till the height of shutters. All the accessories should also be made by the same manufacture. Flush type locks should be with levers for opening and closing with or without a pull handle. Rollers should be same make single or double carriage in 80 kg and 120 kg capacity with both fixed and adjustable versions.</p>			
	<p>Rollers should be tested for 25000cycles. The rollers roll on anodized guide rail fitted on the tracks to ensure smooth sliding experience and long life of the rollers. Window corner should be sealed with Corner cleats and Tightness Foam and should be sealed for water proofing with silicon weather sealant. The external perimeter of aluminium sections should be coated with 60-90 Micron RAL colour powder coating. The system should allow the application of glazing or panels with Glass thickness from 5,6,8 &amp; 24 mm. Glass must be Toughened.</p>			
i)	Ground floor		34.56	
ii)	First floor		51.84	
iii)	Second floor		51.84	
		<b>Sqm</b>	<b>138.24</b>	<b>6869.75</b>
	<b>VENTILATOR/LOUVERS</b>			
35	<p>Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item):</p>			

	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/sqm)			
i)	Ground floor		2.52	
ii)	First floor		2.16	
iii)	Second floor		1.80	
		<b>Sqm</b>	<b>6.48</b>	1275.64
36	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.			
i)	Ground floor		3472.20	
ii)	First floor		5088.60	
iii)	Second floor		5088.60	
iv)	Head Room		277.20	
v)	Boundary wall		2016.00	
		<b>Kg.</b>	<b>15942.60</b>	99.45
37	Providing and laying <b>double charge Vitrified tiles in floor &amp; skirting with tile size of 600mm x1200mm</b> (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, leveling system and rubber mallet			
a)	<b>FLOORING</b>			
i)	Ground floor		566.05	
ii)	First floor		705.78	
iii)	Second floor		707.13	
b)	<b>VITRIFIED TILE IN SKIRTING</b>			
i)	Ground floor		32.72	
ii)	First floor		40.32	
iii)	Second floor		39.51	
		<b>Sqm</b>	<b>2091.52</b>	1336.57
	<b>CERAMIC TILE (FLOOR)</b>			

38	Providing and laying <b>Ceramic glazed floor tiles of size 300x300 mm</b> (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in all colours, shades, except White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick bed of cement mortar 1:4 (1 Cement : 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/sq.m including pointing the joints with white cement and matching pigments etc., complete.			
i)	Ground floor		41.21	
ii)	First floor		35.81	
iii)	Second floor		35.81	
		<b>Sqm</b>	<b>112.83</b>	1114.66
<b>CERAMIC TILE (WALL)</b>				
39	Providing and fixing 1st quality <b>ceramic glazed wall tiles of size 450mmx300mm</b> conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.			
i)	Ground floor		157.83	
ii)	First floor		137.15	
iii)	Second floor		137.15	
		<b>Sqm</b>	<b>432.12</b>	1074.53
40	Providing and laying Polished <b>Granite stone flooring</b> in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge. <b>Note: Polished Granite stone slab of all colour</b>			
a)	<b>FLOORING</b>			
i)	Ground floor		97.25	
ii)	First floor		61.13	
iii)	Second floor		61.13	

	<b>b) GRANITE IN DADOS</b>			
	i) Ground floor		14.01	
	ii) First floor		14.01	
	iii) Second floor		14.01	
		<b>Sqm</b>	<b>261.55</b>	2602.58
41	<b>Chequerred precast cement concrete tiles of 22 mm thick in footpath &amp; courtyard</b> , jointed with neat cement slurry mixed with pigment to match the shade of tiles, including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand), with light shade pigment using white cement.			
	Ground floor	<b>Sqm</b>	<b>139.73</b>	1188.14
	<b>MARVEL</b>			
42	Marble stone flooring with 18 mm thick marble stone, as per sample of marble approved by Engineer-in-charge, over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with grey cement slurry, including rubbing and polishing complete as per direction of EIC.			
	i) Ground floor		42.00	
	ii) First floor		42.00	
	iii) Second floor		42.00	
		<b>Sqm</b>	<b>126.00</b>	2127.46
	<b>HAND RAILING</b>			
43	Providing and fixing stainless steel ( Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered			
	i) Ground floor		228.60	
	ii) First floor		165.60	
	iii) Second floor		165.60	
		<b>Kg</b>	<b>559.80</b>	654.58
	<b>GRADING</b>			

44	Providing 2.5cm thick <b>grading concrete</b> (1:2:2) on roof slab with 6mm size hard granite chips on new work with two coats Sica Latex in 1:4:6 (sica:4 water:6cement) proportion as per drawings including cost of all materials, conveyance, loading and unloading, all taxes and royalties, all labour, scaffolding, watering and curing ,			
i)	Second floor		549.50	
ii)	Head Room		81.74	
		<b>Sqm</b>	<b>631.24</b>	368.03
45	Providing, <b>assembling and supplying vision glass panels</b> (IGUs) comprising of hermetically-sealed 6-12- 6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6 mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthened clear float glass 6 mm thick, spacer tube 12 mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings as per the			
i)	Ground floor		36.96	
ii)	First floor		65.91	
iii)	Second floor		90.63	
		<b>Sqm</b>	<b>193.5</b>	3151.44
	<b>Water proofing at washrooms</b>			
46	Providing and laying water proofing treatment to <b>vertical and horizontal surfaces</b> of depressed portions of W.C., kitchen and the like consisting of: (i) Ist course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. (ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. (iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area. (iv) IVth course of 400 micron thick PVC sheet (Overlapped joints of PVC sheet			
i)	Ground floor		175.00	
ii)	First floor		175.00	



iii)	Second floor		175.00	
		<b>Sqm</b>	<b>525.00</b>	652.20
47	<p>Providing and laying water proofing treatment in <b>sunken portion of WCs</b>, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :</p> <p>(a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.</p> <p>(b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours.</p> <p>The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.</p>			
i)	Ground floor		68.33	
ii)	First floor		68.33	
iii)	Second floor		68.33	
		<b>Sqm</b>	<b>204.99</b>	522.92

48	<p>Providing and laying water proofing treatment on <b>roofs of slabs</b> by applying cement slurry mixed with water proofing cement compound consisting of applying:</p> <p>(a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.</p> <p>(b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.</p> <p>(c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around.</p> <p>(d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately).</p> <p>For the purpose of measurement the entire treated surface will be</p>			
i)	Second floor		549.50	
ii)	Head Room		81.74	
		<b>Sqm</b>	<b>631.24</b>	583.81
49	<p>Providing &amp; fixing Model Type: Greenlam Sturdo Aster-Nova-FPL-Suede-1995 Nos.</p> <p>Size of Cubicles : As Per Drawing</p> <p>Color of HPL Boards : To be selected</p> <p>Thickness of Compact Laminate : 12mm</p> <p>Depth : 1500mm</p> <p>Width : 1325mm</p> <p>Overall Height : 1995mm (including 150mm ground clearance)</p> <p>Accessories Details : SS 316</p> <p>Coat Hook SS 316 Brush Finish</p> <p>Concealed Hinge SS 316 Brush Finish</p> <p>Door Knob SS 316 Brush Finish</p> <p>Door Stopper Aluminium Anodised</p> <p>Mid Panel Adjustable Foot SS 316 Brush Finish</p> <p>Noise Deafening Tape</p> <p>Screws SS 316</p> <p>Slide Bolt Indicator SS 316 Brush Finish</p> <p>Toprail Aluminium Anodised</p> <p>U Channel 12mm Aluminium Anodised</p> <p>Wall Plugs</p>			

	<p>Model Type: Greenlam Sturdo Urinal Parttion-Model- A</p> <p>Made of 12 mm thick compact laminate, total height 1195 mm, Depth 450 mm, Gap from ground 400 mm to 550 mm (as per site requirements). 275 Suede - HPL shade.</p> <p>Standard Accessories Details : HARDWARE</p> <p>Stainless steel L clamp is used to attach the divider to the wall, stainless steel L clamp hardware fittings along with SS 316 screws are used to fix the Urinal partitions on the wall.</p>			
i)	Ground floor	Nos	11	
ii)	First floor	Nos	14	
iii)	Second floor	Nos	14	
		Nos	39	6737.29
50	<p>Supplying and fixing 0.5mm thick aluminium profiled white powder-coated (9010 RAL) Box shaped BD Louvers Oculus Make of Various sizes as per specifications. The installation shall have a proprietary members of slotted angles to hold the Louvers at a specified gap. The work is inclusive of labor.</p>			
	<b>75*50*75mm depth spaced @100mm c/c</b>			
	<p>Aluminium Extruded sections of size 100*50*3mm thick of Narayan Aluminium make for the main members powder-coated to RAL 9010, to be fixed with angle bkts of GI and anchored with RCC. str available with labor</p>			
i)	Ground floor		45.00	
ii)	First floor		50.00	
iii)	Second floor		50.00	
		<b>Sqm</b>	<b>145.00</b>	5238.98

