

# **HLL Lifecare Limited (HLL)**

**Tender No. HLL/HQ/NOIDA/2015**

**Request for Proposal (RFP)**

*for*

**CONSTRUCTION  
OF  
HLL OFFICE BUILDING (PHASE II)  
AT  
B-14A, SECTOR 62, NOIDA**

**THE COMPLETE TENDER DOCUMENTS CONSIST OF THE FOLLOWING:**

- Volume- I (NIB & ITB)
- Volume-II (GCC & SCC)
- Volume-III ( Tech. Specs)
- Volume-IV (BOQ)

**Volume- IV- Bill of Quantities**

**(March, 2015)**

**HLL Lifecare Limited,  
B-14A, Sector – 62, NOIDA (UP) -201307**

**PREAMBLE TO BILL OF QUANTITIES**

*(These preambles apply to all the sections of the Bill of Quantities. The Contract rates shall take into account all these provisions in addition to various provisions in other parts of the Contract document)*

SI No.	DESCRIPTION
1	This is an "Item Rate Tender". Rates shall include cost of materials, labour, plants & equipment taxes, duties and all necessary apparent services required for complete execution, and commissioning in accordance with relevant drawings and specification. The HLL decision on interpretation of bill of quantities and its preamble shall be final and binding on the contractor.
2	The quantities given in this Bill of Quantities are liable to variations. Such variations in quantities shall not, however, vitiate the contract in any way whatsoever and all quoted rates shall remain valid as per deviation limits provided in the contract. Contractor shall be paid for the actual measured quantities of work executed by him/them .
3	Rates quoted shall be firm and shall not be subject to any price variations except as specifically provided in the contract.
4	The contractor's quoted rate shall include surveying, making layout and demarcation of all services as required for completion of the works within the scope of this contract .
5	The words "as specified", "as described", "as shown", "as directed", or "as approved", shall mean as described in the specifications, Schedule of Quantities and other Contract documents as shown on the drawings or as directed by EIC.
6	The following notations as appearing in the Bill of Quantities and specifications shall mean :
	a) Cum = Cubic metre
	b) Sqm. = Square metre
	c) Rm/Mtr./ Metre = Running metre
	d) No./Nos./Each/Set = Numbers
	e) Kg. = Kilogram
	f) MT. = Metric Ton
7	For the general guidance of the bidders, tender drawings are available with the HLL which should be seen /consulted by the intending bidders before bidding. The detailed working drawings shall be issued to the successful bidder after start of work at site and during the execution of the work so as per requirement and progress chart prepared initially and /or modified subsequently by the contractors.
8	The bidders shall take into account all leads and lifts involved in transport of materials to site, erection and hire of T & P, sheds for materials, etc. while quoting the rates for various sub heads of the work. Similarly all taxes including Octroi, Toll or Sales Tax/VAT, Works Contract Tax or any other Taxes etc. as payable by the contractor at the time of submission of bids shall be taken in to account by the bidders before quoting their. Any claim in these matters whatsoever in this respect shall not be entertained.

ESTIMATED COST OF PROPOSED HLL OFFICE BUILDING (PHASE-II) AT B-14A, SECTOR-62 NOIDA (U.P.)			
FINANCIAL BID SUMMARY SHEET			
Sl.No.	Sub-Head Description	Quoted amount in Figures (in Rs.)	Quoted Amount in words (in Rs.)
1	CIVIL WORKS		
2	PLUMBING WORKS (INTERNAL & EXTERNAL)		
3	HVAC		
4	INTERNAL & EXTERNAL ELECTRIFICATION		
5	LIFTS		-
6	FIRE FIGHTING		
	<b>TOTAL AMOUNT</b>		

SUMMARY CIVIL WORK			
CIVIL WORK			
Sl.No.	Description	Quoted amount in Figures (in Rs.)	Quoted Amount in words (in Rs.)
1	EARTH WORK		
2	CONCRETE WORK		
3	REINFORCED CEMENT CONCRETE		
4	BRICKWORK		
5	MARBLE & GRANITE WORK		
6	WOOD AND PVC WORK		
7	STEEL WORK		
8	FLOORING WORK		
9	ROOFING		
10	FINISHING WORK		
11	ALUMINIUM WORK		
12	WATER PROOFING WORK		
13	MISCELLANEOUS WORK		
14	ROAD WORKS		
15	DISMANTLING AND DEMOLISHING		
16	HORTICULTURE & LANDSCAPING		
	<b>TOTAL AMOUNT IN RS.</b>		

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
<b>1</b>		<b>SUB HEAD-I :- EARTH WORK</b>						
1.1	2.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth irrespective of lead and lift upto 1.5 m, disposed soil to be levelled and neatly dressed :						
1.1.1	2.1.1	All kinds of soil	15.00	100 sqm				
1.2	2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5 m in width as well as 10 sqm on plan) including of excavated earth, irrespective of lead and lift upto 1.5m, disposed earth to be levelled and neatly dressed.						
1.2.1	2.6.1	All kinds of soil	22370.00	cum				
1.3	2.25	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, irrespective of lead and lift upto 1.5 m.	6415.00	cum				
1.4	16.3	Supplying and stacking at site.						
1.4.1	16.3.9	Good earth	6415.00	cum				
1.5	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.						
1.5.1	2.26.1	All kinds of soil (Additional Lift from 1.5 m to 3.0 m)	4000.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.5.2	2.26.1	All kinds of soil (Additional Lift from 3.0 m to 4.5 m)	3800.00	cum				
1.5.3	2.26.1	All kinds of soil (Additional Lift from 4.5 m to 6.0 m)	3370.00	cum				
1.5.4	2.26.1	All kinds of soil (Additional Lift from 6.0 m to 7.5 m)	3370.00	cum				
1.5.5	2.26.1	All kinds of soil (Additional Lift from 7.5 m to 9.0 m)	3370.00	cum				
1.5.6	2.26.1	All kinds of soil (Additional Lift from 9.0 m to 10.5 m)	900.00	cum				
1.6	2.27	Supplying and filling in plinth with Jamuna sand under floors, including watering, ramming, consolidating and dressing complete.	50.00	cum				
1.7	2.34	Supplying chemical emulsion in sealed containers including delivery as specified.						
1.7.1	2.34.1	Chlorpyrifos/ Lindane emulsifiable concentrate of 20%	980.00	litre				
1.8	2.35	Diluting and injecting chemical emulsion for POSTCONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :						
1.8.1	2.35.1	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:						
1.8.1.1	2.35.1.1	With Chlorpyrifos / Lindane E.C 20% with 1% concentration.	168.00	metre				
1.8.2	2.35.3	Treatment of soil under existing floors 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 :						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.8.2.1	2.35.3.1	With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	1950.00	sqm				
1.9	NSR	Erection of MS Soldier Piles and waller beam system for retaining excavated earth including necessary studs and anchorage arrangement, grouting of MS Solder pile with cement concrete (M-10 Grade) fixing of wooden planks, removing of MS Sections, the rate to be inclusive of all tools, plant and machinery etc. required for execution of this item complete in all respect as per direction of Engineer-incharge. ( The vertical surface area of retained earth shall be measured for payment) Note:- The Contractor shall submit the drawings/sketches of the complete system for approval of Engineers-incharge before commencement of work.	200.00	sqm				
		<b>EARTH WORK SUB HEAD TOTAL</b>						
<b>2</b>		<b>SUB HEAD-II :- CONCRETE WORKS</b>						
2.1	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :						
2.1.1	4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	7.00	cum				
2.1.2	4.1.8	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	390.00	cum				
2.2	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	1200.00	per 50 kg cement				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.3	4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement:3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	86.00	sqm				
2.4	4.19	Providing and laying in position ready mixed plain cement concrete, using fly ash and cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for plain cement concrete work, including pumping of R.M.C. from transit mixer to site of laying and curing, excluding the cost of centering, shuttering and finishing, including cost of curing, admixtures in recommended proportions as per IS : 9103 to accelerate/retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge.						
		Note : (1) Excess/less cement used than specified in this item is payable/recoverable separately						
		(2) Fly ash conforming to grade I of IS 3812 (Part-1) only be used as part replacement of OPC as per IS : 456. Uniform blending with cement is to be ensured in accordance with clauses 5.2 and 5.2.1 of IS: 456 - 2000 in the items of BMC and RMC.						



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		3)The above item shall be used judiciously where specified quality of Fly Ash is available for mixing in concrete. Also, the guidelines issued by CDO, CPWD, vide circular no. CDO/SE(RR)/Fly Ash (Main)/102 dated 9th April 2009 shall be followed in such cases.						
2.4.1	4.19.1	All works upto plinth level :						
2.4.1.1	4.19.1.2	M-10 grade plain cement concrete (cement content considered @ 220 kg/cum)	170.00	cum				
		<b>CONCRETE WORK SUB HEAD TOTAL</b>						
<b>3.0</b>		<b>SUB HEAD-III :- REINFORCED CEMENT CONCRETE WORK</b>						
		<b><u>FORM WORK</u></b>						
3.1	5.9	Centering and shuttering including strutting, propping etc. and removal of form for :						
3.1.1	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	520.00	sqm				
3.1.2	5.9.2	Walls (any thickness) including attached pilasters, buttermesses,plinth and string courses etc	2950.00	sqm				
3.1.3	5.9.3	Suspended floors, roofs, landings, balconies and access platform	7730.00	sqm				
3.1.4	5.9.4	Shelves (Cast in situ)	30.00	sqm				
3.1.5	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	3450.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.1.6	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	5060.00	sqm				
3.1.7	5.9.7	Stairs, (excluding landings) except spiral-staircases	620.00	sqm				
3.1.8	5.9.16	Edges of slabs and breaks in floors and walls						
3.1.8.1	5.9.16.1	Under 20cms wide	615.00	metre				
3.1.9	5.9.19	Weather shade, chajjas, corbels etc. Including edges.	370.00	sqm				
3.2	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and decentering at all levels, over a height of 3.5 m, for every additional height of 1 metre or part thereof (Plan area to be measured).						
3.2.1	5.11.1	Suspended floors, roofs, landing, beams and balconies (Plan area to be measured)	8350.00	sqm				
3.3	5.12	Providing, hoisting and fixing up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like, including the cost of required centering, shuttering but excluding cost of reinforcement, with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size).	5.00	cum				
		<b>STEEL REINFORCEMENT</b>						
3.4	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.						
3.4.1	5.22.6	Thermo-Mechanically Treated bars	444050.00	Kg				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.4A	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.						
3.4A.1	5.22A.6	Thermo-Mechanically Treated bars	567440.00	Kg				
3.5	5.30	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	200.00	metre				
3.6	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge.						
		(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately)						
3.6.1	5.37.1	All works upto plinth level	3040.00	cum				
3.6.2	5.37.2	All works above plinth level upto floor V level	1310.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.7	5.37+5.3 4.1	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge.						
		(Note :- Cement content considered in this item is @ 340 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately)						
3.7.1	a	All works upto plinth level	28.00	cum				
3.7.2	b	All works above plinth level upto floor V level	80.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.8	5.37+5.34.2	Providing and laying in position ready mixed M-35 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge.						
		(Note :- Cement content considered in this item is @ 350 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately)						
3.8.1	a	All works upto plinth level	150.00	cum				
3.8.2	b	All works above plinth level upto floor V level	1620.00	cum				
3.9	5.38	Extra for R.C.C./ B.M.C/ R.M.C. work above floor V level for each four floors or part thereof.	150.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.10	5.44	Providing and fixing of expansion joint system related with floor location as per drawings and direction of Engineer-In-Charge. The joints system will be of extruded aluminum base members, self-aligning / self centering arrangement and support plates etc. as per ASTM B221-02. The system shall be such that it provides floor to floor /floor to wall expansion control system for various vertical location in load application areas that accommodates multi directional seismic movement without stress to it's components. System shall consist of metal profiles with a universal aluminum base member designed to accommodate various project conditions and finish floor treatments. The cover plate shall be designed of width and thickness required to satisfy projects movement and loading requirements and secured to base members by utilizing manufacturer's pre-engineered self-centering arrangement that freely rotates / moves in all directions. The Self – centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminum extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. Provision of Moisture Barrier Membrane in the Joint System to have watertight joint is mandatory requirement all as per the manufactures design and as approved by Engineer -in- Charge . (Material shall confirm to ASTM 6063.)						
3.10.1	5.44.1	Floor Joint of 100 mm gap	41.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.11	5.45	Providing and fixing of expansion joint system related with wall joint (internal/external) location as per drawings and direction of Engineer-In-Charge. The joints shall be of extruded aluminum base members, self aligning / centering arrangement and support plates as per ASTM B221-02. The material shall be such that it provides an Expansion Joints System suitable for vertical wall to wall/ wall to corner application, both new and existing construction in office Buildings & complexes with no slipping down tendency amongst the components of the Joint System. The Joint System shall utilize light weight aluminum profiles exhibiting minimal exposed aluminum surfaces mechanically snap locking the multicellular to facilitate movement. (Material shall confirm to ASTM 6063.)						
3.11.1	5.45.1	Wall Joint of 100 mm gap	15.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.12	5.46	Providing and fixing of expansion joint system of approved make and manufactures for various roof locations as per approved drawings and direction of Engineer-In-Charge. The joints shall be of extruded aluminum base members with, self aligning and self centering arrangement support plates asper ASTM B221-02. The system shall be such that it provides watertight roof to roof/roof to corner joint cover expansion control system that is capable of accommodating multidirectional seismic movement without stress to its components. System shall consist of metal profile that incorporates a universal aluminum base member designed to accommodate various project conditions and roof treatments. The cover plate shall be designed of width and thickness required to satisfy movement and loading requirements and secured to base members by utilizing manufacturer's pre-engineered self-centering arrangement that freely rotates / moves in all directions. The Self centering arrangement shall exhibit circular sphere ends that lock and slide inside the corresponding aluminium extrusion cavity to allow freedom of movement and flexure in all directions including vertical displacement. The Joint System shall resists damage or deterioration from the impact of falling ice, exposure to UV, airborne contaminants and occasional foot traffic from maintenance personnel. Provision of Moisture Barrier Membrane in the Joint System to have water tight joint is mandatory requirement. Material shall confirm to ASTM 6063.						
3.12.1	5.46.1	Roof Joint of 100 mm gap	37.00	metre				
		<b>R.C.C.WORK SUB HEAD TOTAL</b>						

Addition -----  
 Deletion -----  
 Correction -----  
 Overwriting -----



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4		<b>SUB HEAD-IV :- BRICK WORK</b>						
4.1	6.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:						
4.1.1	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	70.00	cum				
4.2	6.4	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 :						
4.2.1	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	382.00	cum				
4.3	6.12	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :						
4.3.1	6.12.2	cement mortar 1:4 (1 cement : 4 coarse sand)	1240.00	sqm				
4.4	6.13	Half brick masonry 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.						
4.4.1	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	510.00	sqm				
4.5	6.15	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	1750.00	sqm				
4.6	6.34	Brick work with non modular fly ash bricks conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4.6.1	6.34.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	368.00	cum				
4.7	6.44	Brick edging 7cm wide 11.4 cm deep to plinth protection with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	142.00	metre				
4.8	6.45	Half brick masonry with non modular fly ash bricks of class designation 10, conforming to IS : 12894, in super structure above plinth and upto floor V level.						
4.8.1	6.45.2	Cement mortar 1 : 4 (1 cement : 4 coarse sand)	150.00	sqm				
		<b>BRICK WORK SUB HEAD TOTAL</b>						
<b>5</b>		<b>SUB HEAD-V :- MARBLE &amp; GRANITE WORK</b>						
5.1	8.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.						
5.1.1	8.2.2	Granite of any colour and shade						
5.1.1.1	8.2.2.1	Area of slab upto 0.50 sqm (Granite having basic rate not less than Rs.1900/-per sqm.)	30.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.1.1.2	8.2.2.2	Area of Slab over 0.50sqm (Granite having basic rate not less than Rs.2000/-per sqm.)	70.00	sqm				
5.2	8.3	Providing edge moulding to 18 mm thick marble stone counters, Vanities etc., including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.						
5.2.1	8.3.2	Granite work.	94.00	metre				
5.3	8.4	Extra for fixing marble /granite stone over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive including cleaning etc. complete.	94.00	metre				
5.4	8.5	Extra for providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ Granite/stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	38.00	each				
5.5	8.12	Providing and laying flamed finish Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the architectural drawings with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineerin-Charge:						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.5.1	a	Flamed finish granite stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	610.00	sqm				
		<b>MARBLE &amp; GRANITE SUB HEAD TOTAL</b>						
<b>6</b>		<b>SUB HEAD-VI :- WOOD AND PVC WORK</b>						
6.1	9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, includig edges of partitions etc, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length ( hold fast lugs or dash fastener shall be paid for separately).						
6.1.1	9.1.1	Second class teak wood	5.00	cum				
6.2	9.21	Providing and fixing ISI marked flush door shutters conforming to IS :2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:						
6.2.1	9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	116.00	sqm				
6.3	9.23	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured).	116.00	sqm				
6.4	9.24	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.4.1	9.24.1	Rectangular or square.	75.00	sqm				
		<b>Providing and fixing hardware's for Door :</b>						
6.5	9.76	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. Complete (best make of approved quality).	26.00	each				
6.6	9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	26.00	each				
6.7	9.86	Providing and fixing bright finished brass casement stays (straight peg type) with necessary screws etc. complete :						
6.7.1	9.86.1	300 mm weighing not less than 330 gms	28.00	each				
6.8	9.96	Providing and fixing aluminium sliding door bolts, ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868), transparent or dyed to required colour or shade, with nuts and screws etc. complete :						
6.8.1	9.96.2	250x16 mm	12.00	each				
6.9	9.97	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868 ) transparent or dyed to required colour or shade, with necessary screws etc.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		complete :						
6.9.1	9.97.2	250x10 mm	30.00	each				
6.9.2	9.97.4	150x10 mm	112.00	each				
6.10	9.100	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete :						
6.10.1	9.100.1	125 mm	12.00	each				
6.11	9.101	Providing and fixing aluminium hanging floor door stopper, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade, with necessary screws etc. complete.						
6.11.1	9.101.1	Single rubber stopper	26.00	each				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.12	9.105	Providing and fixing partition upto ceiling height consisting of G.I. frame and required board, including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120gms/sqm(both side inclusive), consisting of floor and ceiling channel 50mm wide having equal flanges of 32 mm and 0.50 mm thick, fixed to the floor and ceiling at the spacing of 610 mm centre to centre with dash fastener of 12.5 mm dia meter 50 mm length or suitable anchor fastener or metal screws with nylon plugs and the studs 48 mm wide having one flange of 34 mm and other flange 36 mm and 0.50 mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610 mm centre to centre by 6 mm dia bolts and nuts,						
		including fixing of studs along both ends of partition fixed flush to wall with suitable anchor fastener or metal screws with nylon plugs at spacing of 450 mm centre to centre, and fixing of boards to both side of frame work by 25 mm long drywall screws on studs, floor and ceiling channels at the spacing of 300 mm centre to centre.						
		The boards are to be fixed to the frame work with joints staggered to avoid through cracks, M.S. fixing channel of 99 mm width (0.9 mm thick having two flanges of 9.5 mm each) to be provided at the horizontal joints of two boards, fixed to the studs using metal to metal flat head screws, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, angle beads at corners (25 mm x 25 mm x 0.5 mm), joint finisher and two coats of primer suitable for board as per manufacture's specification and						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		direction of engineer in charge all complete.						
6.12.1	9.105.1	75 mm overall thickness partition with 12.5 mm thick double skin fire rated board conforming to IS: 2095: part I	860.00	sqm				
6.13	9.127	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality						
6.13.1	9.127.2	1.0 mm thick.	320.00	sqm				
		<b>Note-</b> It should be preferably Factory pressed Laminated door shutters.						
6.14	21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacturer, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).	165.00	sqm				