51	Providing and fixing 60 mm thick <b>glazed fire resistant door shutters</b> of 120 minutes Fire rating conforming to IS:3614 (Part II) or EN1634-1:1999, tested and certified as per laboratory approved by Engineer-in-Charge, with suitable mounting on door frame, consisting of vertical styles, top rail & side rail 60 mm x 60 mm wide and bottom rail of 110 mm x 60 mm made out of 1.6 mm thick G.I. sheet (zinc coating not less than 120 gm/sqm) duly filled mineral wool insulation having density minimum 96 kg/ cum and fixing with necessary stainless steel ball bearing hinges of size 100x89x3 mm of approved make,panic bar(Push type-UL listed) device for single leaf door(for inside operation), clear fire rated 6 mm this glass with metal vision panel of size(200x300mm), Anchor fastner(10x100mm), fire door closure, pair of SS tower bolt of 300 mm long, mortise dead lock with 70mm cylinder both side, SS D handle(19x250mm) followed by applying a coat of approved fire resistant primer or powder coating not less than 30 micron etc all complete as per direction of Engineer-in-Charge.			
	i) Ground floor		7.92	
	ii) First floor		5.28	
	iii) Second floor		13.2	
		<b>Sqm</b>	<b>26.4</b>	16845.67
52	Supplying & fixing <b>30mm thick Red sand Stone work</b> (machine cut edges) for wall lining etc. (veneer work) upto 10 metre height, backing filled with a grout of average 12 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade : (To be secured to the backing and the sides by means of cramps and pins which shall be paid for separately) :			
	i) First floor		62.60	
	ii) Second floor		127.88	
		<b>Sqm</b>	<b>190.47</b>	2459.87
53	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.			
	i) Ground floor	<b>Kg</b>	<b>3120.4</b>	113.31

54	Supplying and fixing 10mm thick toughened laminated glass as per specifications. The installation shall have a proprietary members of slotted angles to hold the work is inclusive of labor.	Sqm	116	4142.08
55	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	Sqm	2312.60	185.51
56	Laying, spreading and compacting stone aggregate of specified sizes to WBM 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 / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	Sqm	454.72	887.25
57	<b>PAVING</b>			
	Supplying all materials, labour and T&P for laying, fitting & fixing 80mm thick Cement Concrete inter locking paver blocks of M 30 grade of approved make, design, colour and size made by block making machine with proper compaction by mechanical means , cutting of paver blocks as per required size and pattern and laying the blocks in required pattern over the prepared hard base surface , finishing and sweeping extra sand in pathway including all cost, conveyance, taxes, royalties of all materials and T&P etc all complete confirming to IRC:SP-63:2018 and its ammendments if any etc all complete as per the specifications and directions of the Engineeer-in- Charge.	Sqm	2273.60	768.98

<b>II</b>	<b>PHE WORKS</b>			
<b>A</b>	<b>Water Supply</b>			
	<b>C.P.V.C PIPES</b>			

1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings and fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.			
	Concealed work, including cutting chases and making good the walls etc			
i	20 mm nominal dia Pipes	Meter	220	455.59
ii	25 mm nominal dia Pipes	Meter	60	531.57
iii	32 mm nominal dia Pipes	Meter	81	626.53
2	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply and all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.			
	Internal work - Exposed on wall			
i	32 mm nominal dia Pipes	Meter	75	439.62
ii	40 mm nominal dia Pipes	Meter	64	595.72
iii	50 mm nominal dia Pipes	Meter	260	791.65
3	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge.			
	External work			
	50 mm nominal dia Pipes	Meter	145	673.09
4	Cutting holes up to 30x30 cm in walls including making good the same with common burnt clay F.P.S. (non modular) bricks.	Each	22	353.22
5	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.	Each	12	383.05

6	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931	Each	19	429.49
7	Providing and fixing PTMT soap Dish Holder having length of 138 mm, breadth 102 mm, height of 75 mm with concealed fitting arrangements, weighing not less than 106 gms.	Each	19	94.45
8	Providing and fixing PTMT pillar cock of approved quality and colour 15 mm nominal bore, 107 mm long, weighing not less than 110 gms	Each	3	176.65
<b>BRASS FITTINGS</b>				
9	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :			
i	25 mm nominal bore	Each	12	527.46
ii	20 mm nominal bore	Each	16	457.58
iii	32 mm nominal bore	Each	3	584.41
iv	40 mm nominal bore	Each	6	700.08
v	50 mm nominal bore	Each	4	870.04
10	Providing and fixing gun metal non- return valve of approved quality (screwed end) of 50mm nominal bore(vertical) :	Each	2	1,224.70
11	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 of 15 mm nominal bore	Each	56	486.69
<b>B Sanitary Installations</b>				
12	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.	Each	19	12,711.14
13	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.	Each	19	295.89

14	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	Each	19	600.81
15	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	Each	9	6,762.03
16	Providing and fixing P.V.C. waste flexible 40mm dia pipe including P.V.C. waste fittings complete.	Each	9	101.31
17	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap	Each	25	1,886.74
18	Providing and fixing Stainless Steel Kitchen sink( 510x1040 mm bowl depth 250 mm) with drain board A ISI 304 (18/8) as per IS:13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required:	Each	3	5,886.10
19	Providing and fixing CP Brass 32 mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	Each	28	876.95
20	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	Each	28	142.67
21	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Each	25	1,362.67



C	Drainage			
22	Providing and fixing unplasticized polyvinyl chloride (uPVC) pipes, having thermal stability for hot & cold water including all uPVC plain & brass threaded fittings This includes jointing of pipes & fittings, trenching, refilling & testing of joints complete as per direction of Engineer in Charge.			
i	160 mm Outer dia uPVC Ori-Plust Class-1 (0.25 Mpa) Pipe	Meter	155.3	1,246.57
ii	200 mm Outer dia uPVC Ori-Plust Class-1 (0.25 Mpa) Pipe	Meter	213.64	1,859.11
iii	315 mm Outer dia uPVC Ori-Plust Class-1 (0.25 Mpa) Pipe	Meter	7.26	4,064.11
23	100 mm thick 1:3:6 cement concrete (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) Below ground level (Waste/Soil) Pipe			
i	160 mm Outer dia	Meter	155.3	165.72
ii	200 mm Outer dia	Meter	213.64	197.29
iii	315 mm Outer dia	Meter	7.26	291.95
24	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :			
	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :			
	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	40	22,377.54

25	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x 300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:			
	150 x 100 mm size P type			
	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	4	2,317.12
<b>D</b>	<b>Underground and Overhead Reservoirs</b>			
<b>D/1</b>	<b>Underground Domestic &amp; Fire Water Reservoir</b>			
	Fire Tank Capacity - 50000 Lit			
	Domestic Water Tank Capacity - 20000 Lit			
	<b>Earth Work</b>			
26	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift, as directed by Engineer-in-charge.			
	All kinds of soil	Cu.M.	146.86	150.42
27	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 and for all lift.			
		Cu.M.	38.54	166.10
	<b>Concrete Work</b>			
28	1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)			
		Cu.M.	4.17	7,891.02
29	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete.			

	All works upto plinth level :			
	All works upto plinth level : Concrete of M25 grade with minimum cement content of 300 kg /cum			
	Concrete of M25 grade with minimum cement content of 300 kg /cum	Cu.M.	38.06	7,999.19
	<b>REINFORCED CEMENT CONCRETE</b>			
	<b>STEEL REINFORCEMENT</b>			
30	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.			
	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	4567.2	91.40
	<b>MASONRY WORK</b>			
31	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:			
	Cement mortar 1:4 (1 cement : 4 coarse sand)	Cu.M.	13.59	6,246.31
	<b>FINISHING</b>			
	<b>CEMENT PLASTER (IN FINE SAND)</b>			
32	12 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand)	Sq.M.	237.27	294.11
33	Neat cement punning	Sq.M.	118.56	67.75
34	Distempering with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gram/litre, of approved manufacturer and of required shade and colour all complete to achieve even shade and colour :			
	New work (two or more coats) over and including water thinnable priming coat with cement primer having VOC content less than 50 gram/litre	Sq.M.	111.71	157.33
35	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :			
	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	Sq.M.	111.71	164.15
36	560 mm dia cover with frame (Heavy duty)	Each	3	7,881.36
<b>D/2</b>	<b>Underground Rain Water Harvesting Tank</b>			
	Rain Water Harvesting Tank Capacity - 10000 Lit			
	<b>Earth Work</b>			

37	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift, as directed by Engineer-in-charge.			
	All kinds of soil	Cu.M.	27.42	150.42
38	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 and for all lift.	Cu.M.	11.61	166.10
	<b>Concrete Work</b>			
39	1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources)	Cu.M.	1.24	7,891.02
40	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete.			
	All works upto plinth level : Concrete of M25 grade with minimum cement content of 300 kg /cum			
	Concrete of M25 grade with minimum cement content of 300 kg /cum	Cu.M.	11.21	7,999.19
	<b>REINFORCED CEMENT CONCRETE</b>			
	<b>STEEL REINFORCEMENT</b>			
41	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.			
	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	1345.2	91.40
	<b>MASONRY WORK</b>			
42	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:			

	Cement mortar 1:4 (1 cement : 4 coarse sand)	Cu.M.	4.89	6,246.31
	<b>FINISHING</b>			
	<b>CEMENT PLASTER (IN FINE SAND)</b>			
43	12 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand)	Sq.M.	88.15	294.11
44	Neat cement punning	Sq.M.	29.75	67.75
45	Distempering with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gram/litre, of approved manufacturer and of required shade and colour all complete to achieve even shade and colour :			
	New work (two or more coats) over and including water thinnable priming coat with cement primer having VOC content less than 50 gram/litre	Sq.M.	36.05	157.33
46	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :			
	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	Sq.M.	36.05	164.15
47	560 mm dia cover with frame (Heavy duty)	Each	2	7,881.36
<b>D/3</b>	<b>Over Head Water Reservoir -1</b>			
	Fire Tank Capacity -10000 Lit			
	Domestic Water Tank Capacity - 10000 Lit			
	<b>Concrete Work</b>			

48	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/ Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.			
	All works above plinth and upto floor V level			
	Concrete of M25 grade with minimum cement content of 300 kg /cum	Cu.M.	16.23	8,300.59
	<b>REINFORCED CEMENT CONCRETE</b>			
49	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.			
	Thermo-Mechanically Treated bars of grade Fe	Kg	1947.6	91.40
	<b>MASONRY WORK</b>			
50	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :			
	Cement mortar 1:4 (1 cement : 4 coarse sand)	Cu.M.	2.21	7,918.94
	<b>FINISHING</b>			
	<b>CEMENT PLASTER (IN FINE SAND)</b>			
51	12 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand)	Sq.M.	104.38	294.11
52	Neat cement punning	Sq.M.	51.2	67.75
53	Distempering with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gram/litre, of approved manufacturer and of required shade and colour all complete to achieve even shade and colour :			

	New work (two or more coats) over and including water thinnable priming coat with cement primer having VOC content less than 50 gram/litre	Sq.M.	46.38	157.33
54	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :			
	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	Sq.M.	46.38	164.15
55	560 mm dia cover with frame (Heavy duty)	Each	4	7,881.36
<b>D/4</b>	<b>Over Head Water Reservoir -2</b>			
	Flushing Tank Capacity - 10000 Lit			
	<b>Concrete Work</b>			
56	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/ Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.			
	All works above plinth and upto floor V level			
	Concrete of M25 grade with minimum cement content of 300 kg /cum	Cu.M.	9.91	8,300.59
	<b>REINFORCED CEMENT CONCRETE</b>			
57	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.			
	Thermo-Mechanically Treated bars of grade Fe	Kg	1189.2	91.40
	<b>MASONRY WORK</b>			

58	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :			
	Cement mortar 1:4 (1 cement : 4 coarse sand)	Cu.M.	1.8	7,918.94
	<b>FINISHING</b>			
	<b>CEMENT PLASTER (IN FINE SAND)</b>			
59	12 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand)	Sq.M.	61.5	294.11
60	Neat cement punning	Sq.M.	25.6	67.75
61	Distemping with 1st quality acrylic distemper (ready mixed) having VOC content less than 50 gram/litre, of approved manufacturer and of required shade and colour all complete to achieve even shade and colour :			
	New work (two or more coats) over and including water thinnable priming coat with cement primer having VOC content less than 50 gram/litre	Sq.M.	28.5	157.33
62	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :			
	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	Sq.M.	28.5	164.15
63	560 mm dia cover with frame (Heavy duty)	Each	2	7,881.36
<b>E</b>	<b>SEWAGE TREATMENT PLANT</b>			



64	<p>Design, Supplying, installing, testing &amp; commissioning of modular type <b>Sewage Treatment Plant of 25KLD</b> conforming the following specification:</p> <p>a) Plant Capacity - 25 KLD  b) Operation Time - 20 hrs  c) Hourly Flow [ Feed to STP]- 1.5CuM/Hr.</p> <p>d) Peak Factor [ For Equalization Tank] - 2.0  e) Source of sewage - Sweage generated from office space</p> <p><b>Scope of Elec-Mech Equipment:</b></p> <p>a) Manual Bar Screen  b) Raw sweage lifting Pump  c) Air Blower  d) Air Diffuser for Areation tank  e) FAB Media  f) Secondary clarifier tube setting media  g) Bio Sludge withdrawal pump  h) Filter Fed pump  i) Sand / Carbon Filter  j) Dosing system</p>	LS	1	18,59,322.05
	<p>Pipe Specification - MS / UPVC</p> <p>Details of FRP unit</p> <p>a) Screen Chamber  b) Collection Tank  c) Aeration Tank  d) Setting Tank  e) Imtermediate Tank  f) Sludge Drying Bed  g) Foundation for Equipment  h) Treated Water Tank</p>			
<b>III ELECTRICAL WORKS</b>				
<b>INTERNAL</b>				
1	<p>Supply and fixing of following size of medium class PVC conduit along with accessories in surface /recess including cutting the wall and making good the same in case of recessed conduit as required. [for internal wiring]</p> <p>i) 25 mm (Make: PRECISION/ AKG/ BEC/AVON PLAST/ GM/ CLIPSAL/ POLYCAB)</p>	Mtr	1488.7	138.98
1.1	<p>Supply and fixing of following size of medium class PVC conduit along with accessories in surface /recess including cutting the wall and making good the same in case of recessed conduit as required.[for facade light]</p> <p>i) 25 mm (Make: PRECISION/ AKG/ BEC/AVON PLAST/ GM/ CLIPSAL/</p>	Mtr	340	138.98

1.2	Supply delivery & fixing of 25 mm PVC 4 way circular box suitable for internal wiring. [for facade light] (Make: PRECISION/ AKG/ BEC/AVON PLAST/ GM/ CLIPSAL/ POLYCAB)	Each	152	22.84
2	Supplying and fixing 3 pin, 5A ceiling rose on the existing junction box/ wooden block including connection etc as required. (Make: PRITAM/ ANTEX/ LEADER/ EMPEROR/ ANCHOR)	each	175	83.31
3	Supplying and fixing metal box of following sizes(nominal sizes) on surface or in recess with suitable sizes on phenolic laminated steel cover in front including painting etc, as required.(use as joint box) i) 150mm X 75mm X 60mm deep (Make: Legrand/ Honeywell/ Schneider)	Each	70	206.78
4	Supplying and fixing metal box of following sizes(nominal sizes) on surface or in recess t including painting etc, as required i) 3M Metal Box (Make: Legrand/ Honeywell/ Schneider)	Each	27	300.85
5	Supply, delivery and installation of 275 GSM, 25 mm height, 1.6 mm lid, 2.5 mtr length under floor trunking conforming 150 mm 2 compartment structure. (Make : LEGRAND/ HONEYWELL/NIEDEX / PROFAB / JKR / CLASSIC / SHRUTI / PATNY)	Each	67	6138.90
6	Supply, delivery and installation of 275 GSM, 25 mm height, 1.6 mm lid, 75 mm length joint sleeves compatible for 150 mm 2 compartment under floor trunking. (Make : LEGRAND/ HONEYWELL/NIEDEX / PROFAB / JKR / CLASSIC / SHRUTI / PATNY)	Each	63	349.58
7	Supply, delivery and installation of top recess - 8 mm with metallic lid, height : 65-80 mm access outlet box of size 350 mm x 350 mm having 10 nos 6/16 amp socket, 4 nos 16 amp switch, 2 no RJ 45 socket, 2 no RJ 11 socket. (Make : LEGRAND/ HONEYWELL/NIEDEX / PROFAB / JKR / CLASSIC / SHRUTI / PATNY)	Each	32	17878.81
8	Supply, delivery and installation of top recess - 8 mm with metallic lid, height : 90-105 mm access outlet box of size 150 mm x 150 mm having 2 nos 6/6 amp socket, 2 nos 16 amp switch, 1 no RJ 45 socket, 1 no RJ 11 socket. (Make : LEGRAND/ HONEYWELL/NIEDEX / PROFAB / JKR / CLASSIC / SHRUTI / PATNY)	EACH	48.00	8340.68