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.15	21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.						
6.15.1	21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	76.00	each				
6.16	Derived from 9.136	Providing and fixing fire resistant door frame of section Min.143 x 57 mm having built in rebate made out of 16 SWG G.I. sheet (zinc coating not less than 120 gm/sqm) duly filled with vermiculite based concrete mix, suitable for mounting 120 minutes fire rated door shutters. The frame is fitted with intumescent fire seal strip of size 10x4 mm (minimum) all around the frame and fixing with dash fastener including applying a coat of approved brand fire resistant primer etc. complete as per direction of Engineer-in-charge (Dash fastener to be paid for separately).	48.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.17	Derived from DSR 2014_9. 137	Providing and fixing minimum 46 mm thick glazed fire resistant door shutters of 120 minutes fire rating conforming to IS:3614 (Part-II), tested and certified as per laboratory approved by Engineer-in-charge, with suitable mounting on door frame, consisting of vertical styles, lock rail, top rail 100 mm wide, bottom rail 200 mm wide, made out of 16 SWG G.I.sheet (zinc coating not less than 120 gm/m2) duly filled FR insulation material and fixing with necessary stainless steel ball bearing hinges of size 100 x 75 x 3mm of approved make, including applying a coat of approved fire resistant primer etc. all complete as per direction of Engineer-in-charge (panneling to be paid for separately).	23.00	sqm				
6.18	NSR	50MM THCK WOODEN FIRE RATED DOORS OF 120 MINUTES FIRE RATING						
6.18.1	A	Supply and fixing of 2nd class teakwood - door frame of section 120 mm x 70 mm with heat activated intumescent fire seal strip of section 10 mm x 4 mm 2 no. of Sealz, Fire & Acoustic , of approved make . The frame shall be duly primered with FR retardant primer FR880 type primer and FR Paint FRS type. The frame shall be fixed in existing opening with thr help of anchor fastener 8mm dia 10 cm long size complete as per direction of Engineer in Charge.	55.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.18.2	B	Providing and fixing of minimum 50mm thick Wooden fire rated door shutters tested as per BS: 476 Part- 20 & 22 & IS 3614 Part-2 for stability, integrity and thermal insulation. Recommended fire door shall have doors tested at CBRI for maximum rating of 2hrs tested either with or without vision panel. Individual Test certificates should be available for glass used in vision lights confirming the required fire ratings. The shutter should be maximum 52 mm thick up to commercial ply facing and lamination, if required should be over and above. The core insulation should be asbestos free comprising of two 12 mm thick Calcium Silicate boards of Pamtech type , a 100% without Asbestos, having density not more than 900Kg/M3 and thermal conductivity 0.14 W/m*K with non-combustibility as per BS 476 part 4-1970 and class-1 surface spread as per BS-476 Part-7-1971 . These boards sandwiching 20 mm thick fire resistance insulation filler faced with 03 mm thick commercial ply facing on both faces. The shutter is provided with heat activated intumescent fire seal strip of size 20mm x 4 mm mounted in the grooves of 2nd class teak wood Exposed lipping on all sides except bottom. The intumescent fire retardant sealant should be used to fill the gaps between civil opening and frame along with wool insulation so as to fill any visible gap. The manufacturer should submit desired design test report for a design tested earlier for 120 minutes fire rating along with Vision Panel tested at CBRI Roorkee as per directions of Engineer in Charge. (a) Door Shutter with 1mm thick Laminate Facing.	31.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.19	NSR	Providing & fixing fire rated glass i.e. two number toughened glasses 4mm thick each & sandwiched with foaming integrated Gel 3mm thick of approved make total thickness minimum 11 mm, 120 minutes fire rated EW-120 & EI-15 conforming to NBC of India-2005 (EW - Entegritiy + Radiation Limit & EI - Entegritiy +Insulation) complete as per direction of Engineer in Charge.(actual vision pannel area will be measured.)	6.00	sqm				
6.20	Derived from 9.139	Providing and fixing panic bar / latch of S.S. finish touch type fitted with a single body, Trim Latch & Lock on back side of the Panic Latch both of approved brand and manufacture complete as per the direction of the Engineer- in- charge.	15.00	nos				
6.21	NSR	Providing and fixing 12 mm thick frameless toughened glass door partitions of approved brand and manufacturer, including providing and fixing partitions at top & bottom with aluminum channel etc. all complete as per direction of Engineer-in-charge.	1161.00	sqm				
6.22	NSR	Providing and fixing over glass 1.5mm thick Etching strips (film) as per design and pattern of approved make fixed as per manufacturer's specifications all complete as per direction of the Engineer-in-charge.	1330.00	sqm				
6.23	NSR	Providing and fixing of fire rated door closer tested in accordance with BS:476 Part 22 for fire rating) and BS EN 1154 as per direction of Engineer in Charge.	15.00	each				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.24	NSR	Providing and fixing approved brand and manufacture SS 304 grade S.S Pull Handle 35x1500mm fixed with SS screws etc. complete in all respects as per manufacturers' specifications & as directed by Engineer-in-charge.	4.00	each				
6.25	NSR	Providing and fixing approved brand and manufacture SS 304 grade S.S Pull Handle 25mmx325mm fixed with SS screws etc. complete in all respects as per manufacturers' specifications & as directed by Engineer-in-charge.	136.00	set				
6.26	NSR	Providing and fixing approved brand and manufacture SS 304 grade S.S door stopper fixed with SS screws etc. complete in all respect as per manufacturer's specifications & as directed by Engineer-in-charge.	70.00	nos				
6.27	NSR	Providing and fixing approved brand and manufacture SS 304 grade S.S Corner Patch Lock with Strike Plate fixed etc. complete in all respect as per manufacturer's specifications & as directed by Engineer-in-charge.	76.00	nos				
6.28	NSR	Providing and fixing S.S Patch lock to Lock the Door at Centre etc. complete in all respect as per direction of the Engineer-in-charge.	68.00	nos				
6.29	NSR	Providing and fixing approved brand and manufacturer SS 304 grade S.S tower bolt (250mm long and 10mm dia) fixed with SS screws etc. complete in all respect as per manufacturer's specifications & as directed by Engineer-in-charge.	200.00	nos				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.30	NSR	Providing and fixing approved brand and manufacturer SS 304 grade S.S tower bolt (200mm long and 10mm dia) fixed with SS screws etc. complete in all respect as per manufacturer's specifications & as directed by Engineer-in-charge.	166.00	nos				
6.31	NSR	Providing and fixing approved brand and manufacturer SS 304 grade top and bottom patch fittings for frameless doors fixed with SS screws etc. complete in all respect as per manufacturer's specifications & as directed by Engineer-in-charge.	76.00	set				
6.32	NSR	Providing & fixing Mortise Dead Lock of approved brand & manufacture as per direction of engiuneer in charge complete for fire rated doors.	15.00	Nos				
6.33	NSR	Providing and fixing Stainless Steel concealed Tower Bolt of 304 grade of approved make of size 10 mm dia rod and 250 mm long as per direction of Engineer in Charge.	30.00	Nos				
6.34	NSR	Providing and fixing stainless steel 304 Grade D - Type pull handle of size 300mm long 22mm dia of approved brand & manufacture complete as per direction of Engineer in Charge.	30.00	Nos.				
6.35	NSR	Providing & fixing of anchor fasteners of approved brand & manufacture in 10mm dia & maximum 100mm length.	120.00	Nos.				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.36	NSR	Providing and fixing approved brand and manufacturer SS 304 grade S.S lever Handle for wooden door fixed with SS screws etc. complete in all respects as per manufacturers' specifications & as directed by Engineer-in-charge.	48.00	set				
6.37	Derived from DSR 5.43.2	Providing and fixing 1mm thk grade-304, SS Kick plate over flush door with suitable adhesives, screws etc. all complete as per direction of Engineer-In-Charge.	70.00	kg				
6.38	9.158	Providing and fixing in wall lining medium density fibre board IS:14587:1998 marked, Pre-laminated one side decorative lamination and other side balancing lamination, with necessary fixing arrangement and screws etc. complete.						
	9.158.2	18 mm thick.	360.00	sqm				
		<b>WOOD AND PVC WORK SUB HEAD TOTAL</b>						
<b>7</b>		<b>SUB HEAD-VII :- STEEL WORK</b>						
7.1	10.1	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.	2000.00	kg				
7.2	10.2	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.	19230.00	kg				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
7.3	10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.						
7.3.1	10.6.1	80x1.25 mm M.S. laths with 1.25 mm thick top cover	9.00	sqm				
7.4	10.7	Providing and fixing ball bearing for rolling shutters.	2.00	each				
7.5	10.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.						
7.5.1	10.8.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area.	9.00	sqm				
7.6	10.9	Extra for providing grilled rolling shutters manufactured out of 8 mm dia. M.S. bar instead of laths as per design approved by Engineer-in-charge.(area of grill to be measured).	4.00	sqm				
7.7	10.16	Steel work in built up tubular ( round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.						
7.7.1	10.16.1	Hot finished welded type tubes	3900.00	kg				



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
7.8	10.18	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp, of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	16.00	each				
7.9	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.						
7.9.1	10.25.1	In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete	2000.00	kg				
7.9.2	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	1000.00	kg				
7.10	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.						
7.10.1	10.26.1	M.S. tube.	100.00	kg				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
7.11	10.28	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 excluding fixing accessories such as nuts, bolts, fasteners etc.).	4120.00	kg				
7.12	Derived from 10.28	Providing and fixing stainless steel (Grade 304) <b>Main Gate</b> as per the drawing using made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the gate with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of coloumn with suitable arrangement as per approval of Engineer-in-charge, The rates shall be inclusive of providing Stainless Steel sections with necessary turning for pivots / hinges, guide channel etc as per architects drawing. The gate shall be provided with arrangements for closing; hinges, locking arrangement, stays.( for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fixtures, fasteners etc.)	1000.00	kg				
		<b>STEEL WORK SUB HEAD TOTAL</b>						

Addition -----  
Deletion -----  
Correction -----  
Overwriting -----

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.0		<b>SUB HEAD-VIII :- FLOORING</b>						
8.1	11.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.						
8.1.1	11.3.1	40mm thick with 20mm nominal size stone aggregate.	80.00	sqm				
8.2	11.4	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	100.00	sqm				
8.3	11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement: 3 coarse sand), finished with a floating coat of neat cement.						
8.3.1	11.6.1	18 mm thick	60.00	sqm				
8.4	Derived from 11.13.1	Providing and fixing PVC strips 6 mm thick & 50 mm wide approved make in joints of cement concrete floors complete in all respect & as directed by Engineer in charge.	90.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.5	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :						
8.5.1	11.26.1	25mm thick	430.00	sqm				
8.6	11.27	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	43.00	sqm				
8.7	11.31	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slabs.	470.00	metre				
8.8	11.32	Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre .	110.00	sqm				
8.9	11.35	Providing and fixing M.S. angle 50x50x5 mm to act as nosing with lugs of M.S. flat 10x5 mm, 10 cm long, forked at end 60cm apart (minimum three lugs to be provided), including necessary welding and applying a priming coat of approved primer on exposed surface etc. complete.	2600.00	kg				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.10	11.36	Providing and fixing 1st quality ceramic glazed wall tiles <b>of size 300x600mm</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.	810.00	sqm				
8.11	11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc, complete.	70.00	sqm				
8.12	11.39	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS: 15622, of approved make, in colours White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement: 4 Coarse sand), including grouting the joints with white cement and matching pigments etc, complete.	181.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.13	11.41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS : 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc., complete.						
8.13.1	11.41.2	Size of Tile 600x600 mm	1630.00	sqm				
8.14	11.46	Providing and laying Vitrified tiles in different sizes (thickness to be specified by manufacturer), with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make, in all colours & shade, in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete.						
8.14.1	11.46.2	Size of Tile 600x600 mm	210.00	sqm				
		<b>Note: - The vitrified tiles for the above items shall be from the double/multi charged range of tiles.</b>						
8.15	11.54	Providing and fixing removable raised/false access flooring with system and its components of approved make for different plenum height with possible height adjustment upto 50 mm, comprising of modular load bearing floor panels supported on G.I. rectangular stinger frame work and G.I. Pedestal etc. all complete, as per the architectural drawings, as specified and as directed by Engineer-in-charge consisting of :						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		a) Providing at required spacing to form modular framework, pedestals made out of GI tube of thickness minimum 2 mm and 25 mm outer diameter, fully welded on to the G.I. Base plate of size 100mm x 100mm x 3mm at the bottom of the pedestal tube, G.I. pedestal head of size 75mmx 75mmx 3.5 mm welded with GI fully threaded stud 16mm outer diameter with two GI Check nuts screwed on the stud for level adjustment upto 50mm, locking and stabilizing the pedestal head in position at the required level. The pedestals shall be fixed to the subfloor (base) through base plate using epoxy based adhesive of approved make or the machine screw with rawl plug.						
		b) Stringers system in all steel construction hot dipped galvanized of rectangular size 570x 20x 30x 0.80mm thick having holes at both ends for securing the stringers on to the pedestal head using fully threaded screws ensuring maximum lateral stability in all directions, the grid formed by the pedestal and stringer assembly shall receive the floor panel, this system shall provide adequate solid, rigid support for access floor panel, the system shall provide a minimum clear uninterrupted clearance between the bottom of the floor for electrical conduits and wiring etc. all complete as per the architectural drawings, as specified and as directed by the Engineer-in-charge.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		c) Providing and fixing Access Floor panel of 600x600x32 mm medium grade Filled Steel anti-static high pressure Lamination of 800H grade (FS800H). Access Floor panel shall be steel welded construction with an enclosed bottom pan with uniform pattern of 64 hemispherical cones. The top and bottom plates of Steel Gauges: top 0.6 mm and bottom 0.7mm fused spot welded together (minimum 64 welds in each dome and 20 welds along each flange). The panel should be Corroresist epoxy coated for lifetime rust protection and cavity formed by the top and bottom plate is filled with Pyrogrip noncombustible Portland cementitious core mixed with lightweight foaming compound. The access floor shall be factory finished with Anti-static High Pressure laminate with Non Warp technology upto 1mm thickness for superior adhesion and Surface flatness within 0.75mm. The panel is to withstand a Concentrated Load of 363 kgs applied on area 25mm x 25mm without collapse in the centre of the panel which is placed on four steel blocks. The panel will withstand and Uniformly Distributed Load (UDL) minimum 1250 kg/sqm and an impact load of 50kg all complete as per the approved manufacturers specification and as per the direction of Engineer-in-charge. All specification must be printed on the side of the panel to ensure the quality of the product.						
8.15.1	11.54.1	300 mm Finished Floor Height (FFH)	30.00	sqm				



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.16	NDSR	Providing and laying Germ free tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 3% and having anti microbial activity greater than equal to 2.0 of approved make, in all colours and shades,, complete in all respect & as directed by Engineer in charge.						
8.16.1	a.	For Flooring with preferred size of 600x600mm laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), including grouting the joints with white cement and matching pigments etc.	290.00	sqm				
8.16.2	b.	For Skirting /dado lwith preferred size of 300x450mm laid on 12mm thick cement mortar 1:3 (1 cement : 3 coarse sand), including grouting the joints with white cement and matching pigments etc.	185.00	sqm				
8.17	16.86	Providing and laying gang saw cut 18 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.						
8.17.1	16.86.1	Area less than 0.50 sqm. (Granite basic rate not to be less than Rs.1900 per sqm)	1300.00	sqm				
8.18	NSR	Extra for pre finished nosing to treads of steps of Granite stone.	811.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.19	NSR	Extra for Granite stone flooring in treads of steps and risers using single length up to 2.00 metre.	436.00	sqm				
8.20	NSR	Providing and fixing 18mm thick Granite stone work for wall lining at all height in cement mortar 1:3 (1cement : 3 coarse sand) including pointing with white cement mortor with an admixture of pigment to match the granite shade complete as per direction of Engineer-in-charge.(Granite basic rate not to be less than Rs.2000 per sqm)	550.00	sqm				
8.21	NSR	Providing and fixing Vinyl flooring of 2mm thick 100% recycled PVC flexible, homogeneous antistatic calendared compacted floor covering, minimum weight 3120 g/m2 in minimum sheet of size 2mtrs. x 20 mtrs. approved pattern & colour combination with PUR Protect or equivalent surface treatment having wear minimum resistance of $\leq 4.0\text{mm}^3$ as per EN 660.2 and wear group Group P as per EN-649 and should have a minimum residual indentation of $<0.03\text{mm}$ confirming to EN-433. The laid flooring should have non- directional design, colour dyed as a raw mixture to ensure even colour throughout the thickness and its surface should be densely compacted for improving wear and ease of maintenance with Anti-bacterial and Fungicidal properties. The laid flooring shall confirms the fire rating B1 class as per EN 13501-1. The floor finish should terminate at the room perimeter passing over a concealed cove former and continuing up the wall for 100mm. The joints in the flooring should be sealed by using a PVC welding bar of matching	80.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		colour to be supplied by the manufacturer, using a hot air gun for fusion of welding bar with flooring.						
8.22	NSR	Providing and fixing of Self Levelling Compound containing high quality synthetic resins, special cements and selected fillers, when mixed with water, a fluid easily troweled mortar with free flooring properties it should be applied normally upto 3mm. Primer should be applied on the sub-floor to seal the pores, to prevent air bubbles from rising through the applied mortar to maintain flow life and also to promote excellent uniform adhesion to the substrate.	80.00	sqm				
8.23	NSR	Providing and laying 8mm thk Laminated Wooden flooring of approved make in a design combination as per the drawing & instructions on levelled floor, insulating the areas, surface preparation, bedding, finishing etc complete as per the directions and instructions of the Engineer-in-charge. The rate shall be inclusive of edge moulding & end strips at the junction between the floor and the vertical surfaces and mouldings, T grooves and shall also include the underlays as per manufacturers specifications to achieve acoustical & thermal insulating properties etc complete.						
8.23.1	a )	Flooring	320.00	sqm				
8.23.2	b )	Skirting	32.00	sqm				
8.23.3	c )	Floor strip on edges 20cm in width	271.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.24	NSR	Providing & laying 18 mm thick Engineered Marble of approved shade & make cut to size in flooring/skirting/platform/counters fixed with suitable adhesive 3-4 mm thickness of approved make as per manufacturer specifications complete in all respect and directed by Engineer in charge. The rates is to be inclusive of under tile stone primer application to prevent efflorescence.	400.00	sqm				
8.25	Derived from item 22.14	Providing & laying Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in floor for grading levels of required thickness complete as directed by Engineer-incharge	140.00	cum				
8.26	16.75	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-incharge. (The panel shuttering work shall be Paid for separately). (Note:- Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately).	450.00	cum				
		<b>FLOORING SUB HEAD TOTAL</b>						
<b>9</b>		<b>SUB HEAD-IX :- ROOFING</b>						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.1	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :						
9.1.1	12.21.1	In 75 x75 mm deep chase	154.00	meter				
9.2	NDSR	Supplying and fixing 16 mm th. Polycarbonate sheet of approved make and shade on plain or curved profile roof sheeting with anodised aluminum beading over structural steel member (structural steel members shall be paid under relevant tender item ) fixed with GI bolts or EPDM coated self-tapping screws with EPDM sealing washer with filling the gaps with silicon sealant. Item rates shall include cost of plastic caps of approved colour of U V resistance, sealant wherever required, overlaps, wastage etc complete as per drawing and direction of Engineer in -Charge. The work shall be carried out for all heights with scaffolding, labour tools etc. without any extra cost..	50.00	sqm				
9.3	derived from 12.41	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes (working pressure 4 kg/sqcm) conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes						
9.3.1	derived from 12.41.2	160 mm diameter	99.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.4	derived from 12.42	Providing and fixing on wall face unplasticised-PVC moulded fittings / accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.						
9.4.1	derived from 12.42.5	Bend 87.5°						
9.4.1.1	derived from 12.42.5.2	160 mm bend	6.00	each				
9.5	derived from 12.42.6	Shoe (Plain)						
9.5.1	derived from 12.42.6.2	160 mm Shoe	6.00	each				
9.6	derived from 12.43	Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.						
9.6.1	derived from 12.43.2	160 mm	50.00	each				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.7	derived from 12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 20 cm diameter and weighing not less than 600 grams	6.00	each				
9.8	12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm,						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25 mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound , jointing tapes , finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with :						
9.8.1	12.45.3	12.5 mm thick tapered edge gypsum moisture resistant board	2000.00	sqm				