9	Supply, delivery and installation of top recess - 8 mm with metallic lid, height : 55-70 mm crossover junction box of size 150 mm x 150 mm. (Make : LEGRAND/ HONEYWELL/NIEDEX / PROFAB / JKR / CLASSIC / SHRUTI / PATNY)	Each	39	4963.47
10	Supply, delivery and installation of vertical access box of size 250 mm x 200 mm x 45 mm. (Make : LEGRAND/ HONEYWELL/NIEDEX / PROFAB / JKR / CLASSIC / SHRUTI / PATNY)	Each	32	3601.69
11	Supplying and fixing 5 A to 32 As rating, 240/415 volts, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. (Make : LEGRAND/ L & T / ABB/ Siemens/ Schneider/			
	16A 4P MCB	EACH	6	1175.93
	16A DP MCB	EACH	6	628.20
12	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator: 4 WAY(4+12),DOUBLE DOOR (Make: LEGRAND ( Ekinoxe) / L & T (AU)/ ABB (Itus)/ Siemens- Betaguard/ Schneider-Acti9)	EACH	2.00	3406.92
13	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator): 6 way, Double door (Make: Legrand /Schneider/ ABB)	EACH	2.00	2112.53
14	Supply, delivery and installation of 300 mm sweep decorative EXHAUST fan. Make : (ALMONARD / HAVELLS / CROMPTON / ORIENT/ BAJAJ/ ATOMBERG)	EACH	14	2244.49
15	Supply, delivery and installation of 24 watt 6500 K LED batten tube light with colour temp. between 6000 to 6500 K [BTI-WHT-LGLZ01X024XW]; Make: (PHILIPS/ HAVELLS/ WIPRO/ CROMPTON/ BAJAJ)	EACH	119.00	645.68

16

**LT PANEL BOARD:** Supply, installation, testing and commissioning of 3Phase, 415Volts, 50HZ, Low voltage switchgears, free standing, extensible type LT Pane Boards panel as per specifications , comprising of Air circuit breaker, MCCB, MCB, horizontal and vertical aluminium bus bars, earth bus bar, flush type hinged door with square gaskets complete single line diagram.

The fabrication shall be madeup of CRCA sheet with thickness of 2.5mm frame, 2.0mm front door with components, 1.6mm all other partition.The panel shall be dust free ,vermin proof and totally enclosed with the degree of protection -(IP54) and panel shall be as per IS-2147.Indoor compartmentilized and 3B cubical type.

The surface shall be rigorously treated for derusting in 9tank process with dephosphating and painting with at least 2 coats of Epoxy Powder Coated. The panel shall be totally metal clad type with double gasketing with rubber / resin lining enclosed.

The panel shall be off white painted inside and shall be having control directory pasted inside the panel. The panel shall be mounted on trench and shall have cable entry provision from the top /bottom with suitable alley as the case may be. The panel shall be tested for the same KA rating of the relevant highest rating ACB / MCCB.

All components shall be from ISO-9001 companies and shall have relevant IS/IEC approvals, CPRI Tested panels without fail. (Fabrication, drawing and list of components and panel detail shall be got approved by consultants before fabrication).

The panel shall be fully interlocked as required and the panel shall include MS baseframe channel support of 75x40x6mm thk and size may vary panel to panel. (The Single Line Diagram may be closely be followed). The horizontal and vertical busbar should be same size and 0.8Amps / Sq.mm

The Panel Colour shall be RAL-7032/7035 and hard Copy of the off the Panel Drawing to be attached inside the Panel.

<p>CUBICAL PANEL:- COMMON PANEL Comprising of : Supply, Installation, testing &amp; commissioning of 415/ 240 Volt, 3-Phase and neutral, 50 Hz. A.C. sheet steel (14/SWG) enclosed floor/wall mounted cubicle type Distribution Board complete with multifunctional meter, Surge Protector (Type-1), Digital/ analog Ammeter, Voltmeter, selector switch, necessary CTs, Kit Kat fuses etc. in incommer &amp; having CU Bus suitable for 4 Bar, 630 Amp. indicating lamp in all 3 phases for both main supply &amp; emergency supply etc. all accessories &amp; powder coated painting.</p> <p>(a) Incoming - 1Nos.- 630 Amp. 4 Pole Thermo Magnetic (Breaking capacity 50KA) type MCCB including of all proper operating handle as per specification.</p> <p>(b) Incoming -1 Nos.-250 Amp. 4 Pole Adjustable thermal (Breaking capacity 36 KA) type MCCB including of all proper operating handle as per specific.</p> <p>(c) Incoming - 1Nos.- 630 Amp. 4 Pole Auto transfer switch</p> <p>(d) Bus bar - 1 Nos.- 630 Amp. 4 Pole</p> <p>(e) Outgoing - 2 Nos.- 160 Amp. 4 Pole Adjustable thermal (Breaking capacity 36 KA) type MCCB including of all proper operating handle as per specification.</p> <p>(f) Outgoing -5 Nos.- 63 Amp. 4 Pole Adjustable thermal (Breaking capacity 36 KA) type MCCB including of all proper operating handle as per specificifaction</p>	Nos.	1	455833.39
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17	<p>Supply, delivery &amp; installation of 13 passenger Machine Room Less Lift having following specification:  Assembled Product :  Passenger Elevator Capacity : 13 Persons, 884 kg  Speed :  1.00 m/s Stops &amp; Openings : 03 Stops, 03 Openings - Same side Floor  designations : G, 1 Type : Machine Room Less Machine type &amp; Location : Permanent Synchronise (PMS)  Gearless machine located in the shaft on top of the guiderails Control : Simplex Collective Selective Control Drive : ACVVVF Power supply : 415 volts, 3 phase,  50Hz, AC Hoist way dimensions : 2250 mm wide x 1900mm deep Car travel : 5000 mtr Overhead : 4500mm Pit depth : 1600mm Car dimensions : 1600 mm wide x 1350mm deep x 2200mm high Door opening : 900mm wide x 2100mm high Car door : 2 panel automatic Center opening door  Handrail : Round handrail in Stainless steel finish provided on rear wall of car Landing  operating panel : Individual landing operating panel for each elevator Features : ACVVVF closed loop drive, Alarm button in car  operating panel with battery back-up, Automatic operation for car fan, Adjustable door open time, Blower fan in car for ventilation,  Braille Button in Car operating panel and Landing operating panel, Car call cancellation by double pressing floor button in car  operation panel, Door open and door close buttons in car operating panel, Door closing retries, Door nudging, Emergency light, Full load by-pass, Full Length Infra-red screen for car door, Intercom, Motor overheat protection, Overload function</p>	Each	1	1643220.34
18	<p><b>APFC PANEL BOARD:</b> Supply, installation, testing and commissioning of 3Phase, 415Volts, 50HZ, Low voltage switchgears, free standing, extensible type LT Pane Boards panel as per specifications , comprising of Air circuit breaker, MCCB, MCB, horizontal and vertical aluminium bus bars, earth bus bar, flush type hinged door with square gaskets complete single line diagram.</p>			
	<p>The fabrication shall be madeup of CRCA sheet with thickness of 2.5mm frame, 2.0mm front door with components, 1.6mm all other partition.The panel shall be dust free ,vermin proof and totally enclosed with the degree of protection -(IP54) and panel shall be as per IS-2147.Indoor compartmentilized and 3B cubical type.</p>			
	<p>The surface shall be rigorously treated for derusting in 9tank process with dephosphating and painting with at least 2 coats of Epoxy Powder Coated. The panel shall be totally metal clad type with double gasketing with rubber / resin lining enclosed.</p>			

The panel shall be off white painted inside and shall be having control directory pasted inside the panel. The panel shall be mounted on trench and shall have cable entry provision from the top /bottom with suitable alley as the case may be. The panel shall be tested for the same KA rating of the relevant highest rating ACB / MCCB.			
All components shall be from ISO-9001 companies and shall have relevant IS/IEC approvals, CPRI Tested panels without fail. (Fabrication, drawing and list of components and panel detail shall be got approved by consultants before fabrication).			
The Panel Colour shall be RAL-7032/7035 and hard Copy of the off the Panel Drawing to be attached inside the Panel.			
<b>APFCR PANEL (150kVAR)</b> - at LT Panel Room. DSITC of panel from CPRI approved manufacturer/fabricator of 3Phase, 415Volts, 50HZ Cubicle type floor mounting 150 KVAR APFCR Panel Board with 1 x 400 Amps, 50KA, TP+N MCCB as Incomer feeder, 800Amps, TPN Aluminium busbars, Capacitor shall be APP type super heavy Duty type, 7% Detuned reactors, Capacitor duty contactors, ON-OFF Push buttons, A/M Selector switch, 10Stage APFCR Relay, Control MCBs, internal control wirings, etc., with suitable rating MCCBs for outgoing feeders, Metering compartments, interconnections, earthing, etc. (1X50kVAR+2 x 25kVAR+ 1X20kVAR+1X15kVAR+1X10kVAR+1X5kVAR) (Make of capacitor: SCHNEIDER / L&T / EPCOS/SIEMENS/MIHIR)	EACH	1	228410.00
<b>CAPACITOR OG-1</b>			
TP THERMAL MAGNETIC BASED RELEASE (O/C, S/C PROTECTION) MCCB WITH SPREADER TERMINAL & ROH, 25kA - 125A			
CAPACITOR DUTY CONTACTOR , 1NO + ADD ON 1NO+1NC - 50KVR			
MPP HEAVY DUTY CYLINDRICAL 3PH DELTA CONNECTED CAPACITOR, 440V - 50KVAR			
LED ON STATUS INDICATING LAMP -240V AC			
STOP PUSH BUTTON WITH ELEMENT - NC+NO			
START PUSH BUTTON WITH ELEMENT-NO			
DP MCB, C-CURVE, 10kA FOR FDR CONTROL -6A			
<b>CAPACITOR OG-2</b>			