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.9	12.52	Providing and fixing tiled false ceiling of approved materials of size 595x595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanized steel sections ( galvanized @ 120 gsm/sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet, spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main "T" at 600mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and wall angle of size 24x24x0.3 mm and laying false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc.						
		Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 x mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4mm GI adjustable rods with galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-charge.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.9.1	12.52.2	GI Metal Ceiling Lay in perforated Tegular edge global white color tiles of size 595x595 mm and 0.5 mm thick with 8 mm drop; made of GI sheet having galvanizing of 100 gms/sqm (both sides inclusive) and 20% perforation area with 1.8 mm dia holes and having NRC (Noise Reduction Coefficient) of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation, and backed with a black Glass fiber acoustical fleece.	130.00	sqm				
9.10	12.55	Providing and fixing Heat Resistant Terrace Tiles (300 mm x 300 mm x 20 mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joints with mix of white cement & marble powder in ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner.	805.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.11	12.58	Providing and fixing tiled false ceiling of approved materials of size 595x595 mm in true horizontal level, suspended on interlocking metal grid of hot dipped galvanized steel sections ( galvanized @ 120 grams/ sqm, both side inclusive) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38 mm made from 0.30 mm thick (minimum) sheet, spaced at 1200 mm center to center and cross "T" of size 24x25mm made of 0.30 mm thick(minimum) sheet, 1200 mm long spaced between main "T" at 600 mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600 mm panel to form grids of 600x600 mm and wall angle of size 24x24x0.3mm and laying false ceiling tiles of approved texture in the grid including, required cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc.						
		Main "T" runners to be suspended from ceiling using GI slotted cleats of size 27 x 37 x 25 x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm GI adjustable rods with galvanized butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm center to center along main T, bottom exposed width of 24 mm of all T-sections shall be pre-painted with polyester paint, all complete for all heights as per specifications, drawings and as directed by Engineer-in-charge.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.11.1	12.58.1	8 mm thick fully perforated calcium silicate board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process to give stable crystalline structure with minimum compressive strength 225 kg/ sq. cm, bending strength 100 kg/sq. cm , of size 595x595 mm, having perforation of dia. 10 mm with minimum perforated area 18 % with non-woven tissue on the back side, having an NRC ( Noise Reduction Coefficient) of 0.85, with 50 mm thick Rockwool of 48 kg /cum backing.	200.00	sqm				
9.12	NDSR	Providing and fixing of false ceilings of ARMSTRONG or equivalent make, at all heights of 600mm x 600mm x 15mm or 1200mm x 600mm x 15mm Mineral Fibre ceiling tiles of Dune Plus RH-95 with Tegular Edge laid on Armstrong prelude XL exposed grid systems with 24mm wide T - section flanges colour White. The framework comprise of main runner spaced at 1200mm centers securely fixed to the structural soffit by approved hangers at 1200mm maximum centers. Hangers (GI wire of 4.0mm dia) to be fixed by approved roof plug, level adjusters and screws etc. The last hanger at the end of each main runner should not be greater than 450mm from the adjacent wall. Flush fitting 1200mm long cross						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		tees (with double stitching) to be interlocked between main runners at 600mm centers to form 1200 x 600 x modules. Cut cross tees longer than 600mm to be supported independently. 600mm x 600mm modules to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200m cross tees. Perimeter trim to be Armstrong wall angle secured to walls at 450mm maximum centres. (The quoted rate shall be inclusive for making opening for light fixtures, diffusers & AC grills.)	1020.00	sqm				
9.13	NSR	Providing & fixing trap door in the false ceiling using 19 mm thk commercial block board laminated with approved finish 1mm thick laminate with necessary 2nd Class teak frame work of size 2" x 1.5", Oak wood mouldings as per Architect's drawing, brass hinges, latches etc. complete in all respect as directed by Engineer-in-charge.	116.00	sqm				
9.14	NSR	Providing & fixing 75 mm deep feature panels in ceiling comprising of 19mm Thick. Commercial Block Board of approved make laminated with 4mm Thick. Italian Veneer ply including edge moulding, melamine polish, including cost of adhesive of approved quality, MS Tubular/wooden suspension system etc. complete in all respect as directed by Engineer-in-charge.	93.00	sqm				
		<b>ROOFING SUB HEAD TOTAL</b>						
<b>10</b>		<b>SUB HEAD-X :- FINISHING WORK</b>						
10.1	13.1	12mm cement plaster of mix :						
10.1.1	13.1.2	1:6 (1 cement : 6 fine sand)	4150.00	sqm				

Addition -----  
Deletion -----  
Correction -----  
Overwriting -----

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
10.2	13.2	15 mm cement plaster on the rough side of single or half brick wall of mix :						
10.2.1	13.2.2	1:6 (1 cement: 6 fine sand)	5700.00	sqm				
10.3	13.7	12 mm cement plaster finished with a floating coat of neat cement of mix :						
10.3.1	13.7.2	1:4 (1 cement: 4 fine sand)	110.00	sqm				
10.4	13.16.1	6 mm cement plaster of mix : 1:3 (1 cement : 3 fine sand)	9180.00	sqm				
10.5	13.26	Providing and Applying plaster of Paris putty of 2mm thickness over Plastered surface to prepare the surface even and smooth complete.	4510.00	sqm				
10.6	13.44	Finishing walls with water proofing cement paint of required shade :						
10.6.1	13.44.1	New work (Two or more coats applied @ 3.84 kg/10 sqm)	8350.00	sqm				
10.7	Derived from 13.45	Finishing walls with textured interior paint of required shade and approved make in design as directed by Engineer-in charge :						
10.7.1	Derived from 13.45.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of interior primer applied @ 2.20kg/10 sqm	5710.00	sqm				
10.8	13.52	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
10.8.1	13.52.1	On steel work	3000.00	sqm				
10.9	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	3010.00	sqm				
10.10	13.83	Wall painting 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.						
10.10.1	13.83.2	Two coat	2160.00	sqm				
10.11	13.84	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.						
10.11.1	13.84.2	Two coats.	418.00	sqm				
10.12	NDSR	Providing & laying Anti bacterial/Anti fungal paint having Low VOC on interior wall on new surface with two or more coats of desired shade & approved make as per manufacturers, specifications . The item rate to be inclusive of filling cracks & holes etc with approved make. Acrylic wall putty/Crack seal compound etc complete in all respect as per direction of Engineer in charge.	1100.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
10.13	NDSR	Finishing walls with weather proof emulsion exterior paint of required shade & approved make. On new work with two or more coat applied@100-130sqft/lit.over priming coat of exterior primer of approved make applied @ 55-60 sqft/lit) at all heights complete in all respect as per manufactures specifications & as directed by Engineer in charge.	500.00	sqm				
10.14	14.70	Melamine polishing on wood work (one or more coat).	250.00	sqm				
		<b>FINISHING WORK SUB HEAD TOTAL</b>						
<b>11.0</b>		<b>SUB HEAD-XI :- ALUMINIUM WORK</b>						
11.1	21.1	Providing and fixing aluminum work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminum sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminum snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and paneling to be paid for separately) :						
11.1.1	21.1.1	For fixed portion						



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
11.1.1.1	21.1.1.2	Powder coated aluminum (minimum thickness of powder coating 50 micron)	9380.00	kg				
11.1.1.2	NDSR	Rough Ground Aluminum	500.00	kg				
11.2	21.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of PVC / neoprene gasket required (Fittings shall be paid for separately).						
11.2.1	21.1.2.2	Powder coated aluminum (minimum thickness of powder coating 50 micron)	470.00	kg				
11.3	21.3	Providing and fixing glazing in aluminum door, windows, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings and the directions of the Engineer-in-Charge. (Cost of aluminum snap beading shall be paid in basic item).						
11.3.1	21.3.1	With float glass panes of 4.0mm thickness	59.00	sqm				
11.3.2	21.3.2	With float glass panes of 5.50 mm thickness	430.00	sqm				
11.4	9.12	Extra for providing frosted glass panes 4mm thick instead of ordinary float glass panes 4mm thick in doors, windows& clerestory windows, shutters (Area of opening for glass panes excluding portion inside rebate shall be measured)	29.00	sqm				
11.5	21.8	Filling the gap in between aluminum frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
11.5.1	21.8.1	Upto 5mm depth and 5 mm width	675.00	metre				
11.6	21.15	Providing and fixing aluminum casement windows fastener of required length for aluminum windows with necessary screws etc. complete.						
11.6.1	21.15.2	Powder coated minimum thickness 50 micron aluminum	56.00	each				
11.7	26.1	Providing and supplying aluminum extruded tubular and other aluminum sections as per the architectural drawings and approved shop drawings , the aluminum quality as per grade 6063 T5 or T6 as per BS 1474,including super durable powder coating of 60-80 microns conforming to AAMA 2604 of required colour and shade as approved by the Engineer-in-Charge. ( The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminum frame work. Nothing extra shall be paid on this account).	14070.00	kg				
11.8	26.2	Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
	a)	Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminum cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation & drainage and protection against fire hazard including:						
	b)	Fabricating and supplying serrated M.S. hot dip galvanised / Aluminum alloy of 6005 T5 brackets of required sizes, sections and profiles etc.to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/masonry/structural steel framework of building structure using stainless steel anchor fasteners/ bolts, nylon separator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.						
	c)	Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory /work shop environment , including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
	d)	Providing and fixing in position flashings of solid aluminum sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.						
	e)	Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminum grid, installation of glazed units, T&P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Note:- 1. The cost of providing extruded aluminum frames, shadow boxes, extruded aluminum section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this subhead. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves ) on the external face shall be measured in sqm. up to two decimal places.						
		Note:-2. The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science & Technologies, India. Cost of testing is payable separately. The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NBL Certified laboratories						
	1	Performance Laboratory Test for Air Leakage Test (- 50pa to – 300pa) & (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr”						
	2	Static Water Penetration Test. (50pa to 1500pa) as per ASTM E- 331-09 testing method for a range up to 2000 ml.”						
	3	Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml”						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
	4	Structural Performance Deflection and deformation by static air pressure test (1.5 times design wind pressure without any failure) as per ASTM E-330-10 testing method for a range upto 50 mm"						
	5	Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test" Tests to be conducted on site 6. Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000ml"	1320.00	sqm				
11.9	26.3	Providing, assembling and supplying vision glass panels (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 6mm 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 6mm thick, spacer tube 12mm wide, desiccants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor. (Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.26.2) For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm.						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	1320.00	sqm				
11.10	26.4	Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 -point cremone locking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineerin- Charge.	370.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
11.11	26.7	Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminum Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building, for all heights and all levels etc. including: <b>a)</b> Structural analysis & design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design. <b>b)</b> Providing,fabricating and supplying and fixing panels of aluminum composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminum composite panel material consisting of 3mm thick FR grade mineral core sandwiched between two Aluminum sheets (each 0.5mm thick).						
		The aluminum composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.						
		<b>c)</b> The fastening brackets of Aluminum alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes						



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		cost of all material & labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminum composite panel cladding, cleaning and protection of the curtain wall with aluminum composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminum items. The Contractor shall provide curtain wall with aluminum composite panel cladding, having all the performance characteristics all complete, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.	2165.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
11.12	14.72	Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to seven story height made with 40 mm dia M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challis, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineering-charge .The elevational area of the scaffolding shall be measured for payment purpose.The payment will be made once irrespective of duration of scaffolding. <b>Note:</b> - This item to be used for maintenance work judicially, necessary deduction for scaffolding in the existing item to be done.	75.00	sqm				
11.13		Removing vision glass panels from Existing Structural glazing fixed on existing Building including stacking etc. complete in all respect and as directed by Engineer Charge. The rates are to be inclusive of scaffolding etc. required for execution of the work as per requirement.	50.00	sqm				
		ALUMINIUM WORK SUB HEAD TOTAL						
12		SUB HEAD - XII - WATER PROOFING WORK						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
12.1	NDSR	Providing water proofing treatment by chemical injection grout process on horizontal surfaces like rafts & other similar locations using 25mm dia . G.I nozzles , minimum 1/4th thickness of raft 40mm(long) whichever is more, inside the raft fixed @ 1.5m c/c in both the directions. The injection grout which consist of injection cement slurries of different viscosities & expansive plasticizing agent (a non shrinkage compensating grout ) Flowcable 50 or equivalent is to be pumped in to the nozzles under pressure with a pump . The nozzles to be sealed off after the injection operation with suitable admixture. Providing & applying two coats of two component based elastomeric, cementitious coating Master Seal 551 or equivalent taking						
		care that the subsequent coat is applied when the previous coat is touch dry, 20mm cement plaster of mix 1:4 (1 cement :4 coarse sand) mixed with liquid waterproofing admixture MasterPal 707 or equivalent & finally embedding with 12mm size stone aggregate @ 8cudm per sqm complete as per manufacturer's specifications & as directed. (Work to be got executed through a specialized agency and covered by a 10 years guarantee by the main contractor.)	2064.00	sqm				
12.2	NDSR	Providing water proofing treatment by chemical injection grout process on vertical surfaces like walls & other similar locations using 25mm dia . M.S nozzles , minimum 1/4th thickness of wall or 40mm(long) whichever is more inside the walls fixed @ 1.5m c/c in both the directions and @ 0.75 m c/c along construction joints. The injection grout which						

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		consist of injection cement slurries of different viscosities & expansive plasticizing agent (a non shrinkage compensating grout )Flowcable 50 or equivalent is to be pumped in to the nozzles under pressure with a pump . The nozzles to be sealed off after the injection operation with suitable admixture.						
		Providing & applying two coats of two component based elastomeric, cementitious coating Master Seal 551 or equivalent taking care that the subsequent coat is applied when the previous coat is touch dry , 20mm cement plaster of mix 1:4 (1 cement :4 coarse sand) mixed with liquid waterproofing admixture MasterPal 707 or equivalent complete as per manufacturer's specifications & as directed.(Work to be got executed through a specialized agency and covered by a 10 years guarantee by the main contractor.)	1530.00	sqm				
12.3	22.4	Providing and placing in position suitable PVC water stops conforming to IS:12200 between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc complete.						
12.3.1	22.4.1	Serrated with central bulb (225mm wide,8-11mm thick)	156.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
12.4	22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : 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. 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. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	250.00	sqm				
12.5	NSR	Providing and laying broken AAC Block in sunken portion of W.C. & kitchen. These broken Block mixed with cement mortar 1:8 ( 1 cement : 8 coarse sand) laid and compacted properly including supply of labour, material, and tools and plant etc. as per instruction of Engineer-in-charge.	15.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
12.6	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-Charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineering-Charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs						
12.6.1	22.7.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	805.00	sqm				
12.7	Derived from 22.7	Extra for every 1 cm thickness of koba treatment.	16070.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
12.8	12.60	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Rockwool conforming to IS: 8183,density 48 kg/ m3, 50 mm thick, wrapped in 200 G Virgin Polythene bags fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5mm x 24 gauge wire mesh, for top most ceiling of building.	805.00	sqm				
		<b>WATER PROOFING WORK SUB HEAD TOTAL</b>						
<b>13</b>		<b>SUB HEAD-XIII :- MISCELLANEOUS WORK</b>						
13.1	NSR	Providing & fixing 24gauge Chicken wire mesh on joints of RCC & Brick work before plastering including nails etc. complete as per the direction of Engineer-in-charge.	620.00	sqm				
13.2	19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS :1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	48.00	each				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
13.3	NSR	Providing & fixing decorative type block board of approved make in wall guard of thickness 19 mm thick & 200 mm wide with decorative ply veneering on one side fixed with screws at a preferred ht. of 1050mm from finished floor level, having both edges to be chamfered complete in all respect as per directed by Engineer in charge..	570.00	metre				
13.4	10.18	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp, of internal dia 140 mm, 73 mm height, top lid of 1.5 mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3 mm dia round headed screws, one lock at the corners. Clamp shall be made of 12 mm dia M.S. bar bent to shape as per standard drawing.	10.00	each				
13.5	NSR	Dismantling & removing M.S. steel main gate work in built up sections etc. as directed by Engineer-in charge including dismembering .The material after dismantling shall become the property of the contractor. Recovery of M.S. Gate material shall be made @ Rs. 20/- kg from the contractor .	1200.00	kg				
13.6	NSR	Dismantling & removing MS steel railing work from existing Fire escape Staircase as directed by Engineer-in charge. The material after dismantling shall become the property of the contractor. Recovery of railing material shall be made @ Rs. 20/- kg from the contractor .	750.00	kg				
		<b>MISCELLANEOUS WORK SUB HEAD TOTAL</b>						



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
<b>14</b>		<b>SUB HEAD-XVI :- ROAD WORKS :</b>						
14.1	16.1	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 earth with lead upto 50 metres.	1558.00	sqm				
14.2	16.2	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).	1480.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
14.3	16.43	Providing and laying design mix cement concrete of M-25 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, leveling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints ( 10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately). Note:- Cement content considered in M-25 is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/recoverable separately. <b>Note</b> -Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer	370.00	cum				
14.4	NDSR	Providing placing & fixing Precast Concrete Grass Grid Pavers of 70 mm Thickness and appropriate size, laid over compacted earth and over 75 mm thick layer (average) of Yamuna sand, manufactured by using M-30 grade of concrete by using vibro compaction process using accurately designed moulds. The Grass Grid pavers shall be suitably reinforced etc. complete in all respects as per direction of the Engineer-in-charge.	350.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
14.5	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement in position to the required line ,level and curvature jointed with cement mortar 1:3 (1 cement : 3 coarse sand) including making joints with or without grooves (thickness of joints except sharp curve shall not be more than 5mm) including making drainage opening wherever required complete etc. as per direction of engineer-in-charge(length of finished kerb edging shall be measured for payment).(Precast C.C. kerb stone shall be approved by engineer-in-charge).	16.00	cum				
14.6	16.82	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineering-Charge.	300.00	metre				
14.7	16.83	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	270.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
14.8	16.84	Laying old cement concrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineering-charge. (Old CC paver blocks shall be supplied by the department free of cost).	270.00	sqm				
14.9	16.85	Laying at or near ground level old kerb stones of all types in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints, except at sharp curve, shall not be more than 5 mm), including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)	300.00	metre				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
14.10	16.91	Providing and laying factory made coloured chamfered edge Cement Concrete paver blocks of required strength, thickness & size/shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of fine sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with Yamuna sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand in footpath, parks, lawns, drive ways or light traffic parking etc. complete as per manufacturer's specifications & direction of Engineering-Charge. 60mm thick C.C. paver block of M-35 grade with approved colour, design & pattern.	1700.00	sqm				
14.11	19.36	Providing and laying Non Pressure NP-4 class (Heavy duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete						
14.11.1	19.36.1	450 mm dia RCC pipes.	80.00	metre				
		<b>ROAD WORKS SUB HEAD TOTAL</b>						
<b>15</b>		<b>SUB HEAD-XV :- DISMANTLING AND DEMOLISHING</b>						
15.1	15.2	Demolishing cement concrete manually/ by mechanical means including disposal of material irrespective of lead as per direction of Engineer - in - charge.						
15.1.1	15.2.2	1:4:8 or leaner mix	25.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
15.2	15.7	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material irrespective of lead as per direction of Engineer-in-charge.						
15.2.1	15.7.4	In cement mortar	52.00	cum				
15.3	15.23	Dismantling tile work in floors and roofs laid in cement mortar including stacking material irrespective of lead.						
15.3.1	15.23.1	For thickness of tiles 10 mm to 25 mm	50.00	sqm				
15.3.2	15.23.2	For thickness of tiles above 25 mm and up to 40 mm	50.00	sqm				
15.4	15.24	Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material irrespective of lead.	10.00	cum				
15.5	15.25	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material irrespective of lead.	50.00	sqm				
15.6	15.43	Dismantling manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material irrespective of lead as per direction of Engineer-in-charge :						
15.6.1	15.43.1	Water bound macadam road	800.00	sqm				
15.6.2	15.43.2	bituminous road	900.00	sqm				
15.7	15.56	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground irrespective of lead.	400.00	sqm				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
15.8	15.58	Demolishing C.C. /R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials irrespective of lead, stacking serviceable and unserviceable material separately including cutting reinforcement bars.	11.00	cum				
15.9	15.60	Disposal of building rubbish/malba/similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, irrespective of lead.	70.00	cum				
		<b>DISMANTLING AND DEMOLISHING WORKS SUB HEAD TOTAL</b>						
<b>16</b>		<b>SUB HEAD-XVI :- Horticulture &amp; Landscaping</b>						
16.1	2.29	Ploughing the existing ground to a depth of 15 cm to 25 cm and watering the same.						
16.1.1	2.29.1	All kinds of soil	5.00	100sq m				
16.2	NSR	Supplying and applying of Chemical fertilizer and Organic manure of approved make and quality, before and after as per requirement and direction of Engineer - in - Charge.						
16.2.1	a.	DAP / NPK(25gm/sqm) or as per direction of Engineer - in - Charge.	12.50	kg				
16.2.2	b.	UREA(10gsm/sqm) or as per direction of Engineer - in - Charge.	5.00	kg				
16.2.3	c.	Bone Meal(150gm/sqm) or as per direction of Engineer - in - Charge.	75.00	kg				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
16.2.4	d.	Neem Cake(150gm/sqm) or as per direction of Engineer - in - Charge.	75.00	kg				
16.3	23.5	Rough dressing the trenched ground including breaking clods.	5.00	100sq m				
16.4	23.7	Fine dressing of the ground	5.00	100sq m				
16.5	23.8	Spreading of sludge, dump manure and / or good earth in required thickness as per direction of Officer-in-charge (Cost of sludge, dump manure and / or good earth to be paid separately)	50.00	cum				
16.6	23.9	Mixing earth and sludge or manure in the required proportion specified or directed by the Engineer-in-charge..	50.00	cum				
16.7	NSR	Supplying and stacking of selection No.1 grass of approved quality at site for grassing as per direction of Engineer-in-Charge. (Grass should be fresh, lush green in carpet shape, free from weeds).	200.00	sqm				
16.8	23.10	Grassing with selection No.1 grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the good earth shall be paid for separately)						
16.8.1	23.10.1	In rows 5 cm apart in both directions	2.00	100sq m				



I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
16.9	NSR	Grassing with selection No.1 grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed (the good earth shall be paid for separately) in rows 5 cm apart in both directions for Grass Paver Block area as per direction of Engineer - in - Charge. (Note: 50 % of total grass paved area shall be measured for payment purpose)	2.00	100sq m				
16.10	NSR	Maintenance of grassing area for 12 months after 30days or more till the grass form a thick lawn free from weeds and fit for mowing including watering etc as per direction of Engineer - in - Charge..	2.00	100sq m				
16.11	23.13	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately).	12.00	cum				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
16.12	23.14	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any, with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :						
16.12.1	23.14.2	Holes 90 cm dia, and 90 cm deep	50.00	each				
16.12.2	23.14.3	Holes 60 cm dia, and 60 cm deep	50.00	each				
16.13	23.24	Flooding the ground with water including making kiaries and dismantling the same	5.00	100sq m				
16.14	23.25	Supplying and stacking of well decayed cow dung manure at site including royalty and carriage upto 1 km (Cow dung manure measured in stacks will reduced by 8% for Payment)	10.00	cum				
16.15	23.29	Providing Circular Cement Concrete pots of specified size, cast with cement concrete of nominal mix 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 6 mm nominal size), reinforced with 7 nos ( 3 nos horizontal & 4 nos vertical "U" shape) M.S. wires of 3.5 mm dia as per design, including required form work, finishing with cement punning on exposed surface, curing for specified period and stacking in required rows & height, all complete as per direction of Engineer-in-charge.						
16.15.1	23.29.1	Top inside dia 35 cm, outer bottom dia 25 cm, total height 35 cm with wall thickness of 25.4 mm	50.00	each				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
16.16	NSR	Supply & Planting best quality trees inclusive of cultivation of trees bead to required depth as per direction of Engineer - in - Charge. All trees / plants to be approved by Engineer-in-charge before planting including watering & maintenance for 12 months after planting.						
16.16.1	a.	Alstonia Scholaris 'Milky pine' (1500-1800mm high)	10.00	each				
16.16.2	b.	Murraya Exotica ' Orange Jasmine' (1000mm high)	10.00	each				
16.16.3	c.	Plumeria Alba 'Champa' (3000mm high sapling, with 5 to 6 branches, 3Mtr.centre to centre.)	10.00	each				
16.16.4	d.	Lagerstroemia indica 'Crape-myrtle' (1500-1800mm high, 3-4 branches, 37-50mm dia trunk)	8.00	each				
16.16.5	e	Nerium Oleander " Oleander'	5.00	each				
16.16.6	f	Rhapis Excelsa ' Broadleaf Lady Palm Or Bamboo Palm'	5.00	each				
16.16.7	g	Chrysalidocarpus lutescens 'Yellow butterfly palm'	5.00	each				
16.17	NSR	Supplying and plantation of best quality healthy Shrubs, climbers of approved quality & species as per direction of Engineer - in - Charge, inclusive of maintenance for 12 months after planting.						
16.17.1	a.	Bauhinia tomentosa (common name Small Kachnar ,tree height. 1'-6" to 2' approx)	5.00	each				
16.17.2	b.	Calliandra haematocephala(common name Red powder puff ,tree height. 1'-6" to 2' approx)	5.00	each				
16.17.3	c.	Cestrum nocturnum (common name Rati-Ki-Rani ,tree height. 1'-6" to 2' approx)	5.00	each				

I. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
16.17.4	d.	Tabernaemontana coronaria (common name Chandni tree height. 1'-6" to 2' approx)	5.00	each				
16.17.5	e	Ficus bayamia	20.00	each				
16.17.6	f	Ficus Resnolt	20.00	each				
16.17.8	g	Ficus Panda	25.00	each				
16.18	NSR	Supplying and plantation of best quality healthy hedge plants inclusive of cultivation of plant bead to required depth of approved quality & species and inclusive of watering, manuring, hoeing, trimming as per requirement etc. complete in all respect as directed by Engineer-in-charge. The Horticulture / landscape contractor shall maintain all new planted area trees until the period of one year after the completion of plantation. Maintenance shall include replacement of dead plants. Watering, weeding, cultivating, control of insects, fungicide and other disease by means of spraying with an approved insecticide or fungicide, manuring pruning and other horticulture operations necessary for the proper growth of the plants and for keeping the landscape area neat in appearance.						
16.18.1		Clerodendron inermie	500.00	each				
		<b>Horticulture &amp; Landscaping Works SUB HEAD TOTAL</b>						

SUMMARY OF PLUMBING WORK			
Sl.No.	Description	Quoted amount in Figures (in Rs.)	Quoted Amount in words (in Rs.)
1	SANITARY INSTALLATION		
2	WATER SUPPLY		
3	DRAINAGE		
4	BOREWELL		
5	PUMPS & ALLIED WORKS		
	<b>TOTAL AMOUNT IN RS.</b>		

Addition -----  
 Deletion -----  
 Correction -----  
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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1		<b>SUB HEAD-I :- SANITARY INSTALLATIONS</b>						
1.1	2.10	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, irrespective of lead.						
1.1.1	2.10.1	All kinds of soil						
1.1.1.1	2.10.1.1	Pipes, cables etc, not exceeding 80 mm dia	50.00	metre				
1.1.1.2	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	250.00	metre				
1.1.1.3	2.10.1.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	200.00	metre				
1.2	2.11	Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre).						
1.2.1	2.11.1.1	Pipes, cables etc., not exceeding 80 mm dia	50.00	metre				
1.2.2	2.11.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	250.00	metre				
1.2.3	2.11.1.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	200.00	metre				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.3	17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :						
1.3.1	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	2.00	each				
1.4	17.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :						
1.4.1	17.3.1	W.C. pan with ISI marked white solid plastic seat and lid.	27.00	each				
1.5	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink 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 :						
1.5.1	17.10.1	Kitchen sink with drain board						
1.5.1.1	17.10.1.1	510x1040 mm bowl depth 250 mm	5.00	each				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.6	17.11	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste and 40 mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required:						
1.6.1	17.11.2	Size 600x450x200 mm	6.00	each				
1.7	17.12	Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required:						
1.7.1	17.12.1	White glazed fire clay draining board of size 600x450x25 mm	1.00	each				
1.8	17.34	Providing and fixing toilet paper holder :						
1.8.1	17.34.1	C.P. brass	30.00	each				
1.9	17.35	Providing and fixing soil, waste and vent pipes:						
1.9.1	17.35.1	100 mm dia						
1.9.1.1	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	212.00	metre				
1.9.2	NSR	150 mm dia						
1.9.2.1	NSR	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	125.00	metre				



Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.10	17.37	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast Iron / Cast Iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :						
1.10.1	17.37.1	For 100 mm dia pipe	80.00	each				
1.10.2	NSR	For 150 mm dia pipe	45.00	each				
1.11	17.39	Providing and fixing plain bend of required degree.						
1.11.1	17.39.1	100 mm dia						
1.11.1.1	17.39.1.2	Sand cast iron S&S as per IS : 3989	40.00	each				
1.11.2	NSR	150 mm dia						
1.11.2.1	NSR	Sand cast iron S&S as per IS : 3989	40.00	each				
1.12	17.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3mm thick, bolts and nuts complete.						
1.12.1	17.43.1	100x100x100 mm						
1.12.1.1	17.43.1.2	Sand cast iron S&S as per IS - 3989	19.00	each				
1.13	17.53	Providing and fixing sand cast iron S&S off sets as per IS: 1729						
1.13.1	17.53.1	76 mm off sets						
1.13.1.1	17.53.1.2	With 100 mm dia pipe	17.00	each				
1.13.1.2	NSR	With 150 mm dia pipe	8.00	each				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.14	17.56	Providing and fixing terminal guard:						
1.14.1	17.56.1	100 mm						
1.14.1.1	17.56.1.2	Sand cast iron S&S as per IS - 3989	6.00	each				
1.14.2	NSR	150 mm						
1.14.2.1	NSR	Sand cast iron S&S as per IS - 3989	3.00	each				
1.15	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:						
1.15.1	17.58.1	100 mm	85.00	each				
1.15.2	NSR	150 mm	35.00	each				
1.16	NSR	Providing dripseal PJS-43 or equivalent approved (CI pipe joint sealant) joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter complete in all respect as directed by Engineer in Charge.						
1.16.1	NSR	100 mm	85.00	each				
1.16.2	NSR	150 mm	50.00	each				
1.17	17.59	Providing and fixing M.S. stays and clamps for sand cast iron/centrifugally cast (spun) iron pipes of diameter:						
1.17.1	17.59.1	100 mm	6.00	each				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.17.2	NSR	150 mm	3.00	each				
1.18	17.60	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:						
1.18.1	17.60.1	100 mm inlet and 100 mm outlet						
1.18.1.1	17.60.1.1	Sand cast iron S&S as per IS: 3989	60.00	each				
1.19	17.65	Painting sand cast iron / centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work:						
1.19.1	17.65.1	100 mm diameter pipe	140.00	metre				
1.19.2	NSR	150 mm diameter pipe	125.00	metre				
1.20	17.78	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.	2.00	each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.21	17.80	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.	10.00	each				
1.22	8.10	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.						
1.22.1	8.10.2	Granite stone of approved shade.	10.00	sqm				
1.23	NSR	Providing and fixing C.P. brass twin coat hook of approved brand & manufacture fixed on toilet door with C.P. brass screws including all fittings complete.	25.00	each				
1.24	NSR	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with moulded frame made out of 50mm X 19mm first class teak wood of approved design including finishing to required shade, with 6 mm thick hard board backing.	15.00	sqm				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.25	NSR	Providing & fixing Hand Shower (Health Faucet) with 8mm Dia,1 Metre Long Flexible Tube & Wall Hook of approved make and manufacture complete as per direction of Engineer in Charge.	23.00	each				
1.26	NSR	Providing and fixing of fully automatic "NO TOUCH" durable & shock proof hand drier of approved make & manufacture suitable to operate on 220 volts, single phase 50 hz, A.C. power supply, 1500 Watt and directly plugged to power point complete in ABS plastic body having drying time 20-30 seconds complete as per direction of Engineer in Charge.	15.00	each				
1.27	NSR	Providing and fixing S.S. Grab bar 450mm Long of approved brand and manufacture fixed with necessary screws etc. complete as directed by engineer in charge.	10.00	each				
1.28	NSR	Providing and fixing white vitreous china oval wash basin for top/under counter mounting with fabricated MS brackets painted white syenthetic enamel paint over a coat of primer of approved brand, 15 mm C.P. brass central hole single lever mixer fitting with pop-up waste, 32 mm C.P. brass bottle trap and pipe to wall with C.P. wall flange and rubber adopter for waste connection complete, including cutting and making good the walls wherever required.						
		Oval washbasin size 195X600x425 mm under counter basin with 15 mm C.P. brass central hole single lever mixer.	16.00	each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.29	NSR	Providing and fixing Nickel Chromium Plated Bottle Trap (with internal partition) 32mm size with 250 mm & 190 mm long valve connection pipes & valve flange with minimum 25 mm water seal (Nickel chromium plating should pass Salt Spray Test for 200 hours) of approved make for Wash basin, Urinals & Sink complete as per direction of Engineer in Charge.	21.00	each				
1.30	NSR	Providing & fixing Nickel Chromium Plated liquid soap container/dispenser with metallic bottle of 51 mm dia & 122 mm height (Total height 162mm) of approved brand & make 112 mm distance from wall of standard shape with bracket (Nickel chromium plating should pass Salt Spray Test for 200 hours) of the same materials with snap fittings of approved quality and colour, complete as per direction of Engineer in Charge.	30.00	each				
1.31	NSR	Providing and fixing Nickel Chromium Plated towel ring circular shape 178 mm dia of 6 mm round solid bar with concealed fittings arrangement (Nickel chromium plating should pass Salt Spray Test for 200 hours) of approved quality and colour, of approved brand & manufacture complete as per direction of Engineer in Charge.	30.00	each				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.32	NSR	Providing and fixing white vitreous china oval wash basin for top/under counter mounting with fabricated MS brackets painted white synthetic enamel paint over a coat of primer of approved brand, 15 mm C.P. Brass auto closing pillar cock with 65 mm extension body, 32 mm C.P. brass bottle trap of approved make and pipe to wall with C.P. wall flange and rubber adopter for waste connection complete, including cutting and making good the walls wherever required.						
		Oval washbasin size 195X600x425 mm under counter basin with 15 mm C.P. Brass auto closing pillar cock.	28.00	each				
		<b>SANITARY INSTALLATION SUB HEAD TOTAL</b>						
<b>2</b>		<b>SUB HEAD-II :- WATER SUPPLY</b>						
2.1	18.8	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold wter supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and 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.						
2.1.1	18.8.1	15 mm nominal outer dia pipes	205.00	metre				
2.1.2	18.8.2	20 mm nominal outer dia pipes	110.00	metre				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.1.3	18.8.3	25 mm nominal outer dia pipes	92.00	metre				
2.1.4	18.8.4	32 mm nominal outer dia pipes	100.00	metre				
2.2	18.10	Providing and fixing G.I. pipes (Medium class) complete with G.I. fittings and clamps, including cutting and making good the walls etc.						
		INTERNAL WORK - EXPOSED ON WALL						
2.2.1	18.10.2	20 mm dia. nominal bore	180.00	metre				
2.2.2	18.10.3	25 mm dia. nominal bore	25.00	metre				
2.2.3	18.10.5	40 mm dia. nominal bore	150.00	metre				
2.2.4	18.10.6	50 mm dia. nominal bore	140.00	metre				
2.3	18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.						
		EXTERNAL WORK						
2.3.1	18.12.5	40 mm dia. nominal bore	100.00	metre				
2.3.2	18.12.8	80 mm dia. nominal bore	150.00	metre				
2.4	18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :						



Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.4.1	18.13.1	25 to 40 mm nominal bore	1.00	each				
2.5	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end )						
2.5.1	18.17.2	32 mm nominal bore.	2.00	each				
2.5.2	18.17.3	40 mm nominal bore	10.00	each				
2.5.3	18.17.4	50 mm nominal bore	4.00	each				
2.5.4	18.17.6	80 mm nominal bore	2.00	each				
2.6	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic floats complete:						
2.6.1	18.18.1	15 mm nominal bore.	58.00	each				
2.6.2	18.18.2	20 mm nominal bore.	6.00	each				
2.6.3	18.18.3	25 mm nominal bore	4.00	each				
2.7	18.21	Providing and fixing unplasticised PVC connection pipe with brass unions						
2.7.1	18.21.2	45 cm length						
2.7.1.1	18.21.2.1	15 mm nominal bore	65.00	each				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.8	18.32	Constructing masonry Chamber 30X30X50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 Cement : 4 Coarse sand) for stop cock, with C.I. surface box 100*100*75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix ( 1 Cement : 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design:						
2.8.1	18.32.1	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	2.00	each				
2.9	18.38	Painting of GI pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work.						
2.9.1	18.38.2	20 mm dia. nominal bore	145.00	metre				
2.9.2	18.38.3	25 mm dia. nominal bore	25.00	metre				
2.9.3	18.38.5	40 mm dia. nominal bore	120.00	metre				
2.9.4	18.38.6	50 mm dia. nominal bore	110.00	metre				
2.10	18.40	Painting of GI pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality.						
2.10.1	18.40.5	40 mm diameter pipe	45.00	metre				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.10.2	18.40.8	80 mm diameter pipe	50.00	metre				
2.11	18.48	Providing and placing on terrace (at all floor levels) polyethylene <b>water storage tank</b> ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fitting and base support for tank.	45000.00	litre				
2.12	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931						
2.12.1	18.49.1	a) 15 mm nominal bore	27.00	each				
2.13	18.53	Providing and fixing C.P brass angle valve for basin mixer and geyser points of approved quality confirming to IS:8931						
2.13.1	18.53.1	15 mm nominal bore	14.00	each				
2.14	Derived from 18.58	Providing and fixing SS Grating of 125 mm dia of approved quality and colour complete as per direction of engineer in charge.	57.00	each				
2.15	Derived from 18.51	Providing and fixing C.P. brass autoclosing pillar cock with 65 mm extension body of approved brand and manufacture for wash basin complete as per direction of Engineer in Charge.						
2.15.1	Derived from 18.51.1	15 mm nominal bore.	21.00	each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.16	NSR	Providing & fixing C.P. Brass sink cock with regular swinging spout (wall mounted) with flange complete of approved brand & manufacture as per vdirection of Engineer in Charge.						
2.16.1	NSR	15 mm nominal bar	4.00	each				
		<b>WATER SUPPLY SUB HEAD TOTAL</b>						
<b>3</b>		<b>SUB HEAD-III :- DRAINAGE</b>						
3.1	19.1	Providing, laying and jointing glazed stone ware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1cement :1 fine sand) including testing of joints etc complete.						
3.1.1	19.1.1	100 mm diameter	50.00	metre				
3.1.2	19.1.2	150 mm diameter	95.00	metre				
3.1.3	19.1.3	200 mm diameter	60.00	metre				
3.2	19.3	Providing and laying cement concrete 1 : 5 : 10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. Pipes including bed concrete as per standard design.						
3.2.1	19.3.1	100 mm diameter	50.00	metre				
3.2.2	19.3.2	150 mm diameter	95.00	metre				
3.2.3	19.3.3	200 mm diameter	60.00	metre				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.3	19.4	Providing and fixing square mouth S. W. Gully trap grade 'A' complete with C.I. grating brick masonry chamber with F.P.S bricks and water tight CI 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						
3.3.1	19.4.2	150 x 100 mm. size P type						
3.3.1.1	19.4.2.1	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	6.00	each				
3.4	Derived from 19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :						
3.4.1	Derived from 19.6.2	200 mm diameter R.C.C pipes	100.00	metre				
3.4	19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :						
3.4.1	19.6.4	250 mm diameter R.C.C pipes	100.00	metre				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.5	19.7	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 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 :						
3.5.1	19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :						
3.5.1.1	19.7.1.1	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	6.00	each				
3.6	19.8	Extra for depth for manholes						
3.6.1	19.8.1	Size 90x80 cm						
3.6.1.1	19.8.1.1	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	1.00	metre				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.7	19.9.1	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel 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, all complete as per standard design :						
		0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S.12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :						
3.7.1	19.9.1.1	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	12.00	each				
3.8	19.10	Extra for depth for circular manhole 0.91m internal dia at bottom with beyond 0.91m to 1.67m.						
3.8.1	19.10.1	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	1.00	metre				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.9	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	40.00	each				
3.10	19.19	Providing and fixing in position precast R.C.C. manhole cover and frame.						
3.10.1	19.19.1	L D- 2.5						
3.10.1.1	19.19.1.1	Rectangular shape 600x450mm internal dimensions	8.00	each				
3.11	19.21	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete:						
3.11.1	19.21.1	For pipes 100 to 250 mm diameter	1.00	each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.12	19.27	Constructing brick masonry road gully chamber 50 x 45 x 60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500 x 450mm precast RCC horizontal grating with frame complete as per standard design.	20.00	each				
3.12.1	19.27.1	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5						
		<b>WATER SUPPLY SUB HEAD TOTAL</b>						
<b>4</b>		<b>SUB HEAD-IV :- BOREWELL +RAIN WATER HARVESTING</b>						
4.1	24.1	Boring/drilling bore well of required dia for casing / strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer - in-charge, upto 90 metre depth below ground level.						
4.1.1	24.1.1	All types of soil						
4.1.1.1	24.1.1.1	300 mm dia	90.00	metre				
4.1.1.2	24.1.1.3	400mm dia	90.00	metre				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4.2	24.2	Boring/drilling bore well of required dia for casing / strainer pipe, by suitable method prescribed in IS:2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer - in-charge, beyond 90 metre & upto 150 metre depth below ground level.						
4.2.1	24.2.1	All types of soil						
4.2.1.1	24.2.1.3	400mm dia	10.00	metre				
4.3	24.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge						
4.3.1	24.3.3	200 mm nominal size dia	40.00	metre				
4.4	24.4	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.						
4.4.1	24.4.3	200 mm nominal size dia	80.00	metre				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4.5	24.5	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-in-charge.	25.00	cum				
4.6	24.6	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-incharge.	25.00	cum				
4.7	24.7	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	30.00	cum				
4.8	24.8	Gravel packing in tube well construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer- in -charge.	45.00	cum				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4.9	24.10	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer- in-charge.						
4.9.1	24.10.3	200 mm nominal size dia having minimum wall thickness 5.40 mm	100.00	metre				
4.10	24.12	Development of tube well in accordance with IS:2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-Charge.	135.00	hour				
4.11	24.13	Providing and fixing suitable size threaded mild steel cap or spot as per requirement, all complete for bore well of:						
4.11.1	24.13.3	200 mm nominal size dia	1.00	each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4.12	24.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tube well as per IS: 2800 (part I), including necessary bolts & nuts of required size complete						
4.12.1	24.14.3	200 mm nominal size dia	1.00	each				
4.13	5.1.3	1:2:4(1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size) mix for sanitary sealing of well at top (approx. 5m from top).	30.00	cum				
4.14	NSR	Supply, installation testing & commissioning of submersible pumping set suitable to operate on 415 volts $\pm 10\%$ , 3 phase 50 HZ A.C. power supply including water proof joint free cable, motor control panel including S/D starter, 50 mm dia, G.I. pipe (medium class) column with fittings, clamps etc. complete in all respect as per details given below :						
		Pump to be lowered below ground at : 170 M						
		Pump capacity : 15000 litres/hr						
		Head : 70 Metre above Ground Level						
		Pump Rating (in H.P.) Capacity : 15 HP	1.00	sets				
4.15	22.21	Extra for covering top of membrane with Geotextile, 120 gsm non woven, 100% polyester of thickness 1 to 1.25 mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation. (For Rain Harvesting Pit)	40.00	sqm				
		<b>BOREWELL SUB HEAD TOTAL</b>						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5		<b>SUB HEAD-V :- PUMP &amp; ALLIED WORKS</b>						
5.1	<b>16.11</b>	Supplying, fixing, testing & commissioning of following valves, gauges & strainers for condenser water circulation as per specifications.						
5.1.1	<b>16.11.1</b>	BUTTERFLY VALVE (MANUAL) with CI body SS disc nitrile sheet & O-ring & PN 16 pressure rating as specified.						
5.1.1.1	<b>a.4.1</b>	50 mm dia	5.00	each				
5.1.1.2	<b>a.4.2</b>	65 mm dia	10.00	each				
5.1.1.3	<b>a.4.3</b>	80 mm dia	8.00	each				
5.1.2	<b>16.11.2</b>	NON-RETURN VALVE with dual plate of CI body SS PLATES VULCANIZED NBR seal flanged end & PN pressure rating as specified.						
5.1.2.1	<b>16.11.2.6</b>	65 mm dia	2.00	each				
5.1.2.2	<b>16.11.2.5</b>	80 mm dia	1.00	each				
5.1.2.3	NSR	50 mm dia	2.00	each				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.2	NSR	Supply, installation, testing & commissioning of vertical/ Horizontal inline multistage pumping set with Stainless steel-304 body, Stainless steel-304 impeller, Stainless steel-304 casing, shaft of Stainless steel-316 and C.I. base & head with mechanical seal, connected to a TEFC induction motor suitable for 415+/- 10% volts, 3 phase 50 cycles A.C. supply with 150 mm dia pressure gauge with gunmetal isolation cock, vibration eliminating pads under foundations, 80x40 mm I section base plate bolted to cement concrete foundations complete. Vendor to submit performance curves and technical catalogue of the proposed model for review and information.						
5.2.1	a.	Filter Feed Pumps	1.00	set				
		Set of Two pumps <b>(1 Working + 1 Standby)</b>						
		Capacity - 120 LPM						
		Head - 25.0 Mtr.						
5.2.2	b	Raw Water Transfer Pump	1.00	set				
		Set of two pumps <b>(1 Working + 1 Standby)</b>						
		Capacity - 100 LPM						
		Head - 50.0 Mtr.						
5.2.3	c	Garden Irrigation Pumps	1.00	set				
		Set of two pumps <b>(1 Working + 1 Standby)</b>						
		Capacity - 50 LPM						
		Head - 30.0 Mtr.						
5.2.4	d	Domestic Water transfer Pumps	1.00	set				
		Set of two pumps <b>(1 Working + 1 Standby)</b>						
		Capacity - 70 LPM						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Head - 50.0 Mtr.						
5.3	NSR	Supply, installing, testing and commissioning of submersible single stage single entry pumps with C.I. body and C.I. two vane enclosed type impeller connected to TEFC submersible motor for 415 + 10% volts, 3 phase, 50 cycles A.C. power supply with mechanical seal, pump connector unit with rubber diaphragm and bend, vertical discharge pipe, guide pipe and chain in built level controller, sequence running controller, dry running Protection complete in all respects.						
		(Pumps shall be installed in a set of two pumps One working and One standby)						
5.3.1	a	Basement Drainage Sump Pumps	3.00	set				
		(Pumps to be suitable to handle solids upto 12 mm size)						
		Capacity - 4.0 LPS (Each)						
		Head - 20 M						
5.4	NSR	Providing and laying G.I. "B class" pipes and fittings conforming to IS: 1239 (Medium class) with fittings, union and clamps including cutting holes in wall, makes chases in wall and making good the same in cement mortar 1:2 (1cement: 2 coarse sand) as directed by Project Manager complete in all respects for internal works including pipe supports with galvanised M.S. slotted angle iron, clamps, spacers as required and making good wherever required.						
5.4.1	b.1	65 mm dia	80.00	metre				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.4.2	b.2	80 mm dia	80.00	metre				
5.5	NSR	Painting of G.I. pipes with two or more coats of synthetic enamel paint of approved quality over a coat of red oxide zinc chromate primer as directed by the Engineer-in-Charge (shade as per pipe colour code).						
5.5.1	NSR	65 mm dia	80.00	metre				
5.5.2	NSR	80 mm dia	80.00	metre				
5.6	NSR	Providing & fixing of resilient rubber neoprene lined style arch vibration eliminators suitable for raw water upto pressure 20 kg/cm <sup>2</sup> .						
5.6.1	NSR	50 mm dia	8.00	each				
5.6.2	NSR	65 mm dia	10.00	each				
5.6.3	NSR	80 mm dia	10.00	each				
5.7	NSR	Providing and fixing of CI Y type suction strainer with gunmetal or brass internal parts installed outside water tanks.						
		80 mm dia	2.00	each				

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.8	NSR	Providing and fixing forged brass ball valve of brass body with hard chrome plated steel ball inside PTFE (Teflon) seat & ring with chrome plated centre handle with female BSP threads complete in all respects.						
5.8.1	NSR	32 mm dia	5.00	each				
5.8.2	NSR	40 mm dia	5.00	each				
5.9	NSR	Controllers with low voltage relays, stainless steel probes and PVC shroud, wiring from tank top to probes of required length. (No of probes as required for function of each controller).						
		For Drainage Sump Pumps.						
5.9.1	a	To cut off duty pump on low water level in the UG Raw water tank and high water level in the UG Domestic water tank and To start pump at low water level in the UG Domestic water tank.	1.00	each				
5.9.2	b	To cut off duty pump on low water level in the sump, To start pump at high water level in the sump and both pumps start when water over flowing.	1.00	each				
		<b>PUMP &amp; ALLIED WORKS SUB HEAD TOTAL</b>						

SUMMARY OF HVAC WORK			
Sl.No.	Description	Quoted amount in Figures (in Rs.)	Quoted Amount in words (in Rs.)
1	AIR CONDITIONING (VRV SYSTEM)- SECTION -I		
2	VENTILATION WORKS - SECTION -II		
	<b>TOTAL AMOUNT IN RS.</b>		

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		<b>SECTION I : HVAC WORKS</b>						
		<b><u>VRV SYSTEM</u></b>						
		<b><u>VOLUME CONTROL DAMPER (VCD)</u></b>						
1	DSR - 16.13	Supply, installation, testing and commissioning of GI volume control duct damper complete with neoprene rubber gaskets, nuts, bolts, screws linkages, flanges etc., as per specifications.	2	Sqm				
		<b><u>FIRE DAMPER</u></b>						
2	DSR - 16.20	Supplying, Fixing, testing and commissioning of fire dampers in supply air duct/main branch and return air path as and where required of required sizes i/c control wiring, the damper shall be motorized and spring return so as to close the damper in the event of power failure automatically and open the same in case of power being restored. The spring return action shall be inbuilt mechanism and not externally mounted. The damper shall also be closed in the event of fire signal complete as required and as per specifications.						
2.1	16.20.1	Fire damper	1	Sqm				
2.2	16.20.2	Actuator	4	Nos.				
		<b><u>SUPPLY / RETURN AIR GRILLES</u></b>						
		-						
3	DSR - 16.15	Supplying & fixing of powder coated extruded Aluminum Supply/Fresh Air Grills with aluminum volume control dampers as per specifications.	5	Sqm				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4	DSR - 16.16	Supplying & fixing of powder coated extruded Aluminum Return Air Grilles with louvers but without volume control dampers complete as required.	4	Sqm				
5	DSR 16.22	Supplying, fixing acoustic lining on wall and ceiling of AHU rooms with 50 mm thick, density 32 kg/cum resin bonded glass fiber insulation friction fixed in 610mm x 610 mm frame work made of 25 x 50 x 50 x 50 x 25 mm made out of 0.6 mm thick GI sheet U shaped channel and covered with reinforced fiber glass tissue and finished with 0.8 mm perforated Aluminum sheet etc. complete as required and as per specifications.	15	Sqm				
6	NDSR	<b><u>OUTDOOR UNITS</u></b>						
		Supply, installation, testing and commissioning of Variable refrigerant volume/ Variable refrigerant flow modular type air-conditioning system suitable for cooling and heating by using minimum 33 % as variable capacity Inverter based compressors in each Module complete with outdoor units with controller and with accessories & sub-assemblies fittings etc. full charging of R-410A refrigerant gas complete, powder coating complete as per specifications, with connectivity to BMS for A/M status, RUN status & Remote start/stop command.(Bacnet/IP)						
		(Considering conversion factor 1 HP= 0.83TR)						
		Outdoor units of nominal capacity as per manufacturer's standard suitable for operating with R-410A refrigerant.						
		Ground, First Floor						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.1	NDSR	<b>Minimum 34 H.P</b>	1	No.				
		Second & Third Floor						
6.2	NDSR	<b>Minimum 22 HP</b>	2	No.				
6.3	NDSR	<b>Minimum 30 HP</b>	2	No.				
		Fourth Floor						
6.4	NDSR	<b>Minimum 26 HP</b>	2	No.				
7	NDSR	<b><u>VRV OUTDOOR FOR DX TYPE AHU</u></b>						
		Supply, installation, testing and commissioning of Variable refrigerant volume/ Variable refrigerant flow modular type air-conditioning system suitable for cooling and heating by using minimum 33 % as variable capacity Inverter based compressors in each Module complete with outdoor units with controller, Expansion Valve Kit (EV kit), control box with internal wiring, AHU kit for each DX Type Units and other related accessories etc. full charging of R-410A refrigerant gas complete, powder coating complete as per specifications, with connectivity to BMS for A/M status, RUN status & Remote start/stop command.(Bacnet/IP)						
		(Considering conversion factor 1 HP= 0.83TR)						
		Outdoor units of nominal capacity as per manufacturer's standard suitable for operating with R-410A refrigerant.						
	NDSR	Terrace Floor						
7.1		<b>Minimum 28 HP</b> (For 9500cfm/24TR DX type TFA)	1	No				
	NDSR	Terrace Floor						
7.2		<b>Minimum 10 HP</b> (For Clinical Pathology Lab, Histo	1	No				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Pathology Lab &Molecular Biology Lab )						
	NDSR	Terrace Floor						
7.3		Minimum <b>8 HP</b> (For Microbiology Lab & Microbiology TB Testing))	1	No				
8	NDSR	<b><u>INDOOR UNITS</u></b>						
		-						
8.1		<b>Ceiling Suspended Ductable Units</b>						
		Supply, installation, testing and commissioning of Ceiling Suspended with high static type Ductable units of following Nominal capacities with fittings, flexible canvas connection etc. as required.						
8.1.1	NDSR	8.0 TR (2648/2857 cfm Minimum)	4	Nos.				
8.1.2	NDSR	6.5 TR (1670/1725/1900/2550 cfm Minimum)	15	Nos.				
8.1.3	NDSR	3.18 TR (1132 cfm Minimum)	2	Nos.				
8.1.4	NDSR	2.5 TR (834 cfm Minimum)	2	Nos.				
8.1.5	NDSR	2.0 TR (650 cfm Minimum)	1	Nos.				
8.1.6	NDSR	1.5 TR (412 cfm Minimum)	1	Nos.				
8.2		<b>Cassette Type Units</b>						
		Supply, installation, testing and commissioning of Indoor units equipped with pre-filter, fan section with low noise fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation,						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		pipe connections etc. of various capacities as per drawings, complete as required.						
8.2.1	NDSR	4TR/1050 cfm (Minimum)	8	Nos.				
8.2.2	NDSR	3.18TR/830 cfm (Minimum)	4	Nos.				
8.2.3	NDSR	2TR/500 cfm (Minimum)	2	Nos.				
8.2.4	NDSR	1.28TR/420 cfm (Minimum)	4	Nos.				
9	NDSR	<b><u>DX TYPE TREATED FRESH AIR UNIT</u></b>						
		Supply, installation, testing and commissioning of double skin modular construction, draw through Floor Mounted Horizontal type (FM) Air Handling Unit of 0.6 mm thick Plain GSS Sheet from inside & 0.8 mm thick Pre-plasticized GSS Sheet from Outside with 40 mm thick puf insulation in between them. AHU Shall be complete with DIDW Centrifugal fan (plug fan/belt driven), Starters, Squirrel cage induction motor, DX type cooling / heating coil (Copper tubes and Aluminum fins), pre-filter (Washable Synthetic fiber of efficiency 90% down to 10 micron), drain pan, V belt drive, fireproof double canvass connection and other accessories as per specifications . Motor shall be suitable for 415 ± 10% volts, 50 cycle, 3 Phase AC supply as indicated below.						
9.1	NDSR	Terrace Floor, Fresh Air(Ground to Fourth Floor), 9500 CFM (FM) AHU, 24.0 TR, 8 row deep cooling coil, 50 mm Static Pressure with 7.5 HP/ 3 Phase motor	1	No				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
10	NDSR	<b><u>DX TYPE AHU (LABS)</u></b>						
		Supply, installation, testing and commissioning of double skin modular construction, draw through Ceiling Suspended (CS) /Floor Mounted Horizontal type(FM) Air Handling Units of 0.6 mm thick Plain GSS Sheet from inside & 0.8 mm thick Preplasticized GSS Sheet from Outside with 40 mm thick puf insulation in between them. AHU Shall be complete with DIDW Centrifugal fan (plug fan/belt driven), Starters, Squirrel cage induction motor, DX type cooling / heating coil (Copper tubes and Aluminum fins), pre-filter (Washable Synthetic fiber of efficiency 90% down to 10 micron), fine filter ,drain pan, V belt drive, fireproof double canvass connection and other accessories as per specifications . Motor shall be suitable for 415 ± 10% volts, 50 cycle, 3 Phase AC supply as indicated below.						
10.1	NDSR	First Floor, Microbiology Lab, 1600 CFM (FM) AHU, 3.0 TR, 6 row deep cooling coil, 125 mm Static Pressure with 1.5 HP/ 3 Phase motor	1	No				
10.2	NDSR	First Floor, Clinical Pathology Lab, 1400 CFM (CS) AHU, 2.0 TR, 6 row deep cooling coil, 50 mm Static Pressure with 1.5 HP/ 3 Phase motor	1	No				
10.3	NDSR	First Floor, Histopathology Lab, 1600 CFM (CS) AHU, 3.0 TR, 6 row deep cooling coil, 50 mm Static Pressure with 1.5 HP/ 3 Phase motor	1	No				
10.4	NDSR	First Floor, Molecular Biology Lab, 1400 CFM (CS) AHU, 2.0 TR, 6 row deep cooling coil, 50 mm Static Pressure with 1.5 HP/ 3 Phase motor	1	No				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
10.5	NDSR	First Floor, Microbiology(TB testing), 1700 CFM (FM) AHU, 3.0 TR, 6 row deep cooling coil, 125 mm Static Pressure with 1.5 HP/ 3 Phase motor	1	No				
11	NDSR	Supply, Installation, testing and commissioning of Main centralized controller suitable for groups of indoor units to be installed and shall be with (Bacnet/IP).	1	Nos.				
12	NDSR	Supply, installation, testing and commissioning of Imported Y Joints with insulation to connect indoor units with main header as per drawing.	38	Nos.				
12.1	NDSR	Remote Controller for Ducted Indoor Units	25	Nos.				
12.2	NDSR	Remote Controller for Cassette Unit	18	Nos.				
13	NDSR	<b><u>REFRIGERANT PIPING</u></b>						
		Supplying & Installation of interconnecting following sizes of one end expanded refrigerant copper pipe work with Y-joints and Headers of following outer diameter, insulated with closed cell electrometric nitrile rubber tubular insulation between each set of indoor & outdoor units with outer mechanical protection of aluminum cladding for all exposed pipes as per specification all piping inside the room shall be properly fixed/supported with suitable size of clamp/ M.S. hanger and all external piping shall run in M.S. painted cable tray etc. as reqd. (The final refrigerant pipe sizes shall be as per manufacturer).						
131	NDSR	41.3 mm dia with 19mm thick insulation	45	RM				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
13.2	NDSR	34.9 mm dia with 19mm thick insulation	145	RM				
13.3	NDSR	28.6 mm dia with 19mm thick insulation	250	RM				
13.4	NDSR	22.2 mm dia with 19mm thick insulation	130	RM				
13.5	NDSR	19.1 mm dia with 13mm thick insulation	355	RM				
13.6	NDSR	15.9 mm dia with 13mm thick insulation	340	RM				
13.7	NDSR	12.7 mm dia with 13mm thick insulation	50	RM				
13.8	NDSR	9.5 mm dia with 13mm thick insulation	390	RM				
13.9	NDSR	6.4 mm dia with 13mm thick insulation	5	RM				
14		<b><u>DRAIN PIPING</u></b>						
		Supply, installation, testing and commissioning of rigid heavy duty PVC piping complete with fittings, support as per drawing and insulated with 6 mm closed cell elastomeric insulation.						
14.1	NDSR	25 mm dia	70	RM				
14.2	NDSR	32 mm dia	80	RM				
14.3	NDSR	40 mm dia	101	RM				
		<b><u>AIR DISTRIBUTION (FOR AIRCONDITIONING)</u></b>						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
15	NDSR	Supply, Installation, Testing & Commissioning of Pre-Insulated Fiberglass wool Duct Board-Plus –R for duct thermal insulation is having 25mm thickness with both side factory laminated aluminum foil, outer facing foil is having - Reinforced aluminum + Kraft+ glass veil and inner facing foil - Aluminum + Kraft + glass veil. Duct Board Size: 1.19mtr (W) X 2.9mtr (L)	1490	Sq.mt				
16		Supply, installation, testing and commissioning of extruded Aluminum powder coated linear grilles of approved shade and make as per specifications including any framework required for fixing of linear grilles.						
16.1	NDSR	150 mm wide Linear Grilles	20	RM				
16.2	NDSR	100 mm wide Linear Grilles	307	RM				
17	NDSR	Supply, installing, testing & commissioning of HEPA Filter ( High efficiency particulate air) designed to remove particles down to 0.3 Microns from air streams with an efficiency of 99.97 %. The filter matrix comprises glass fiber media with machine pleated specially treated Aluminum separators with DOP test. It should be complete as per Technical Specifications & as per directions of engineer-in-charge						
17.1	NDSR	610 mm x610mm x305mm	2	No's				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
18	NDSR	Supply, installation, testing and commissioning of HEPA Filter Modules made out of 1.2mm GI Powder coated construction complete with Floor operated Bewel Gear Damper, Filter fixing arrangement along with DOP test port .Filter fixing frames as standard. Modules to include SS 304 1.2mm perforated grille with SS CSK Screw to fit fluah with Module . It should be complete as per Technical Specifications & as per directions of engineer-in-charge.						
	NDSR	To accommodate -- 610 x 610 x 305 mm Hepa Filter	2	No's				
19		<b><u>CONTROL &amp; TRANSMISSION WIRING</u></b>						
19.1	NDSR	Supply, installation, testing and commissioning of 2 Core x 1.5 mm2 copper wire in PVC conduit as per specifications for transmission	1,400	Rmt				
19.2	NDSR	Supply, installation, testing and commissioning of 2 Core x 1.5 mm2 copper wire in PVC conduit as per specifications for remotes	300	Rmt				
		<b><u>GSS DUCTING</u></b>						
20	<b>DSR - 16.12.1</b>	Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.						
	16.12.1.1	0.63 MM (24 gauge) Galvanized Sheet Steel Ducting	186	Sqm				
	16.12.1.2	0.80 MM (22 gauge) Galvanized Sheet Steel Ducting	912	Sqm				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
	16.12.1.3	1.00 MM (20 gauge) Galvanized Sheet Steel Ducting	135	Sqm				
	16.12.1.4	1.25 MM (18 gauge) Galvanized Sheet Steel Ducting	140	Sqm				
		<b><u>SUPPLY / RETURN AIR GRILLES</u></b>						
21	<b>DSR - 16.15</b>	Supplying & fixing of powder coated extruded aluminum Supply/Fresh Air Grills with aluminum volume control dampers as per specifications.	10	Sqm				
22	<b>DSR - 16.16</b>	Supplying & fixing of powder coated extruded aluminum Exhaust Air Grilles with louvers but without volume control dampers complete as required.	15	Sqm				
23	NDSR	<b><u>AXIAL FLOW FANS</u></b>						
		Supply, installation, testing and commissioning of direct driven Axial Flow Fans as shown in drawings and as per specifications. Each fan shall be complete with totally enclosed fan cooled motor (IP:55), starter, motor mount and vibration isolators. Fan motor shall be suitable for 3 Phase, 415 +/- 10% V, 50 Hz AC supply.(Motor speed shall not exceed 900 rpm)						
23.1	NDSR	Duty : Basement Normal Exhaust						
		Air Quantity : 29,000 CFM						
		Static Pressure : 20 mm wg						
		Motor Rating : 15 HP (Suggested)						
		Location : Lower basement	1	No				
23.2	NDSR	Duty: Basement Smoke Exhaust						
		Air Quantity : 22000 CFM						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Static Pressure : 20 mm wg						
		Motor Rating : 10 HP (Suggested)						
		Location : Lower Basement	2	Nos.				
23.3	NDSR	Duty : Basement Fresh Air						
		Air Quantity : 29000 CFM						
		Static Pressure : 20 mm wg						
		Motor Rating : 15 HP (Suggested)						
		Location : Lower Basement	1	No.				
23.4	NDSR	Duty : Basement Normal Exhaust						
		Air Quantity : 18000 CFM						
		Static Pressure : 20 mm wg						
		Motor Rating : 10 HP (Suggested)						
		Location : Upper Basement	2	No.				
23.5	NDSR	Duty : Basement Smoke Exhaust						
		Air Quantity : 27000 CFM						
		Static Pressure : 20 mm wg						
		Motor Rating : 15 HP (Suggested)						
		Location : Upper Basement	2	Nos.				
23.6	NDSR	Duty : Basement Fresh Air						
		Air Quantity : 18000 CFM						
		Static Pressure : 20 mm wg						
		Motor Rating : 10 HP (Suggested)						
		Location : Upper Basement	1	No.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
24		<b><u>INLINE FANS</u></b>						
		Supply, installation, testing and commissioning of inline ducted Fans as shown in drawings. Fan motor shall be suitable for single phase, 50 Hz AC supply. The capacity of the fan given as under:-						
24.1	NDSR	Air Quantity : 400 CFM						
		Static Pressure : 15 mm wg						
		Motor rating : 300 Watt						
		Duty :Lab Exhaust						
		Location : (First Floor)	5	Nos.				
24.2	NDSR	Air Quantity : 300 CFM						
		Static Pressure : 15 mm wg						
		Motor rating : 300 Watt						
		Duty :Pantry Exhaust						
		Location : (Fourth Floor)	1	Nos.				
25	NDSR	<b><u>FAN SECTIONS</u></b>						
		Supply, Installation, Testing and commissioning of single skin Fan Section as shown in drawing and as per specifications. Each unit shall be complete with casing (16G) DIDW centrifugal fan, belt drive, motor(EFF 1 class), starter, louvers etc. Fan motor shall be suitable for 3 Phase, 415 ± 10% V, 50 Hz AC supply.						
25.1	NDSR	Duty: Lift Well Pressurization						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Air Quantity : 16,000 CFM						
		Static Pressure : 40 mm wg						
		Motor Rating : 10.0 HP						
		Location : Terrace Floor	1	Nos.				
25.2	NDSR	Duty: Lift Lobby Pressurization						
		Air Quantity : 16500 CFM						
		Static Pressure : 40 mm wg						
		Motor Rating : 10.0 HP						
		Location : Terrace Floor	1	No.				
25.3	NDSR	Duty: Staircase Pressurization						
		Air Quantity : 15500 CFM						
		Static Pressure : 40 mm wg						
		Motor Rating : 10.0 HP						
		Location : Terrace Floor	1	No.				
		<b><u>AIR DISTRIBUTION</u></b>						
26	NDSR	Supply, installation and balancing of extruded aluminum powder coated air louvers complete with aluminum wire mesh bird-screen & volume control dampers as per specifications.						
26.1	NDSR	Fresh air louvers	5	Sq.mt				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
26.2	NDSR	Exhaust air louvers(without volume control dampers)	9	Sq.mt				
		<b>Note:- Potential free contact for AHUs /Pressurization Fans/outdoor units/TFA Units is in HVAC Contractor's scope</b>						
		<b>TOTAL SUMMARY</b>						