TP THERMAL MAGNETIC BASED RELEASE (O/C, S/C PROTECTION) MCCB WITH ROH, 25kA -63A			
CAPACITOR DUTY CONTACTOR , 1NO + ADD ON 1NO+1NC - 25KVAR			
MPP HEAVY DUTY CYLINDRICAL 3PH DELTA CONNECTED CAPACITOR, 440V - 20KVAR			
LED ON STATUS INDICATING LAMP -240V AC			
START PUSH BUTTON WITH ELEMENT-NO			
DP MCB, C-CURVE, 10kA FOR FDR CONTROL -6A			
<b>CAPACITOR OG-3</b>			
TP THERMAL MAGNETIC BASED RELEASE (O/C, S/C PROTECTION) MCCB WITH ROH, 25kA-40A			
CAPACITOR DUTY CONTACTOR , 1NO + ADD ON 1NO+1N -20KVAR			
MPP HEAVY DUTY CYLINDRICAL 3PH DELTA CONNECTED CAPACITOR, 440V- 20KVAR			
LED ONSTATUS INDICATING LAMP-240V AC			
STOP PUSH BUTTON WITH ELEMENT - NC+NO			
START PUSH BUTTON WITH ELEMENT - NO			
DP MCB, C-CURVE, 10kA FOR FDR CONTROL-6A			
<b>CAPACITOR OG-4(+SPARE -2 NOS-SPACE PROVISION)</b>			
TP THERMAL MAGNETIC BASED RELEASE (O/C, S/C PROTECTION) MCCB WITH ROH, 25kA -32A			
CAPACITOR DUTY CONTACTOR , 1NO + ADD ON 1NO+1NC -15KVAR			
MPP HEAVY DUTY CYLINDRICAL 3PH DELTA CONNECTED CAPACITOR, 440V - 15KVAR			
LED ONSTATUS INDICATING LAMP-240V AC			
STOP PUSH BUTTON WITH ELEMENT - NC+NO			
START PUSH BUTTON WITH ELEMENT - NO			
DP MCB, C-CURVE, 10kA FOR FDR CONTROL-6A			
<b>CAPACITOR OG-5</b>			
TP MCB, C-CURVE, 10kA-25A			
CAPACITOR DUTY CONTACTOR , 1NO + ADD ON 1NO+1NC -10KVAR			
MPP HEAVY DUTY CYLINDRICAL 3PH DELTA CONNECTED CAPACITOR, 440V - 10KVAR			



	LED ONSTATUS INDICATING LAMP-240V AC			
	STOP PUSH BUTTON WITH ELEMENT - NC+NO			
	START PUSH BUTTON WITH ELEMENT - NO			
	DP MCB, C-CURVE, 10kA FOR FDR CONTROL-6A			
	<b>CAPACITOR OG-6</b>			
	TP MCB, C-CURVE, 10kA-16A			
	CAPACITOR DUTY CONTACTOR , 1NO + ADD ON 1NO+1NC-5KVAR			
	MPP HEAVY DUTY CYLINDRICAL 3PH DELTA CONNECTED CAPACITOR, 440V - 5KVAR			
	LED ONSTATUS INDICATING LAMP-240V AC			
	STOP PUSH BUTTON WITH ELEMENT - NC+NO			
	START PUSH BUTTON WITH ELEMENT - NO			
	DP MCB, C-CURVE, 10kA FOR FDR CONTROL-6A			
	<b>Note:</b>			
	All MCCB's upto 250A shall be of 25 KA breaking capacity.			
	LED indication for number of capacitor banks 'ON'.			
	LED indication of Power Factor lagging or leading.			
	The panel shall be provided with required nos. of loovers in the capacitor Chambers for its cooling.Also required nos. of ventillation Fans with auto sensing thermostat to be provided in the panel to improve the capacitor life.			
	Capacitor automatic control arrangement (150 KVAR) as described above.			
<b>EXTERNAL</b>				
19	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. in the existing trench, complete as required. (Make: Supreme/Oriplast)			
19.1	200 mm dia (OD-200 mm & ID- 175 mm nominal)	Mtr	170	524.75
19.2	90 mm dia (OD-90 mm & ID- 76 mm nominal)[for facade light]	Mtr	220	162.80

20	Earthing with G.I. earth pipe 4.5 meter long, 40mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc.(but without charcoal/coke and salt) as required. (Make of GI pipe: (TATA/ Jindal )	Set	10	5140.68
21	Providing and fixing 25mm X 5mm G.I. strip in 40mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt,spring,washer excavation and re-filling etc. as required.	Mtr	60	676.10
22	Supply and delivery 1.1 KV grade PVC insulated and PVC sheathed / XLPE stranded CU/AL conductor cable of the following sizes. (Make : KEI / POLYCAB / RR CABLE / HAVELLS/ FINOLEX/ NICCO /UNIVERSAL/ CCI)			
	300 sqmm 3.5 C Aluminium Armoured	Mtr	160	3016.69
	95 sqmm 3.5 C Aluminium Armoured	Mtr	34	1054.15
	4 sqmm 3 C COPPER Unarmoured	Mtr	25	388.22
	4 sqmm 4 C COPPER Unarmoured	Mtr	25	489.32
23	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.			
	300 sqmm 3.5 C Aluminium Armoured	Mtr	160	204.24
	4 sqmm 3 C COPPER Unarmoured	Mtr	25	120.59
	4 sqmm 4 C COPPER Unarmoured	Mtr	25	120.59
	95 sqmm 3.5 C Aluminium Armoured	Mtr	34	137.29
24	Supplying and making outdoor end termination with brass compression gland and AL. lugs for following size of PVC Sheathed / XLPE AL. conductor cable of 1.1KV grade as required. (Make : PLOYCAB (DOWELLS) / JAISON/ COMET / BRACO/ HENSEL)			
	95 sqmm 3.5 C Aluminium Armoured	per set	4	562.71
	4 sqmm 3 C COPPER Unarmoured	per set	4	245.76
	4 sqmm 4 C COPPER Unarmoured	per set	4	257.54
	300 sqmm 3.5 C Aluminium Armoured	per set	6	1144.07

25	<p><b><u>DIESEL GENERATOR SET</u></b>  Supply , delivery at site, installation on foundation , commissioning of 160 kVA, 415V, 50Hz, 3Ø silent new DG Set, comprising of Engine, alternator, separate AMF panel, Base frame, Fuel tank, Battery, CPCB-II approved Engin &amp; Acoustic Enclosure having following specifications :-  Engine should not derate at 50 deg ambient temperature.Engine &amp; alternator should be from same manufacturer  ENGINE  Engine Type : 4 Stroke Diesel Engine  RPM : 1500  Rated Output : 199 BHP or Higher  Duty : Prime  Cooling : Coolant Cooled  Cylinder : 6</p>	Each	1	889697.63
	<p>Type of Governer : Electronic  Fuel Tank Capacity : Minimum capacity 380 Liters Diesel Tank , with Inlet &amp; outlet arrangement with Drain Plug and Air vents.  Fuel Consumption at 75% rated Load with Radiator or Fan : 27 Ltr./ Hr. or Less  Fuel Consumption at 100% rated Load with Radiator or Fan : 35 Ltr./ Hr. or Less  Engine instrument Panel : Consisting of starting switch with Key, Lube Oil Indicator, water temperature Indicator, RPM indicator and hour meter.  Safety Controls : Emergency Stop, Low Lube Oil Pressure warning/ Shutdown, High Engine Water Temp. warning/ Shutdown, Sensor failure Indicator, Engine overspeed indicator, Battery charging and low battery indicator  Exhaust Silencer : HOSPITAL GRADE TYPE  Starting system : 12V, DC power srstarting system complete with starter motor, charging alternator with rectifier and Cutout as per manufacturer standard.</p>			