SUMMARY OF INTERNAL & EXTERNAL ELECTRIFICATION WORKS			
Sl.No.	Description	Quoted amount in Figures (in Rs.)	Quoted Amount in words (in Rs.)
1.	SUB HEAD - I : WIRING		
2.	SUB HEAD - II : MCCB,MCB & DB'S		
3.	SUB HEAD - III : CABLE TRAYS & CABLES		
4.	SUB HEAD - IV : EARTHING SYSTEM		
5.	SUB HEAD - V : LIGHTING CONDUCTOR SYSTEM		
6.	SUB HEAD - VI : SUPPLY & FIXING OF LIGHTING CONTROL DEVICE & LIGHT FIXTURES		
7.	SUB HEAD - VII : CONDUITS AND WIRING FOR TELEPHONES, MATV SYSTEM		
8.	SUB HEAD - VIII : ADDESSABLE FIRE DETECTION & ALARM SYSTEM		
9.	SUB HEAD -IX : LT PANEL & RISING MAIN		
10.	SUB HEAD - X : HT EQUIPMENT & TRANSFORMER		
11.	SUB HEAD - XI : DG SET		
12.	SUB HEAD - XII : CLOSE CIRCUIT TELEVISION SYSTEM		
13.	SUB HEAD - XIII : UPS SYSTEM		
14.	SUB HEAD - XIV: FIRE SEPRESSION SYSTEM		
15.	SUB HEAD - XV: EXTERNAL STREET LIGHTS AND SOLAR POWER PANELS ON GRID SYSTEM		
	<b>TOTAL AMOUNT IN RS.</b>		

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		<b><u>SUB HEAD - I CIRCUIT CUM POINT WIRING</u></b>						
<b>1.</b>		<b><u>SUB HEAD - I : WIRING</u></b>						
1	1.3	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface/ recessed <b>steel</b> conduit with modular switch modular plate suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc.as required.						
1.1	1.3.3	Group C	800	Point				
2	1.4	Wiring for twin light point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface/ recessed <b>steel</b> conduit with 2 way modular switch modular plate suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc.as required.	10	Point				
3	1.5	Wiring for power plug points with 2 x 4 sq.mm. FRLS PVC insulated, Cu. Conductor, single core cable in surface/ recessed <b>steel</b> conduit along with 1 No. 4 sq.mm. FRLS PVC insulated copper conductor single core cable for loop earthing as required.	4500	Mtr.				
4	1.6	Wiring for light plug points / power plug points with 4 x 4 sq.mm. FRLS PVC insulated, Cu. Conductor, single core cable in surface/ recessed <b>steel</b> conduit along with 2 Nos. 4 sq.mm. FRLS PVC insulated copper conductor single core cable for loop earthing as required.	6000	Mtr.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5	1.7	Wiring for circuit/ sub-main wiring alongwith earth wire with the following size of FRLS PVC Insulated copper conductor, single core cable in surface/ recess <b>Steel</b> conduit as required.						
5.1	1.7.1	2x 1.5 sqmm+ 1x 1.5 sqmm earth wire	200	Mtr.				
5.2	1.7.2	2x 2.5 sqmm+ 1x 2.5 sqmm earth wire	2800	Mtr.				
5.3	1.7.4	2x 6 sqmm+ 1x 6 sqmm earth wire for outlet on UPS	200	Mtr.				
5.4	1.7.5	2 X 10 sq. mm + 1 X 10 sq. mm earth wire	100	Mtr.				
5.5	1.7.7	4x 2.5 sqmm+ 2x 2.5 sqmm earth wire	1800	Mtr.				
5.6	1.7.9	4x 6 sqmm+ 2x 6 sqmm earth wire	100	Mtr.				
5.7	1.7.10	4x 10 sqmm+ 2x 10 sqmm earth wire	100	Mtr.				
5.8	1.7.11	4x 16 sqmm+ 2x 16 sqmm earth wire	100	Mtr.				
6	1.24	Supplying and fixing of following switch on the existing modular plate & switch box including connections but excluding modular plate etc. as reqd.						
6.1	1.24.1	5/6 amps switch (1 nos.6A switch on UPS)	320	Each				
6.2	1.24.3	15/16 amp switch	10	Each				
6.3	1.24.4	3 pin 5/6 amp socket outlet (sockets for UPS)	620	Each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.4	1.24.5	6 pin 15/16 amp socket outlet	10	Each				
7	1.25	Supplying and fixing of Stepped type electronic fan regulator on the existing modular plate & switch box including connections but excluding modular plate etc. as reqd.	10	Each				
8	1.26	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	320	Each				
9	1.27	Supply and fixing of following size/ modules, GI box along with modular base & cover plate for modular switch/ regulator in recess, including connection as required.						
9.1	1.27.1	1or 2 module (75mmx 75mm)	330	Each				
9.2	1.27.2	3 module (100mmx 75mm)	20	Each				
9.3	1.27.3	4 module (125mmx 75mm)	20	Each				
9.4	1.27.4	6 module (200mmx 75mm) (For 2 nos.socket+1no switch on UPS)	320	Each				
9.5	1.27.5	8 module (125mmx 125mm)	20	Each				
10	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 3 pin 5/6 Amp modular socket outlet and 5/6 A modular type	310	Each				

Addition -----  
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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		switch, connections painting etc. as reqd, for Light plug point.						
11	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 6 pin 5/6 & 15/16 Amp modular socket outlet and 15/16 A modular type switch, connections painting etc. as reqd.	300	Each				
12	1.33	Supplying & fixing of 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection as required, for Exit signage.	25	Each				
13	1.41	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent /LED fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	1100	Each				
14	1.45	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq.mm FRLS PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	10	Each				
15	1.50	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.						
15.1	1.50.1	Upto 450 mm sweep	35	Each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
			-	-				
16		Wiring for the following light points with 2.5 sq.mm PVC insulated copper conductor 1100 volts grade stranded flexible FRLS wires of approved make in concealed or surface mounted 25 mm dia 16 gauge MS Conduit including providing and controlled by SPMCB provided in the DB. (Cost of MCB not to be included here) complete in all respect and as per direction of Engineer In Charge.						
16.1		Primary point controlled by one MCB.	110	Point				
16.2		Same as item above but <b>Secondary point.</b> i.e. Points to be looped with Primary point.	320	Point				
		TOTAL C/F TO SUMMARY						
2.		<b><u>SUB HEAD - II : MCCB,MCB &amp; DB'S</u></b>		-				
1	2.2	Providing and fixing following rating and breaking capacity and pole MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required (Incomer for the VTPN DBs)						
1.1	2.2.1	100 Amp TP MCCB(16KA)	8	Each				
1.2	2.2.2	125 Amp TP MCCB(16KA)	3	Each				
1.3	2.2.5	200 Amp TP MCCB (25KA)	2	Each				

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Overwriting -----



Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2	2.7	Supplying and fixing following way, prewired <b>SP&amp;N,MCB distribution board</b> of sheet steel 240 volts on on surface/ recess, complete with loose wire box ,terminal connectors for all incoming and outgoing circuits ,duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper busbars, neutral link, earth bar, dinbar, detachable gland plate , interconnections powder painted including p earthing etc. as required.(But without MCB/RCCB/Isolator)						
2.1	2.7.4	2+ 4 way/6 way, double door	1	Each				
2.2	2.7.5	2 + 8 way/10 way, double door	2	Each				
2.3	2.7.6	2 + 12 way/14way, double door	1	Each				
3	2.8	Supplying and fixing following way, prewired <b>TP&amp;N,MCB distribution board</b> of sheet steel 415 volts on on surface/ recess, complete with loose wire box ,terminal connectors for all incoming and outgoing circuits ,duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bars, neutral link, earth bar, dinbar, detachable gland plate , interconnections powder painted including earthing etc. as required.(But without MCB/RCCB/Isolator)						
3.1	2.8.5	4 way (4+12),Double door	2	Each				
3.2	2.8.6	6 way (4+18),Double door	3	Each				

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 Correction -----  
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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.3	2.8.7	8 way (4+24),Double door	12	Each				
3.4	2.8.8	12 way (4+36),Double door	4	Each				
4	2.9	Supplying and fixing following way surface/recessed mounting , <b>Vertical type 415 TP &amp; N MCB distribution board</b> of steel sheet ,dust protected ,duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs terminal connected to all incoming and outgoing circuits duly prewired with adequate size of pre- wired FRLS PVC insulated copper conductor up to terminal connector /neutral link earthing etc as required (but without MCB/RCCB/Isolator)						
4.1	2.9.5	4 Way Double door	1	Each				
4.2	2.9.6	6 Way Double door	4	Each				
4.3	2.9.7	8 Way TP Double door	1	Each				
4.4	2.9.8	12 Way TP Double door	1	Each				
5	2.13	Supplying and Fixing of following rating four pole 415 Volts isolator in the existing MCB DB complete with connections ,testing and commissioning etc as required						
5.1	2.13.1	40 amps	45	Each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.2	2.13.2	63 amps	25	Each				
5.3	2.13.3	100 amps	1	Each				
6	2.14	Supplying & Fixing of following rating double pole (single phase and neutral) 240 volts, Residual Current Circuit Breaker (RCCB), having a sensitivity current upto 300 milli-amperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.						
6.1	2.14.1	25 Amps	10	Each				
6.2	2.14.2	40 Amps	55	Each				
6.3	2.14.3	63 Amps	40	Each				
7	2.10	Supplying & fixing 5 amps to 32 amps rating 240/415 volts C curve Miniature Circuit Breaker suitable for inductive loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.						
7.1	2.10.1	Single Pole	670	Each				
7.2	2.10.3	Double Pole	5	Each				
7.3	2.10.4	Triple Pole	5	Each				
7.4	2.10.5	Triple Pole & Neutral	5	Each				

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 Deletion -----  
 Correction -----  
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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8	2.11	Supply & fixing of single pole blanking plate in the existing MCB DB complete etc. as required	50	Each				
9	2.16	Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32amps 240 volts "C" curve DP MCB complete with connections, testing and commissioning etc. as required. (For geyser & A.C Outlets)	14	Each				
10	2.18	Supplying and fixing 20A 240Volts SPN industrial type socket outlet with 2 pole and earthed in metal enclosed plug top along with 20A c curve SP ,MCB ,in sheet steel enclosure on surface or in recessed with chained metal cover for the socket outlet and complete with connection testing and commissioning as required.	10	Each				
11	2.19	Supplying and fixing 20 amps 415 Volts TPN industrial type, socket outlet with 4 pole and earth metal enclosed plug top along with 20A C curve TPMCB ,in sheet steel enclosure, on surface or in recessed with chained metal cover for the socket outlet and complete with connection testing and commissioning as required.(for Server room etc)	7	Each				
12	2.21	Providing & fixing of 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.	10	Each				
13	2.22	Providing and fixing HT danger notice plate of 250 mm x 200 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	7	RM				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		as required.						
		TOTAL C/F TO SUMMARY						
<b>3.</b>		<b><u>SUB HEAD - III : CABLE TRAYS &amp; CABLES</u></b>						
<b>1</b>	<b>4.1</b>	<b><u>S/ F MS Cable Trays</u></b>						
		Supplying and installing following size of perforated pre-painted 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.						
1.1	4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	50	Mtrs.				
1.2	4.1.4	300 mm width X 50 mm depth X 1.6 mm thickness	100	Mtrs.				
1.3	4.1.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	50	Mtrs.				
1.4	4.1.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	200	Mtrs.				
1.5	4.1.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	250	Mtrs.				
<b>2</b>	<b>4.2</b>	<b><u>S/ F MS Cable Tray Bends</u></b>						
		Supplying and installing following size of perforated pre-painted M.S. cable tray bends 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.						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.1	4.2.2	150 mm width X 50 mm depth X 1.6 mm thickness	2	Each				
2.2	4.2.4	300 mm width X 50 mm depth X 1.6 mm thickness	2	Each				
2.3	4.2.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	2	Each				
2.4	4.2.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	4	Each				
2.5	4.2.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	6	Each				
3	4.4	<b><u>S/ F MS Cable Tray Tee's</u></b>						
		Supplying and installing following size of perforated pre-painted M.S. cable tray tee's 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.						
3.1	4.4.2	150 mm width X 50 mm depth X 1.6 mm thickness	1	Each				
3.2	4.4.4	300 mm width X 50 mm depth X 1.6 mm thickness	1	Each				
3.3	4.4.10	450 mm width X 62.5 mm depth X 2.0 mm thickness	1	Each				
3.4	4.4.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	2	Each				
3.5	4.4.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	2	Each				
4	4.5	<b><u>S/ F MS Cable Tray Cross Members</u></b>						