	<p>LOAD :Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528</p> <p>Battery : 12 V X 2, Lead Acid, Low Maintenance or SMF and conforming to relevant IS Specification with Low/High Battery Voltage and Weak Battery warning</p> <p>ALTERNATOR</p> <p>Rating : 415 V., 3Ph. 50 Hz., 160 KVA, 128KW, 1500 rpm</p> <p>Type : Brushless, self excited and self regulated through an AVR.</p> <p>Insulation : Class High</p> <p>Protection : screen-protected drip proof with Min.IP-23 degree of protection</p> <p>RPM : 1500</p> <p>Rated Current: 200 A</p> <p>Voltage Regulation (max) : <math>\pm 1\%</math></p> <p>Winding connection : Star with Neutral</p> <p>Total Distortion factor : Less than 3%</p> <p>Power Factor : 0.8 pf (lag)</p> <p>Total Harmonic distortion in output waveform : &lt; 5%</p> <p>(Make: Kirloskar/Mahindra/Jakson/ Caterpillar/ Volvo)</p>			
26	<p><b>COMPACT SUB-STATION:</b> 11KV, 315KVA CSS with 630A RMU, STC 21kA for 3 Sec. 11KV CSS consisting of HT(RMU)- Manual, Non-Extensible RMU (RL) consisting of 1Nos isolator (R Module) for incoming and 1Nos VCB module (L) for Transformer protection , Transformer-315KVA oil cooled Transformer (Ref IS 1180), LV-630A 4Pole ACB- Quantity 1 No.</p> <p><b>Scope Of Supply :</b></p> <p>a)RMU type - Manual operated, Non extensible RMU -RL-1 No per CSS</p> <p>b)11 kV/0.433 kV, class-II, oil cooled Transformer with On Load Tap Changer with tapping range +5% to -5% in steps of 2.5%,Vector group: Dyn11, No Load Losses :As per IS 1180</p> <p>Load Losses : As per IS 1180</p> <p>c) Copper Bus Bar</p> <p>d) Transformer protection (LV) - 630A FP 50KA MDO ACB with Microprocessor release -1 No</p> <p>e) Degree of protection for enclosure: IP54 for HT &amp; LT switchgear; IP23 for Trafo compartment</p> <p>(Make : ABB/Schneider/Siemens)</p>	each	1	2574005.00
27	<b>PUMPS AND ALLIED ACCESSORIES</b>			

	Procurement, supply, install and commission electrically operated monoblock type pump sets, with all protection sensors viz. temperature, oil leakage (if required), over load/under voltage tripping, electronic level sensing device for 3 level indication in UGR and auto cut off for dry run of pumps. (Should be with all necessary valves like NRV, Strainer & Butterfly valve)Electrical MCC in scope of work. Power connection to MCC will be Owner's responsibility. Interfacing with other contractors and Owner for smooth execution of work shall be vendor's responsibility. Details of pumps given below.  (Make Grundfoss / IIT / AMSTRONG / KIRLOSKAR/Willow)			
a)	<b>Raw water pump</b>			
	Cost of all materials to be included in the quoted rate and to be inclusive of all transportation, handling, supply of all other appurtenances and accessories, fasteners, miscellaneous items, labour for erection, trial run and commissioning + OH & P. No extra item shall be entertained.			
	Open Well monoblock Type pumps with Bronze impeller complete with common base plate coupling and guard,appropriate motor and delivering 50 lpm of water @ 35 mwc head <b>(Make Grundfoss / IIT / AMSTRONG / KIRLOSKAR)</b> WITH TEFC, EEF-1 MOTOR, strainer.(Should be with all necessary valves like NRV, Strainer & Butterfly valve)			
	(1W + 1S for Raw Water Pump & 1W + 1S for STP Treated Water Pump)	Nos	4	13317.12
b)	<b>RWH Pump</b>			
	Open Well monoblock Type pumps with Bronze impeller complete with common base plate coupling and guard,appropriate motor and delivering 50 lpm of water @ 35 mwc head 1W+1S - <b>(Make Grundfoss / IIT / AMSTRONG / KIRLOSKAR.)</b> WITH TEFC, EEF-1 MOTOR.	Nos	2	13317.12
c)	<b>De-watering Pump</b>			
	Open Well monoblock Type with Partical handing capacity of 40mm - 1.5 HP pumps with Bronze impeller complete with common base plate coupling and guard,appropriate motor and delivering 50 Lpm of water @ 12 mwc head - <b>(Make Grundfoss / IIT / AMSTRONG / KIRLOSKAR)</b> WITH TEFC, EEF-1 MOTOR	Nos	2	13317.12

<b>IV</b>	<b>FIREFIGHTING WORKS</b>			
<b>A</b>	<b>FIRE EXTINGUISHERS</b>			

1	<b><u>WATER (GAS CARTRIDGE TYPE) FIRE EXTINGUISHERS:</u></b> provided with squeeze grip control valve operating mechanism complete with CO2 Gas Cartridge, suspension bracket, and overall conforming to IS: 15683 and ISI marked. <b>Capacity – 09 Liter</b> , MAKE: KENEX/ FIRESHIELD/LIFEGUARD/ SAFEPRO	Each	9	3191.96
2	<b><u>DRY CHEMICAL POWDER (BC) GAS CARTRIDGE TYPE FIRE EXTINGUISHERS:</u></b> provided with squeeze grip control valve operating mechanism complete with CO2 Gas Cartridge, suspension bracket, and overall conforming to IS: 15683 and ISI marked. Capacity – 04 kg, MAKE: KENEX/ FIRESHIELD/LIFEGUARD/ SAFEPRO	Each	9	3005.36
3	“STORED PRESSURE” ABC TYPE FIRE EXTINGUISHER (IS 15683) squeeze Lever Discharge Valve fitted with Pressure indicating Gauge, suspension bracket duly charged with Dry powder (Mono Ammonium Phosphate), ISI Mark and Pressurized with Nitrogen Gas. Capacity – 02 kg, MAKE: KENEX/ FIRESHIELD/LIFEGUARD/ SAFEPRO	Each	3	1325.89
4	CORBON DIOXIDE (CO2) TYPE FIRE EXTINGUISHERS (IS: 15683) filled with CO2 gas, wire braided rubber Hose & Horn etc.& It should be of wheel type control valve operating mechanism with CCE Approved Cylinder over all conforming to IS 15683 and ISI Marked. Capacity – 4.5 kg, MAKE: KENEX / FIRESHIELD / LIFEGUARD / SAFEPRO	Each	9	5745.54
5	“STORED PRESSURE” MODULAR ABC TYPE FIRE EXTINGUISHER Duly charged with Dry powder (Mono Ammonium Phosphate-90) and Pressurized with Nitrogen Gas. Complete Fitting in All Respect like Ceiling/L-Type Wall Bracket, etc. Capacity - 05kg, MAKE: KENEX/ FIRESHIELD/LIFEGUARD/ SAFEPRO	Each	2	4075.89

6	<p>“STORED PRESSURE” ABC TYPE FIRE EXTINGUISHER (IS 15683) squeeze Lever Discharge Valve fitted with Pressure indicating Gauge, suspension bracket duly charged with Dry powder (Mono Ammonium Phosphate), ISI Mark and Pressurized with Nitrogen Gas. Capacity – 06 kg, MAKE: KENEX/ FIRESHIELD/LIFEGUARD/ SAFEPRO</p>	Each	3	2946.43
<b>B PUBLIC ADDRESSING SYSTEM</b>				
1	<p><b>Advanced Power Mixing Amplifier 240 Watt</b> 240 Watt advanced power mixing amplifier with inbuilt blue tooth for audio streaming, supports audio play back form USB pen drive, 4 mike / line inputs plus music source input, 2 tone chime generator for channel 1, Inrush current 36 A, Freq response 80 to 18000 Hz, Distortion &lt;1%, Bass &amp; treble control +- 8Db, Front panel has Power-ON switch with LED indication • LCD display, USB port, UBS/BT keyboard functions with IR remote sensor • Four volume knobs for microphone inputs • Volume knob for AUX input • Knob for treble level • Knob for bass level • Master volume knob • LED VU meter for master output (LEDs for -18, -12, -6,-3,0 dB ) Headphone socket and surge voltage protection. <b>Make:Ahuja /Honeywell /Bosch</b></p>	Each	1	29660.71
2	<p><b>Booster Power Amplifier</b> 240/480-WATT booster power amplifier having multiple outputs 70 /100 Volts and 8/4 Ohms. Temperature controlled forced front to back ventilation directly stackable, mains / battery backup ,2U 19” case, input voltage 230 Volts AC Frequency 60 to 18000 Hz, S/N Ratio &gt; 85dB. Power consumption 760 VA, gain 40 dB. Impedance &gt; 20 K Ohms with surge voltage protection. <b>Make:Ahuja /Honeywell /Bosch</b></p>	Each	1	28973.21
3	<p><b>Gooseneck microphone condenser type / wireless mic</b> Gooseneck microphone condenser type unidirectional with flexible stem / wireless mic, phantom powered, voltage range 12-48 Volts, sensitivity 2.5 mV/pascal, Freq 100 to 16000 Hz, output impedance &lt; 200 Ohms. Mike to be fitted on some good quality desk stand with on /Off facility with announcement alert tune facility.</p>	Each	1	8839.29

4	<p><b>Recessed mount (Ceiling), Speakers 4/6/8 watts with selectable 8 Ohms, 70 &amp; 100 Volts taps</b></p> <p>Recessed mount (Ceiling), 4/6/8 Watt with built in 100 Volt Line Matching transformers complete with dual cone loudspeaker and frame. A circular metal grille is an integrated part of the front. Ceiling speakers are supplied with a 100 V matching transformer with taps on the primary winding for full power, half-power, quarter-power and eighth-power radiation. The unit has integral spring clamps on the rear which can be used to easily fix the loudspeaker into the false ceiling. Rated power SPL 108 dB, Effective Freq 150 to 15000 Hz, Rated impedance 1667 Ohms. Max power 8 Watt &amp; rated voltage 70 / 100 Volts</p> <p><b>Make:Ahuja / Honeywell /Bosch</b></p>	Each	30	1989.91
5	<p><b>Booster Power Amplifier</b></p> <p>Wall mounted 4/6/8 Watt with built in 100 Volt Line Matching transformers complete with dual cone loudspeaker and frame. A circular metal grille is an integrated part of the front. Ceiling speakers are supplied with a 100 V matching transformer with taps on the primary winding for full power, Half-power, quarter-power, and eighth-power radiation. The unit has integral spring clamps on the rear which can be used to easily fix the loudspeaker into the false ceiling. Rated power SPL 108 dB, Effective Freq 150 to 15000 Hz, Rated impedance 1667 Ohms. Max power 8 Watt &amp; rated voltage 70 / 100 Volts</p> <p><b>Make:Ahuja / Honeywell /Bosch</b></p>	Each	8	1989.91
6	<p><b>Steel Rack for Amplifiers complete with pre-wired and control accessible from the front</b></p> <p>Convenient and quick movable on wheel, - Cable entry from the rear side, Turning Angle of front and Rear Door over 180-degree, Material SPC quality cold rolled sheet, Powder coating frame and door key lock, Compatible with 19" international standard, Maximum Loading capacity 60-80 Kg, - Welded frame with reliable structure, Front toughened Glass door with good quality of body finishing</p>	Each	1	19642.86
7	<p><b>Wiring Cable</b></p> <p>Wiring: Speaker cable 1.5 sq mm 2 core PVC insulated preferably FRLS with low impedance, ISI Marked</p> <p><b>Make:Falcon /Finolex or equivalent</b></p>	Each	1850	98.77



8	<b>Digital Selector &amp; Recorder unit</b> Facility to Select the announcement at particular zone either all zones or compatible with any amplifier/booster amplifier, Emergency pre-recorded evacuation message (Prerecorded good quality of voice for minimum 10 mints), Voice Recording facility to play recording voice as and when required for min 10 mints recording facility for single voice, digital display of play back sound/voice etc. <b>Make: Ahuja / Honeywell / Soft chip</b>	Each	1	10312.50
9	<b>PVC Conduit</b> Supplying & fixing PVC Conduit 1"-1.5", ISI Marked <b>Make: Anchor / Finolex or equivalent</b>	Each	1500	49.11
<b>C FIREFIGHTING SYSTEM</b>				
1	Supplying, installation, testing and commissioning of Electric driven Main Fire Pump suitable for automatic operation and consisting of following, complete in all respects, as required : (a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. (b) Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325. (c) M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required. (d) Suitable cement concrete foundation duly plastered with anti vibration pads.			
1.1	1620 lpm/56m Head	Nos	1	271779.64

2	<p>Supplying, installation, testing and commissioning of diesel engine driven main fire pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Diesel Driven Pump), Horizontal type, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12/24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential instruments and protection as per silencer, standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required.</p> <p>M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required.</p> <p>Suitable cement concrete foundation duly plastered and with anti vibration pads.</p>			
2.1	1620 lpm/56m Head	Nos	1	495234.41
3	<p>Supplying, installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Jockey Pump)</p> <p>Horizontal type, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS: 1520.</p> <p>Suitable HP squirell cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS: 325.</p> <p>M.S.fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.</p> <p>Suitable cement concrete foundation duly plastered and with anti vibration pads.</p>			
3.1	180 lpm/56m Head	Nos	1	81365.27






4	<p>Supplying, installation, testing and commissioning of electric driven, terrace pump suitable for automatic operation and consisting of following, complete in all respects, as required: (Terrace Pump)</p> <p>(a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body &amp; bronze impeller with stainless steel shaft, mechanical confirming to IS: 1520</p> <p>b) Suitable HP squirrel cage induction motor TEFC type suitable for operation on 415 volts, 3 phase, 50 Hz, AC supply with IP55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.</p> <p>(c) M.S.fabricated common base plate, coupling, coupling guard, foundation bolts etc.as required.</p> <p>(d) Suitable cement concrete foundation duly plastered and with anti vibration pads.</p>			
4.1	900 lpm/35m Head	Nos	1	100933.30
5	<p><b>CONTROL PANELS</b></p> <p>Fabrication, supply, Installation testing &amp; commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalised with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter-connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurisation pump &amp; diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required:</p> <p><b>INCOMING</b></p> <p style="text-align: right;">250A, 50kA</p> <p>4 Pole MCCB, Ics=100% Icu rating Digital Voltmeter 0-500V with selector switch Digital Ammeter (0-250 A) with selector switch &amp; CTS etc.</p> <p style="text-align: right;">LED type RYB phase</p> <p>indicating lamps, ON, OFF, trip indicating lamps</p>	Nos	1	243496.80
6	Starter Mechanism on Each Floor to start the Terrace Pump	Job	1	29727.36

7	Supplying, fixing, testing and commissioning of <b>butterfly valve</b> of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required			
7.1	150 mm dia.	Nos	5	8878.57
7.2	100 mm dia.	Nos	4	6606.41
7.3	80 mm dia.	Nos	10	4936.72
7.4	50 mm dia.	Nos	3	3749.61
8	Providing, installation, testing and commissioning of non-return valve of following sizes conforming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required			
8.1	150 mm dia.	Nos	1	17624.36
8.2	100 mm dia.	nos	2	10949.58
8.3	80 mm dia.	Nos	3	7621.10
8.4	50 mm dia.	Nos	1	5737.38
8.5	40 mm dia.	Nos	4	5737.38
9	Providing,installation,testing and commissioning of CI Foot Valve - Flanged End, Swing type Operation with Rubber Seat as per IS:4038			
9.1	100 mm dia.	Nos	2	7431.84
9.2	80 mm dia.	Nos	1	6094.11
10	Providing,installation,testing and commissioning of Forged Brass Threaded Ball Valve complete as required.			
10.1	25 mm dia.	nos	5	1506.19
10.2	40 mm dia.	Nos	7	2725.01
11	Pressure gauge-Providing and fixing in position the industrial type pressure gauges with gun metal / brass valves complete as required	Nos	5	2972.74
12	Providing & fixing of <b>Pressure switch</b> in M.S pipe line including connection etc. as required	Nos	4	1531.95
13	Supplying and fixing air vessel made of 250 mm dia, 8 mm thick MS sheet, 1200 mm in height with <b>air release valve</b> on top and flanged connection to riser, drain arrangement with 25 mm dia gun metal wheel valve with required accessories, pressure gauge and paintingwith synthetic enamel paint of approved shade as required.	Nos	1	17125.00
14	Supplying and fixing single headed internal hydrant valve with instantaneous Gunmetal coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type-A) with blank Gunmetal/Stainless Steel cap and chain as required:			
14.1	Single headed gunmetal	Nos	3	7576.51

15	Supplying and fixing Single headed external yard hydrant valve with 1 No. 63 mm dia instantaneous FM Gunmetal coupling and cast iron wheel, ISI marked, conforming to IS 5290 (type A) with blank Gunmetal/Stainless Steel cap and chain as required:			
15.1	Single headed gunmetal	Nos	6	7576.51
16	Supplying & fixing 63 mm dia gun metal short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required: Gun metal	Nos	9	2394.04
17	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required: Gun Metal	Nos	18	5154.72
18	Providing ,fixing , testing and commissioning of M.S. Hose cabinet stand mounted type fabricated out of M.S. sheet of 16 SWG with powder coated of approved red color both inside and out side and glass fronted ( 6mm thick glass with rubber beading) door and size of the cabinet shall be 600mm x 750 mm x 250 mm	Nos	9	8918.21
19	Supplying and fixing first-aid Hose Reel with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required. 20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585 20 mm nominal internal dia gun metal globe valve & nozzle. Drum and brackets for fixing the equipments on wall. Connections from riser with 25 mm dia stop gun metal valve & M.S. Pipe and socket.			
19.1	40 m	Nos	3	11963.28
20	Providing, fixing, testing & commissioning of 15mm dia quartzoid bulb type sprinklers of rating 68 degree centigrade with required accessories			
20.1	Sprinkler-Pendent K-80	Nos	145	517.26
21	Supplying, installation, testing & commissioning of sprinkler flexible pipe (UL Listed) of stainless steel complete with 15 NPT on reducer thread with maximum working pressure of 175 PSI test pressure of 875 PSI (Burst) with branch line (Inlet) 25mm NPT male thread to sprinkler head (Outlet) 15mm NPT female thread with reducer, nipple, 2 side brackets, center bracket, stockbar of following sizes complete as required.			