Addition -----  
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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Supplying and installing following size of perforated pre-painted M.S. cable tray cross members 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.						
4.1	4.5.2	150 mm width X 50 mm depth X 1.6 mm thickness	1	Each				
4.2	4.5.4	300 mm width X 50 mm depth X 1.6 mm thickness	1	Each				
4.3	4.5.6	450 mm width X 50 mm depth X 2.0 mm thickness	1	Each				
4.4	4.5.11	600 mm width X 62.5 mm depth X 2.0 mm thickness	2	Each				
4.5	4.5.13	900 mm width X 62.5 mm depth X 2.0 mm thickness	2	Each				
<b>5</b>	<b>7.1</b>	laying of one number PVC Insulated and PVC sheathed /XLPE power Cables of 1.1 KV grade of following size direct in ground including excavation, sand cushioning and protecting covering and refilling the trench etc as required.						
5.1	7.1.1	Up to 35 sqmm.	405	Mtrs.				
5.2	7.1.2	Above 35 sq mm and up to 95 sq mm.	148	Mtrs.				
5.3	7.1.3	Above 95 sq mm and up to 185 sq mm.	45	Mtrs.				
5.4	7.1.4	Above 185 sq mm and up to 400 sq mm.	956	Mtrs.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6	7.8	Laying and fixing of one no PVC insulated and PVC sheathed /XLPE power cable of 1.1 kV grade of following size on Cable tray as required.						
6.1	7.8.1	Up to 35 sqmm. (Clamped with 1 mm thick saddle)	3519	Mtrs.				
6.2	7.8.2	Above 35 sq mm and up to 95 sq mm. (Clamped with 25 x 3 mm thick MS Flat Clamp)	592	Mtrs.				
6.3	7.8.3	Above 95 sq mm and up to 185 sq mm. (Clamped with 25/40 x 3 mm thick MS Flat Clamp)	105	Mtrs.				
6.4	7.8.4	Above 185 sq mm and up to 400 sq mm. (Clamped with 25/40 x 3 mm thick MS Flat Clamp)	515	Mtrs.				
7	9.1	Supplying & making of end terminations with brass compression gland and Al. lugs for following sizes of PVC insulated and PVC sheathed/ XLPE Al. conductor cable of 1.1 KV grade as required.						
7.1	9.1.1	2 x 6 sq. mm	4	Each				
7.2	9.1.7	3 x 10 sq. mm	2	Each				
7.3	9.1.8	3 x 16 sq. mm	12	Each				
7.4	9.1.9	3 x 25 sq. mm	20	Each				
7.5	9.1.10	3 x 35 sq. mm	20	Each				
7.6	9.1.20	3½ x 25 sq. mm	8	Each				
7.7	9.1.21	3½ x 35 sq. mm	8	Each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
7.8	9.1.22	3½ x 50 sq. mm	8	Each				
7.9	9.1.23	3½ x 70 sq. mm	6	Each				
7.10	9.1.24	3½ x 95 sq. mm	14	Each				
7.11	9.1.25	3½ x 120 sq. mm	6	Each				
7.12	9.1.27	3½ x 185 sq. mm	2	Each				
7.13	9.1.29	3½ x 240 sq. mm	8	Each				
7.14	9.1.30	3½ x 300 sq. mm	46	Each				
7.15	9.1.32	4 x 10 sq. mm	26	Each				
7.16	9.1.33	4 x 16 sq. mm	24	Each				
8	<b>NS</b>	Supply of following sizes of XLPE/ PVC insulated Aluminum/ Copper conductor strip/ wire Armoured, overall PVC sheathed 1.1 KV grade cables conforming to relevant IS code and technical specifications.						
8.1		3 x 6 sq. mm	300	RM				
8.2		3 x 10 sq. mm	50	RM				
8.3		3 x 16 sq. mm	250	RM				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.4		3 x 25 sq. mm	180	RM				
8.5		3 x 35 sq. mm	100	RM				
8.6		3½ x 25 sq. mm	450	RM				
8.7		3½ x 35 sq. mm	300	RM				
8.8		3½ x 50 sq. mm	220	RM				
8.9		3½ x 70 sq. mm	170	RM				
8.10		3½ x 95 sq. mm	350	RM				
8.11		3½ x 120 sq. mm	100	RM				
8.12		3½ x 185 sq. mm	50	RM				
8.13		3½ x 240 sq. mm	150	RM				
8.14		3½ x 300 sq. mm	1320	RM				
8.15		4 x 6 sq. mm	250	RM				
8.16		4 x 10 sq. mm	420	RM				
8.17		4 x 16 sq. mm	180	RM				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		<u>PVC insulated Cu. Ar. Cables</u>						
		-						
8.18		2C x 6 Sq.mm.	180	RM				
8.19		2C x 4 Sq.mm.	50	RM				
8.20		3C x 4 Sq.mm.	350	RM				
8.21		4C x 4 Sq.mm.	50	RM				
8.22		4C x 2.5 Sq.mm.	100	RM				
8.23		7C x 2.5 Sq.mm.	100	RM				
8.24		12C x 2.5 Sq.mm.	100	RM				
8.25		1C x 35 Sq.mm.(Unarmoured cable)	500	RM				
9	<b>NSR</b>	Supply and making End termination with brass Single/ Double compression gland including providing and crimping of aluminum/copper solder less lugs/ferrules for XLPE/PVC insulated armoured power aluminum/copper conductor cables 1.1 KV grade of following sizes complete in all respect and as per direction of Engineer In Charge. :						
		<u>SINGLE COMPRESSION GLAND FOR AL. AR. CABLE</u>						
9.1		4C/3C x 6 sq.mm.	40	Sets				
		<u>Single Compression Gland for Cu. Cable</u>						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
9.2		4C/3C/2C x 6/4/2.5 sq.mm.	10	Sets				
9.3		7C x 2.5 Sq.mm.	8	Sets				
9.4		12C x 2.5 Sq.mm.	10	Sets				
9.5		1C x 35 Sq.mm.(Unarmoured cable)	4	Sets				
		<b><u>Raceways and Floor outlet box</u></b>						
10.1		Supplying and fixing 250 mm x 250 mm x 53 mm deep, 3 compartment epoxy coated metal clad Underfloor access outlet boxes as per approved makes with hinged cover, cable outlet grommets, earthing connectors with provision for 3 nos 3 pin 6 amp socket outlets, 1 set of Telephone outlet and 1 set of Data outlet with fixtures complete as required and as per direction of Engineer in Charge.	15	Sets				
11		Supplying and fixing of Raceways in the floor comprising rectangular G.I. raceway including chasing of floor and tiles, cleaning wherever necessary, fixing the raceways, minor civil work with providing sealing at joints at junction boxes and protect against any dust or any other foreign materials as per direction of Engineer in Charge.						
11.1		300 mm x 40 mm x 2 mm thick	150	RM				
11.2		250 mm x 40 mm x 2 mm thick	100	RM				
11.3		150 mm x 40 mm x 2 mm thick	200	RM				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
11.4		100 mm x 40 mm x 2 mm thick	250	RM				
12		Supplying and fixing of Junction boxes for aforesaid raceways fabricated out of MS powder coated, having following sizes made out of 2 mm thick sheet, 50 mm deep, with cut outs for raceways and cover duly champhered. Stainless steel Cover plate of the junction box will be flush wiring as per direction of Engineer in Charge.						
13.1		Junction Box of size 300 mm x 300 mm.	40	No.				
13.2		Junction Box of size 250 mm x 250 mm.	25	No.				
13.3		Junction Box of size 150 mm x 150 mm.	50	No.				
13.4		Junction Box of size 100 mm x 100 mm.	55	No.				
		TOTAL C/F TO SUMMARY						
4.		<b><u>SUB HEAD - IV : EARTHING SYSTEM</u></b>						
1	5.2	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	6	Each				
1.1	5.4	Earthing with G.I. earth Plate 600mm x 600mm x 6mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 mtr long etc. with charcoal or coke and salt ) as required.	20	Sets				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2	5.6	Earthing with Cu. earth Plate 600mm x 600mm x 3mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 mtr long etc. with charcoal or coke and salt ) as required	18	Sets				
3	5.11	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	200	Metre				
3.1	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or In recess for connections etc. as required. 2 nos used for 50 x 5 for the Neutral earthing of equipment's )	480	Metre				
3.2	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required. (2 nos used for 50 x 5 for the Body earthing of equipment )	1980	Metre				
3.3	5.18	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ sub-main wiring/ cable as required.	800	Metre				
		TOTAL C/F TO SUMMARY						
5.		<b><u>SUB HEAD - V : LIGHTING CONDUCTOR SYSTEM</u></b>						
1	6.7	Providing and fixing GI. tap 20 mmx3mm thick on parapet or surface of wall for lightning conductor complete as required.	250	Mtrs.				
2	6.8	Providing and fixing G.I. tape 20 x 3mm thick on surface of wall for lightning conductor as required.	350	Mtrs.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3	6.11	Providing and fixing of 20mm x 3mm thick G.I. strip, 125mm long test joint with G.I. bolts, nuts, check nuts and spring washers etc. complete as required.	4	Each				
4	6.14	Providing and laying 32mm x 6mm G.I. strip for earth grid & from test joint to grid.	100	Mtrs.				
5	5.2	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	4	Sets				
6	6.2	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc. complete as required.	2	Each				
		TOTAL C/F TO SUMMARY						
6.		<b><u>SUB HEAD - VI : SUPPLY &amp; FIXING OF LIGHTING CONTROL DEVICE &amp; LIGHT FIXTURES</u></b>	-	-				
1	15.1	Supplying, installation, testing and commissioning of Passive Infrared(PIR) technology based occupancy sensor having high performance, non-regulating programmable type, suitable for connected load upto 10Amp , for mounting height up to 2.8 mtr and for 5 m diameter coverage area along with necessary fixing arrangements i/c programming at site etc. complete as required.	15	Each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2	15.2	Supplying, installation, testing and commissioning of Passive Infrared(PIR) technology based occupancy sensor with day light dimming(lightning level shall be regulated as per availability of natural day light in an area along with occupancy detection.) having high performance, regulating programmable type, suitable for connected load upto 10Amp , for mounting height up to 2.8 mtr and for 5 m diameter coverage area along with necessary fixing arrangements i/c programming at site etc. complete as required.	50	Each				
		Supplying of following fans & Light fittings with high frequency, electronic Ballast with THD<10 % starter, control gears, lamps holder, power factor as per ECBC for LED lights for improvement, etc. as called for, including chasing of walls, grouting of fitting and making good of the same , Hanging arrangement as required, complete with providing of all necessary hardware's like raw plugs, hangers, support plates etc. and flexible wires ,flexible conduits as required for fixing complete as per direction of Engineer In Charge.						
3		Surfaced mounting LED Down Lighter fixture Bajaj Cat no. 110947 BGCML 12W WW/WH/NW or equivalent as approved by Engineer in Charge complete with 12x1W LED lamp.	430	Nos.				
4		Recess mounting LED Down Lighter fixture Bajaj Cat no. 111206 BGSLO 03 03 WW/HH /NW or equivalent as approved by Engineer in Charge complete with 3x3W LED lamp.	200	Nos.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5		2'x2' recess mounting LED Luminaire fixture Bajaj cat no. 111182 BZRSQ 24 W WW or equivalent as approved by Engineer in Charge complete with Lamp Type and wattage 120x0.2W LED lamp.	380	Nos.				
6		Recess mounting LED Down Lighter fixture Bajaj Cat no. 110953 BXSLOD 12 01 WW/WH or equivalent as approved by Engineer in Charge complete with 12x1W LED lamp.	50	Nos.				
7		Surface mounted compact fluorescent Light fixture <b>Crompton Greaves Cat. No</b> TLE 236 EB 36 watt CFL Lamp or equivalent as approved by Engineer in Charge with lamp 36 watt CFL lamp as required	5	Nos.				
8		Bulk head lighting fixtures Philips make FXC-101 or equivalent as approved by Engineer in Charge with 9 watt CFL lamps as required	50	Nos.				
9		Surface mounted compact fluorescent Mirror Light fixture ( <b>Bajaj catalogue BSP-111 or equivalent</b> )11 watt CFL Lamp or equivalent as approved by Engineer in Charge with lamp.	20	Nos.				
10		1200mm sweep 3 blade Ceiling fan complete with assembling of blades, down rod, shackle insulator, canopy etc from approved makes and complete as per direction of Engineer in Charge	10	No.				
11		Exhaust fan with louver and with 3x1.5 sqmm flexible PVC insulated copper wire of approved make						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		and complete as per direction of Engineer in Charge						
11.1		300mm 1280 RPM	25	No.				
11.2		230mm 1280 RPM	5	No.				
		<b>Note :</b>						
		All LED with microcontroller ballast and Fluorescent lighting fixtures /compact fluorescent lighting fixtures shall be provided with electronic ballast and TLD/T5/ CFL lamp. All lamps/ ballast shall be as per specifications						
		TOTAL C/F TO SUMMARY						
<b>7.</b>		<b><u>SUB HEAD - VII : CONDUITS AND WIRING FOR TELEPHONES, MATV SYSTEM</u></b>						
1	1.20	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.						
1.1	1.20.2	25 mm dia.	4000	Mtrs.				
1.2	1.18	Supplying and drawing of following pair 0.5 mm dia FRLS PVC insulated annealed copper conductor ,unarmoured telephone cable in the existing surface /recessed steel /PVC conduit as required.						
1.2.1	1.18.2	2 Pair	6500	Mtrs.				
1.2.2	1.18.3	4 Pair	200	Mtrs.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2	1.19	Supply and drawing of Co-axial TV cable RG-6 grade, 0.7mm solid Cu. Conductor PE insulated, shielded with fine tinned Cu. Braid & protected with PVC sheath in existing surface / recessed steel/ PVC conduit as reqd.	200	Mtrs.				
2.1	1.53	Supplying and drawing of UTP 4 pair CAT6 LAN cable in the existing surface /recessed steel /PVC conduit as required.	8500	Mtrs.				
3	1.24.6	Supplying and fixing of modular Telephone socket outlet on the existing Modular plate & switch including connection but excluding modular plate etc. as required.	280	Each				
4	1.24.7	Supplying and fixing of modular TV antenna socket outlet on the existing Modular plate & switch including connection but excluding modular plate etc. as required.	5	Each				
5		Supply, installation, testing and commissioning of following krone type tag blocks enclosed in MS enclosure of suitable size with lockable cover including all the accessories for fixing complete in all respect and as per direction of Engineer in Charge.						
5.1		300 pair Tag block (Main Teg Block)	1	No				
5.2		100 pair Tag block	5	No				
5.3		50 pair Tag block	1	No				
5.4		20 pair Tag block	2	No				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6		Supply, laying, testing and commissioning of following size of 0.61mm dia copper conductor multi pair telephone cable as per suitable for indoor telephone wiring conforming for ITD S/WS - 113 C and S/WS - 114 (actual qty. may vary as per site) in existing conduit/ trench/ tray as required . The flexible conduit wherever required shall be inclusive in cable rates and complete as per direction of Engineer in Charge .						
6.1		100 pair Ar. Cable	20	RM				
6.2		60 pair Ar. Cable	20	RM				
6.3		50 pair Ar. Cable	150	RM				
6.4		20 pair Ar. Cable	100	RM				
7		Supply, fixing, testing & commissioning of Modular RJ-45 with data outlet socket with grid & cover plate in suitable size of 16 SWG GI box complete as per direction of Engineer in Charge .	290	Nos				
8		Supply, erection, testing and commissioning of splitter/ Tap-off terminals for Co-axial cables in suitable size of G.I. Boxes with hinged lockable cover complete as per direction of Engineer in Charge .						
8.1		Two way Splitter(S2)	2	Nos.				
8.2		1 way Tap-off Box.	2	Nos.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8.3		2 way Tap-off Box.	2	Nos.				
9		Supply, laying and connecting of following: Co-axial TV cable as per specifications in the existing conduit / raceways trays etc complete as per direction of Engineer in Charge .						
9.1		RG-11 Cable	100	RM				
		TOTAL C/F TO SUMMARY						
8.		<b><u>SUB HEAD - VIII : ADDESSABLE FIRE DETECTION &amp; ALARM SYSTEM</u></b>						
1	1.17	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel / PVC conduit as required.						
1.1	1.17.11	2 x 2.5 sq. mm	2840	Mtrs				
2	1.2	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required						
2.1	1.20.2	25mm	1650	Mtrs				
3		Supply installation testing and commissioning of Microprocessor based intelligent analogue addressable, modular, expandable networkable, 7 loop (each loop shall be loaded maximum upto 80% of the loop capacity) fire alarm control panel with minimum 640 character LCD display, multiple access levels, event history file in non-volatile memory (EEPROM). The panel shall have a built-in integrated voice command center with suitable rating amplifier						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		for suitable speaker zones. The panel shall have facility to interface with Public Addressing system and tripping command to background music. The panel shall support programmable relay for controlling lifts, staircase pressurizations fans, lift shaft & lift lobby pressurization fans, toilets exhaust fans, ventilation fans, monitoring of fire sprinkler and fire hydrant pump controlled by powerful Boolean logic equation. The panel shall have minimum seven independent hazard release circuit built-in the panel. The panel shall have 240 volts AC power supply, automatic battery charger, 24 volts, sealed lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 4 hours during emergency condition. The panel shall be UL/EN listed.						
3.1		Fire Detection & Alarm Control Panel suitable for 300 No. detectors. 7 Loop and 7 Zone expandable 14 Loop 14 Zone complete as per direction of Engineer in Charge .	1	Set				
4		Supply installation testing and commissioning of Fire Alarm System software capable of following functions: Seamless integration to BAS software, Uploading and downloading of information to FACP. Graphics including AutoCAD drawings. All Detector information and change of detector setting Software as described above. All necessary License & software cost to be included in the quoted cost and complete in all respect as per direction of Engineer in Charge .	1	Set				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5		Supply installation, testing and commissioning of networkable Repeater Panel for Fire Alarm System with LCD display & with accept / reset buttons for alarm address of any sensor / field device. The Repeater Panel shall only provide field device address with room number. Analogue Output is not required. The Panel shall be connected to the main Fire Alarm Panel required Cat-6 cable and its installation cost shall be inclusive in the quoted rates of repeater panel and as per direction of Engineer in Charge.	1	No.				
6		Supply, installation, testing and commissioning of Analogue addressable Multi-criteria <b>Type detector</b> with floating sensitivity, mounting based LED, software addressing, Address Switch to Programme the detectors is not acceptable, to be installed under/above false ceiling, roof and concealed space etc. interconnecting to loop cable complete as required as per direction of Engineer in Charge.	30	No.				
7		Supply, installation, testing and commissioning of Analogue addressable photoelectric type <b>smoke detector</b> with mounting based LED software addressing, Address Switch to Programme the detectors is not acceptable, UL /EN LISTED to be installed under/above false ceiling, roof and concealed space, etc. interconnecting to loop cable complete as required as per direction of Engineer in Charge..	180	Each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8		Supply, installation, testing and commissioning of UL /EN listed Analogue Addressable type <b>Heat Detector</b> (Fixed cum-rate of rise type) with range upto 58° C complete with all fixing accessories like base, base box, self-adhesive sticker indicating loop number and address etc. to be installed under/above false ceiling, roof and concealed space, etc. interconnecting to loop cable complete as required as per direction of Engineer in Charge..	50	No.				
9		Supply, installation, testing and commissioning of Addressable type fault for isolating shorted, dewired and loose circuits between two successive <b>fault isolators</b> with automatic resetting arrangement UL/ listed to be interconnecting to loop cable complete as required as per direction of Engineer in Charge.	5	No.				
10		Supply, installation, testing and commissioning of addressable <b>Manual Call Point</b> (break glass type) complete as per direction of Engineer in Charge..	14	No.				
11		Supply, installation, testing and commissioning of addressable <b>strobe cum-Hooter</b> as per direction of Engineer in Charge..	14	No.				
12		Providing, installation, testing & commissioning of <b>control module</b> as per specifications and as per direction of Engineer in Charge..	15	No.				
13		Providing, installation, testing & commissioning of <b>Monitor module</b> as per specifications and as per direction of Engineer in Charge..	5	No.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
14		Providing, installation, testing & commissioning of Response Indicator as per specifications and as per direction of Engineer in Charge..	50	No.				
15		Providing, installation, testing & commissioning of 2 way communication Fire Fighter's Telephone Jack as per specifications complete as required.	7	No.				
16		Providing, installation, testing & commissioning of 2 way communication Fire Fighter's Handset as per specifications complete as required.	7	No.				
17		Providing, installation, testing & commissioning of Fire panel supervised 70db-84db Ceiling mounted multi tap 2 Watt Speaker as specified & same make as of panel as per specifications complete as required.	100	No.				
18		<b><u>CABLES AND CONDUIT</u></b>						
18.1		Supply, installation & commissioning of Fire Survival Armoured cable (600/1000V) with Class-2 annealed copper conductor to BS EN 60228 having crosslinkable Halogen Free insulation with Glass Mica (Fire barrier) tape along with Low Smoke Zero Halogen (LSZH) inner & outer sheath as per BS 7846:2009. Should retain circuit integrity as per BS 6387 C.W.Z & BS EN 50200 .						
18.1.1		2 x 2.5 sqmm	100	RM				
		TOTAL C/F TO SUMMARY						
				-				
9.		<b><u>SUB HEAD -IX : LT PANEL &amp; RISING MAIN</u></b>		-				
		<b><u>RISING MAIN</u></b>	-	-				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1	3.1	Supplying, installing on wall, testing and commissioning of following capacity rising mains made of 1.6mm thick sheet steel enclosure duly painted with powder coating, wall straps, fully PVC insulated 4 Nos aluminum bus bars in convenient sections and suitable for 415 volts, 3 phase, 4 wire, 50 Hz, A.C. supply with extension joints, fire proof barriers, expansion joints, thrust pads including jointing, and earthing with 2 runs of galvanized iron strips etc. as required. (Rising mains conforming to IS 8623, TEC 439)						
1.1	3.1.4	630 amps (S.C. rating for 1 sec - 45 KA)	30	RM				
2	3.2	Supplying, installing, testing and commissioning of following capacity TPN tap off box made of 1.6mm thick sheet steel enclosure duly painted with powder coating on existing rising mains complete with TPN disconnecter FSU and HRC fuses, connections, earthing etc. as required.						
2.1	3.2.3	63 amps TPN	6	Each				
2.2	3.2.4	100 amps TPN	6	Each				
2.3	3.2.5	200 amps TPN	1	Each				
3	3.4	Supplying, installing, testing and commissioning of following capacity End Feed Unit made of 1.6mm thick sheet steel enclosure duly painted with powder coating to existing rising mains complete with TPN disconnecter FSU and HRC fuses, mounting stands, cable end box, brass compression gland, connections, earthing etc. as required.						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.1	3.4.4	600 amps TPN	1	Each				
4		<b><u>MAIN LT PANEL</u></b>						
		Design, fabrication, assembly, wiring and supply of front operated dead front cubicle type compartmentalized as per Form 3B, rear access free standing, dust and vermin proof (IP 42 ingress protection) main switchboards suitable for use at 415 volts, 3 phase 4 wire 50 Hertz system suitable for a symmetrical fault level of 55 kA at 415 volts, fabricated from 2 mm thick CRCA MS sheets with hinged, gasketed (metal based neoprene) and lockable doors having structural reinforcement with suitable angle/channel/T/flat sections including 3 mm thick gland plates on top and bottom and including lifting hooks and including GI earth strip of required size with 2 nos earthing terminals and including powder coated paint finish of approved shade over metal surface cleaned and treated with seven tank process complete with interconnections etc as per specifications, as required and as below. This main panel must be extendable for future requirement in such a manner not to disrupt ongoing services at the point of use during extension.						
		<i>(Note: The contractor may select the next higher fault rating of MCCB if it is not readily available ,without any extra cost ,as the figure indicated within the bracket are required maximum fault level of the panel.)</i>						
		<b><u>MAIN LT PANEL</u></b>						