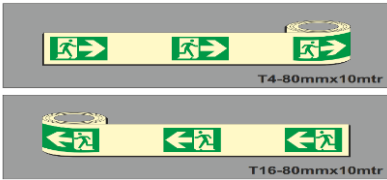

21.1	i) 1000 mm	Nos	145	1563.66
22	Providing, installation, testing & commissioning of adjustable rosette plate for 15mm dia in white finish UL Listed or FM approved complete as required.	Each	145	222.96
23	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required:			
23.1	3-WAY -150 mm dia M.S pipe	Nos	1	9369.07
24	Providing, laying, testing & commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required:			
24.1	150 mm dia.	Mtr.	270	3521.25
24.2	100 mm dia.	Mtr.	120	2511.12
24.3	80 mm dia.	Mtr.	72	1867.87
24.4	50 mm dia.	Mtr.	72	1269.36
24.5	40 mm dia.	Mtr.	60	1024.60
24.6	32 mm dia.	Mtr.	84	843.27
24.7	25 mm dia.	Mtr.	350	737.24
25	Providing laying, testing & commissioning of 'C' class heavy duty MS Pipe conforming to IS 1239/3589 i/c fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. in ground including welding, excavation & providing cement concrete blocks as supports, anticorrosive treatment with coaltar/asphalt tape as per IS 10221, refilling the trench etc. of following sizes complete as required			
25.1	150 mm dia.	Mtr.	18	3600.00
26	Charges for approval and getting the fire no objection certificate from fire department as required	LS	1	180000.00
<b>EARTHING: -</b>				
27	Earthing with G.I.earth pipe 4.5 metre long. 40mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal / coke and salt as required :	set	4	6792.70
28	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required	mtr.	100	241.78


29	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	mtr.	70	142.69
30	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/recessed conduit/submain wiring/ cable as required.	mtr.	100	41.62
<b>Safety Equipments : -</b>				
31	Supplying of First Aid Box as approved by Saint John Ambulance Brigade/Indian and Red Cross Society conforming to IS 2217, as Each required.	Each	1	1221.79
32	Supplying & Fixing Shock Treatment Chart duly mounted on wooden frame with 2mm thick glass, as required. (Approx. Front area 12 sq. Each mtr.)	Each	1	644.09
33	Providing and fixing M.V. danger notice plate of 200 mm X 150 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.	Each	4	266.56
<b>LT Cable Termination : -</b>				
34	Supplying the following size of ISI marked PVC sheathed & XLPE insulated armoured aluminium conductor cable of 1.1 KV grade as required :			
34.1	3.5 C X 240 Sq. mm	mtr	44	2380.00
34.2	3.5 C X 120 Sq. mm (one run of main pump)	mtr	24	1230.00
34.3	3.5 C X 25 Sq. mm (one run for Jockey pump)	mtr	24	380.00
35	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.			
35.1	Upto 35 sq. mm	mtr	20	124.85
35.2	Above 95 sq.mm and upto 185 sq. mm	mtr	24	159.54
35.3	Above 185 sq.mm and upto 400 sq. mm	mtr	40	211.06
36	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.			
36.1	3.5 X 25 sq. mm Al conductor cable	sets	2	310.16
36.2	3.5 X 120 sq. mm Al conductor cable	sets	4	607.43
36.3	3.5 X 240 sq. mm Al conductor cable	sets	2	1017.67

37	Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required.			
37.1	300mm width X 50 mm depth X 1.6 mm thickness	Mtr	100	769.94
<b>D SIGNAGES WORK</b>				
1	EXIT signage at Main EXIT door from inside, Make- Prolite / Autolite / Supreme Creation	Each	3	368.3
				
2	In banking hall or any gallery to indicate the EXIT gate (Left direction), Make- Prolite / Autolite / Supreme Creation	Each	3	368.3
				
3	In banking hall or any gallery to indicate the EXIT gate (Right direction), Make- Prolite / Autolite / Supreme Creation	Each	3	368.3
				
4	At the staircase landing area towards getting down direction, Make- Prolite / Autolite / Supreme Creation	Each	6	368.3
				
5	In banking hall or any gallery to indicate the EMERGENCY EXIT gate (Left direction), Make- Prolite / Autolite / Supreme Creation	Each	3	368.3
				
6	In banking hall or any gallery to indicate the EMERGENCY EXIT gate (Right direction), Make- Prolite / Autolite / Supreme Creation	Each	3	368.3



				
7	At each door both side, Make- Prolite / Autolite / Supreme Creation, 40PL & 40PS	Each	80	88.4
				
8	lift lobby for marking Outside Fire Lift, Make- Prolite / Autolite / Supreme Creation	Each	3	279.91
				
9	All floors / Near Stationary / Record room, Make- Prolite / Autolite / Supreme Creation	Each	3	279.91
				
10	Near fire alarm manual call point (MCP), Make- Prolite / Autolite / Supreme Creation	Each	6	279.91
				
11	Near main electrical panel & master switch, Make- Prolite / Autolite / Supreme Creation	Each	10	279.91
				
12	Near hydrant point if hydrant system installed, Make- Prolite / Autolite / Supreme Creation	Each	6	279.91
				
13	Near the Fire Extinguishers, Make- Prolite / Autolite / Supreme Creation	Each	6	279.91
				
14	Safe area to be marked outside of the premises for assembly of the occupants in case of emergency, Size- 300mmx400mm Make- Prolite / Autolite / Supreme Creation	Each	1	530.36

				
15	lift lobby above the lift entrance door centrally in the lift lobby on all the floors and one inside the Lift car, Size- 300mmx400mm, Make- Prolite / Autolite / Supreme Creation	Each	4	530.36
				
16	Near the Fire Alarm Panel ideally located near Exit Gate, Size- 300mmx400mm, Make- Prolite / Autolite / Supreme Creation	Each	1	618.75
				
17	Way Finding Tape on Flexile material laminated scratch proof for (Low location light), directional route marking way finding (Left / Right-handed directional), 80mm x 10mtr roll, Make- Prolite / Autolite / Supreme Creation, 02-LEFT & 02-RIGHT	Each	4	2740.18
				
18	To be pointed towards EXIT gates at each floor as per requirements. LED configured emergency (E) edge lit light: Should be Ceiling mounted Size should be 180mm x 400 mm in Aluminium Housing Body (25mm x 45 mm), Make- Prolite / Autolite / Supreme Creation	Each	3	2946.43
				

19	EXIT gates at each floor as per requirements Self-contained rechargeable emergency (LED MULTI LIGHTS WITH आपातकालीन निकास / EMERGENCY EXIT (Hindi & English both) & SIGNAGE) automatically switched-on mains power failure and provides illumination on battery source for specified duration, Make- Prolite / Autolite / Supreme Creation	Each	3	3977.68
				
<b>E</b>	<b>SUPPLY INSTALLATION, TESTING AND COMMISSIONING OF CONVENTIONAL AUTOMATIC FIRE DETECTION AND ALARM SYSTEM (AFDAS)</b>			
1	SITC of Fire Alarm Control Panel (FACP) 6-Zone	Each	1	23080.36
2	SITC of Fire Alarm Control Panel (FACP) 4 (Four) —Zone as a repeater panel	Each	3	13750.00
3	SITC of Battery Unit	Each	8	1198.21
4	SITC of Sounder Cum Strobe	Each	12	1178.57
5	SITC of manual call point	Each	6	618.75
6	SITC of Response Indicator (RI)	Each	70	137.50
7	SITC of Smoke Detector (Optical) with original base	Each	140	1325.89
8	SITC of Heat Detector (Fixed Temperature cum rate of rise type) with original base	Each	9	1276.79
9	SITC of Junction Box	Each	70	147.32
10	SITC of Armoured Cable per running meter (01-Meter)	Each	1850	108.04
11	SITC of 20 mm Casing & capping per running meter (01-Meter)	Each	1000	49.11
12	SITC of Miniature Circuit Breaker (MCB)	Each	4	530.36
	<b>TOTAL AMOUNT</b>			
	Rate quoted in percentage (above/below/at par)	%	0	

	Final quoted amount			
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ce Building at

**QUOTED  
AMOUNT**

5,15,24,358.49

65,15,397.37

88,49,216.30

57,71,703.73

7,26,60,675.88

**Amount**

2,72,551.47

91,450.55

75,516.48
2,98,660.19
97,098.31
4,511.00

22,91,224.26
16,490.00

1,93,124.36
7,37,821.17
10,25,360.58

37,09,147.01
2,09,785.18
36,91,486.14
4,25,492.42
27,033.94





1,98,065.59
66,81,622.05
54,37,731.20
12,11,511.07



7,14,787.26
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