Addition -----  
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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
<b>A</b>		<b><u>INCOMER FROM GENERATOR (DG SET - 1 , 320 KVA )</u></b>						
		<b><u>Incomer from D.G. shall consist of the following:</u></b>						
		800A, 4 pole ACB (EDO) having microprocessor based programmable trip setting for releases for the following integral protection:						
i)		Under voltage & Overvoltage protection						
ii)		Overload, over current & Earth fault protection, Negative phase sequence protection relay , reverse power relay						
iii)		The ACB shall be complete with 3 Nos. 800A/5A, 15VA, 5P10 CTs for protection.						
		<b><u>Metering, Indication &amp; Push Button for Controls</u></b>						
i)		1 set of R,Y,B phase indicating lamps each with 3 nos. 2A SP MCBs.						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-800A) Ammeter with ASS with 3 nos. 800/5A CT's						
iv)		1Set- of ON/OFF/Trip/ Spring Charged & Trip circuit healthy indicating lamps.						
<b>B</b>		<b><u>INCOMER FROM TRANSFORMER-1, 630 KVA)</u></b>						
		Incomer shall consist of the following:						
		1000A 4 pole ACB (EDO) having microprocessor based programmable trip setting for releases for the following integral protection:						
i)		Under voltage & Overvoltage protection						
ii)		Overload, Over current & Earth fault protection						
iii)		Negative phase sequence protection,reverse power protection relay						
iv)		The ACB shall be complete with 3 Nos. 1000A/5A, 15VA, 5P10 CTs for protection.						
v)		1 set of 1000/5A, 15 VA, class-1 CTs for APFC relay						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		<b>Metering &amp; Indication</b>						
i)		1 set of R,Y,B phase indicating lamps each with 3 nos. 2A SP MCBs.						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0- 1000A) Ammeter with ASS with 3 nos.1000/5A CT's						
iv)		1Set- of ON/OFF/Trip/ Spring Charged & Trip circuit healthy indicating lamps.						
<b>C</b>		<b><u>INCOMER FROM TRANSFORMER-2, 630 KVA)</u></b>						
		Incomer shall consist of the following:						
		1000A 4 pole ACB (EDO) having microprocessor based programmable trip setting for releases for the following integral protection:						
i)		Under voltage & Overvoltage protection						
ii)		Overload, Over current & Earth fault protection						
iii)		Negative phase sequence protection, reverse power protection relay						
iv)		The ACB shall be complete with 3 Nos. 1000A/5A, 15VA, 5P10 CTs for protection.						
v)		1 set of 1000/5A, 15 VA, class-1 CTs for APFC relay						
		<b>Metering &amp; Indication</b>						
i)		1 set of R,Y,B phase indicating lamps each with 3 nos. 2A SP MCBs.						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0- 1000A) Ammeter with ASS with 3 nos.1000/5A CT's						
iv)		1Set- of ON/OFF/Trip/ Spring Charged & Trip circuit healthy indicating lamps.						
<b>D</b>		<b>INCOMER FROM GENERATOR (DG SET - 2 , 320 KVA</b>						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		)						
		Incomer shall consist of the following:						
		800A 4 pole ACB (EDO) having microprocessor based programmable trip setting for releases for the following integral protection:						
		Under voltage & Overvoltage protection						
i)		Overload, Over current & Earth fault protection						
ii)		Negative phase sequence protection						
iii)		The ACB shall be complete with 3 Nos. 800A/5A, 15VA, 5P10 CTs for protection.						
		1 set of 800/5A, 15 VA, class-1 CTs for APFC relay						
i)		<b>Metering &amp; Indication</b>						
ii)		1 set of R,Y,B phase indicating lamps each with 3 nos. 2A SP MCBs.						
iii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iv)		1 No. (0- 800A) Ammeter with ASS with 3 nos.800/5A CT's						
		1Set- of ON/OFF/Trip/ Spring Charged & Trip circuit healthy indicating lamps.						
<b>E</b>		<b><u>BUS COUPLER:-1</u></b>						
i)		1 No. 1000A FP ACB with all required accessories (as per SLD).						
ii)		1 Set of Breaker ON-OFF-TRIP, Spring charged indication Lamps as required.						
<b>F</b>		<b><u>BUS BARS</u></b>						
		1 Sets of 1000A TPN Aluminum bus bars with colour coded PVC sleeves						
<b>G</b>		<b><u>PLC</u></b>						

Addition -----  
 Deletion -----  
 Correction -----  
 Overwriting -----

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		1 no. 32-bit microprocessor based PLC with MMI for auto load Management of DG Sets, Sensing & Signaling AMF condition to PCC or equivalent mounted on DG Sets, Selection of Master DG Sets, operation (Opening/closing) as required BUSCOUPLER, Transformer incomers ACB's interlocking etc as required and complete with interfacing with DG Set Control Module and coordination with Controller and DG Sets. Auto Load Sharing and Synchronization of DG Sets shall be Done by DG Controller PCC or equivalent mounted on DG Sets.						
<b>H</b>		<b><u>OUTGOINGS( Short Ckt Rating in KA Rating as per above note )</u></b>						
i)		2 No. 1000A TPN ACB						
ii)		6 No. 630A TPN MCCB						
iii)		3 No. 400A FP MCCB						
iv)		2 No. 250A FP MCCB						
v)		1 No. 250A TPN MCCB						
vi)		1 No. 200A TPN MCCB						
vii)		1 No. 160A TPN MCCB						
viii)		2 No. 125A TPN MCCB						
ix)		3 No. 100A 4P MCCB						
x)		1 No. 63A FP MCCB						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Main LT Panel</b>	1	Set				
		Note: Incomers for Transformer, D.G. sets & Bus couplers shall be electrically & mechanically interlocked and quoted price shall be inclusive of all .						
<b>5</b>		<b><u>Capacitor Panel-1 (280 KVAR)</u></b>						
<b>A</b>		<b><u>INCOMER</u></b>						
		1 No. 630 Amps TPN MCCB (45 kA)						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
<b>B</b>		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of phase indicating lamps						
ii)		1 No. Microprocessor APFC controller/Relay shall continuously monitor all three phases and LCD displays for various Electrical Parameters like voltage, input current, capacitive current, KVA demand, KW, Power Factor, self diagnostic error code indication with printout facility of the above with RS 232 C port. Controller should mounted on the front side of the panel.						
<b>C</b>		<b><u>BUS-BAR</u></b>						
		1 Set of 800A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
<b>D</b>		<b><u>OUTGOINGS</u></b>						
i)		1 Nos.of 250A TP MCCB with suitable AC -3 duty contactor						
ii)		1 Nos.of 125A TP MCCB with suitable AC -3 duty contactor						
iii)		2 Nos.of 80A TP MCCB with suitable AC -3 duty contactor						
iv)		4 Nos.of 40A TP MCCB with suitable AC -3 duty contactor						
v)		2 Nos.of 32A TP MCCB with suitable AC -3 duty contactor						
vi)		2 Nos.of 25A TP MCCB with suitable AC -3 duty contactor						
vii)		1 Nos. 100 KVAR capacitor Bank each with 7% harmonic & discharge resistor suitable capacity to carry expected current continuously.						
viii)		1 Nos. 50 KVAR capacitor Bank each with 7% harmonic & discharge resistor suitable capacity to carry expected current continuously.						
ix)		2 Nos. 25 KVAR capacitor Bank each with 7% harmonic & discharge resistor suitable capacity to						

Addition -----  
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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		carry expected current continuously.						
x)		4 Nos. 12.5 KVAR capacitor Bank each with 7% harmonic & discharge resistor suitable capacity to carry expected current continuously.						
xi)		2 Nos. 10 KVAR capacitor Bank each with 7% harmonic & discharge resistor suitable capacity to carry expected current continuously.						
xii)		2 Nos. 5 KVAR capacitor Bank each with 7% harmonic & discharge resistor suitable capacity to carry expected current continuously.						
		<b>Note: The capacitor panel shall also stipulate the following</b>						
		(i) All the capacitors shall be suitable for 525 V						
		(ii) Necessary control and firing card with proper wiring and lugs of the required rating to be provided.						
		(iii) Heavy duty exhaust fans to be provided for cooling						
		(iv) LED indication for number of capacitor banks 'ON & Power Factor lagging or leading.						
		(v) The APFC shall be protected from following						
		* over-voltage & voltage unbalance						
		* Over temperature-system should be in standby mode and automatically restart after above condition restored.						
		* Total Harmonic Distortion						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of <u>Capacitor panel</u> as described above of Capacitor panel as described above</b>	2	Sets				

Addition -----  
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Overwriting -----

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6		<b><u>FRONT OPERATED PANEL</u></b>						
		Design, manufacture, supplying fixing in position of the following front operated cubicle type, front access, dead back, 2mm thick steel enclosed free standing, dust and vermin proof, switchboard with IP42 protection with hinged and lockable doors complete with interconnections, tinned copper crimping lugs, bonding to earth and painting, suitable for use at 415 volts, 3 phase 4 wire 50 Hertz system, and suitable for a fault level of 25 MVA symmetrical at 415 volts.						
i)		All switchboards shall be modular type and have provision for entry of cables from the top /bottom as required.						
ii)		The cost shall include providing and fixing of 100 x 50 x 6 mm channels for switchboard support.						
iii)		All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The Busbars insulation shall be with heat shrinkable sleeves. SMC/DMC shrouds and busbar supports shall be used.						
iv)		All MCCB shall have phase barriers, rotary handles and extension terminal as required .						
v)		All unbalanced kWh meter shall have communication module for BMS connectivity						
6.1		<b><u>MDB (Basement panel)</u></b>						
A		<b><u>INCOMER</u></b>						
		1 No.100 4P MCCB						
B		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
iii)		1 No. (0-100A) Ammeter with ASS with 3 nos. 100/5A CT's						
<b>C</b>		<b><u>BUS-BAR</u></b>						
i)		1 Set of 150A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
<b>D</b>		<b><u>OUTGOINGS</u></b>						
i)		2 Nos. 63A FP MCB						
ii)		5 Nos. 40A FP MCB						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	1	Sets				
<b>6.2</b>		<b><u>VRV Panel - 2 (Terrace for future floors 5th to 7th floors)</u></b>						
<b>A</b>		<b><u>INCOMER</u></b>						
		1 No.400A TPN MCCB (50 KA)						
<b>B</b>		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-400A) Ammeter with ASS with 3 nos. 400/5A CT's						
<b>C</b>		<b><u>BUS-BAR</u></b>						
i)		1 Set of 630A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
<b>D</b>		<b><u>OUTGOINGS</u></b>						
i)		2 No. 160A TPN MCCB						
ii)		4 No. 125A TPN MCCB						
iii)		4 Nos. 63A TPN MCB						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	1	Sets				

Addition -----  
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Overwriting -----

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6.3		<b><u>VRV Panel -1 (Terrace for Present floors ground to 4th floors)</u></b>						
A		<b><u>INCOMER</u></b>						
		1 No.400A TPN MCCB (50 KA)						
B		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-400A) Ammeter with ASS with 3 nos. 400/5A CT's						
C		<b><u>BUS-BAR</u></b>						
i)		1 Set of 630A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
D		<b><u>OUTGOINGS</u></b>						
i)		2No. 160A TPN MCCB						
ii)		8 No. 125A TPN MCCB						
iii)		4 Nos. 32A DP MCB						
		<b>Supplying,Receiving, fixing, testing &amp; commissioning of above described Panel</b>	1	Sets				
6.4		<b><u>UPS Input panel</u></b>						
A		<b><u>INCOMER</u></b>						
		1 No.400 4P MCCB						
B		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-400A) Ammeter with ASS with 3 nos. 400/5A CT's						
C		<b><u>BUS-BAR</u></b>						
i)		1 Set of 500A TPN Aluminium Bus Bar with colour coded PVC Sleeves						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
<b>D</b>		<b><u>OUTGOINGS</u></b>						
i)		5 No. 160A FP MCCB						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	<b>1</b>	Sets				
<b>6.5</b>		<b><u>UPS outgoing Panel</u></b>						
<b>A</b>		<b><u>INCOMER</u></b>						
		3No. 160A 4P MCCB (25 kA)						
		2 Nos space shall be provided for the future incomers.						
<b>B</b>		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-160A) Ammeter with ASS with 3 nos. 160/5A CT's						
<b>C</b>		<b><u>BUS-BAR</u></b>						
i)		3 Set of 200A TPN Aluminum Bus Bar with colour coded PVC Sleeves						
		<b><u>BUS-COUPLER</u></b>						
		2 No 160A FP MCCB with Phase indication lamps						
<b>D</b>		<b><u>OUTGOINGS</u></b>						
i)		3 Nos. 63A FP MCB						
ii)		19 Nos. 40A FP MCB						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	<b>1</b>	Sets				
<b>6.6</b>		<b><u>PRESSURIZATION PANEL (Terrace)</u></b>						
<b>A</b>		<b><u>INCOMER</u></b>						
		1No. 160A TPN MCCB (25 KA)						
<b>B</b>		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of R,Y,B phase indicating lamps						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-160A) Ammeter with ASS with 3 nos. 160/5A CT's						
<b>C</b>		<b>BUS-BAR</b>						
		1 Set of 200A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
<b>D</b>		<b>OUTGOINGS</b>						
i)		4 Nos. 63A TPN MCB						
ii)		10 Nos. 40A TPN MCB						
iii)		6 nos. 32Amp TPN MCB						
iv)		4 Nos. S/D starter with self-illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 15 HP Motor.						
v)		8 Nos. S/D starter with self-illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 10 HP Motor.						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	1	Sets				
<b>6.7</b>		<b>VENTILATION PANEL (UPPER &amp; LOWER BASEMENT)</b>						
<b>A</b>		<b>INCOMER</b>						
		1No. 250A TPN MCCB (35 KA)						
<b>B</b>		<b>METERING &amp; INDICATION</b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-250A) Ammeter with ASS with 3 nos. 250/5A CT's						
<b>C</b>		<b>BUS-BAR</b>						
		1 Set of 300A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
<b>D</b>		<b>OUTGOINGS</b>						

Addition -----  
Deletion -----  
Correction -----  
Overwriting -----

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		5 Nos. 63A TPN MCCB (25 KA)						
		5 Nos. 40A TPN MCCB (25 kA)						
i)		5 Nos. S/D starter with self illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 15 HP Motor.						
ii)		5 Nos. S/D starter with self illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 10 HP Motor.						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	1	Sets				
<b>6.8</b>		<b>Lift Panel (Loc.-Lift Machine room)</b>						
<b>A</b>		<b>INCOMER</b>						
i)		1 No. 125A TPN MCCB .						
<b>B</b>		<b>METERING &amp; INDICATION</b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		1 No. (0-500V) Voltmeter with Built-in VSS with 3 nos. 2A SP MCB						
iii)		1 No. (0-125A) Ammeter with ASS with 3 nos. 125/5A CT's						
<b>C</b>		<b>BUS-BAR</b>						
i)		1 Set of 150A TPN Aluminium Bus Bar with colour coded PVC Sleeves						
<b>D</b>		<b>OUTGOINGS</b>						
i)		5 Nos. 40A TPN MCB .						
ii)		2 No. 32A DP MCB .						
		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	1	Sets				
<b>6.9</b>		<b><u>Water Supply Panel</u></b>						
<b>A</b>		<b><u>INCOMER</u></b>						
		1No. 160A TPN MCCB (25 KA)						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
<b>B</b>		<b><u>METERING &amp; INDICATION</u></b>						
i)		1 set of R,Y,B phase indicating lamps						
ii)		Digital Multifunction meter for Voltage, Current & KW with selector switch. Each with 3nos. of 2A SP MCB & 3nos 160/5A CTs (160A/500V) rating						
<b>C</b>		<b><u>BUS-BAR</u></b>						
		1 Set of 250A TPN Aluminum Bus Bar with colour coded PVC Sleeves						
<b>D</b>		<b><u>OUTGOINGS</u></b>						
i)		2 Nos. 40A TP MCB .						
ii)		13 Nos. 16A TP MCB .						
iii)		5 No. 10A TP MCB .						
iv)		1 Nos. S/D starter with self-illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 10 HP Motor.						
v)		4 Nos. DOL starter with self-illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 2 HP Motor.						
vi)		12 Nos. DOL starter with self-illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 1/1.5 HP Motor.						
vii)		1 No. space for S/D starter with self-illuminated Push button for ON & OFF.						
viii)		16 Nos. space for DOL starter with self illuminated Push button for ON & OFF.						
ix)		<b>Supplying, Receiving, fixing, testing &amp; commissioning of above described Panel</b>	1	Set				
<b>6.10</b>		<b><u>Interlink Panel to Existing Panel (At Existing basement )</u></b>						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
A		-						
		2 No.1000A FP ACB (65 KA)						
B		<b><u>METERING &amp; INDICATION</u></b>						
i)		2set of R,Y,B phase indicating lamps						
ii)		2No. (0-500V) Voltmeter with Built-in VSS with 6 nos. 2A SP MCB						
iii)		2No. (0-1000A) Ammeter with ASS with 6 nos. 1000/5A CT's						
		This interlink panel shall have necessary arrangement ,connections ,terminations , Mechanical and electrical interlinking with the outgoing of this panel and incomer of main panel of existing building as required and all are inclusive in the above quoted price.						
		<b>Supply, installation, testing , commissioning of above type with microprosper based O/L, E/F, O/C &amp; S/C protection</b>	1	Sets				
		TOTAL C/F TO SUMMARY						
10.		<b><u>SUB HEAD - X : HT EQUIPMENT &amp; TRANSFORMER</u></b>		-				
		-		-				
	Note:	<b>1. All the necessary Approvals &amp; liasoning for Load enhancement from present approved load to the required load shall be in the scope of the contractor.Only fee paid to the authority shall be reimbursed against the submission of the receipt and nothing shall be paid extra.</b>		-				
		<b>2. All the necessary arrangement for connecting existing ESS to the proposed new ESS shall be in the scope of contractor</b>		-				
1		<b><u>INDOOR TYPE</u></b>		-				
	10.4	Supplying, and making Indoor cable end termination with Heat shrinkable jointing kit complete with all						

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Correction -----  
Overwriting -----

Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		accessories, including lugs suitable for following sizes of 3 core XLPE aluminum conductor cable of 11 KV grade as required.						
1.1	10.4.3	3Cx240 sq.mm. XLPE insulated Al. Ar. Cable	2	Sets				
2		<b><u>OUTDOOR TYPE</u></b>						
	10.5	Supplying, and making OUTDOOR cable end termination with Heat shrinkable jointing kit complete with all accessories, including lugs suitable for following sizes of 3 core XLPE aluminum conductor cable of 11 KV grade as required.						
2.1	10.5.3	3Cx240 sq.mm. XLPE insulated Al. Ar. Cable	2	Sets				
3	8.2	Laying of one number additional PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required..						
3.1	8.2.2	Above 120 sq. mm and upto 400 sq. mm	150	Metre				
4		<b><u>11 KV HT SWITCHBOARD ( SINGLE PANEL) - INDOOR DUTY (TO BE LOCATED NEAR THE MAIN ENTRANCE)</u></b>						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Design, Manufacture, Supply, delivery, erection, testing and commissioning of a single enclosed 2 mm thick sheet steel clad floor mounting, vermin proof, fully interlocked vertical isolation, extensible, horizontal draw out, air insulated, metal clad switchboard having double isolation features complete with circuits as detailed below. The switchboard shall be complete with necessary PVC insulated copper busbars, small wiring, labels, cable eyes, cable termination to receive XLPE cables, foundation bolts and suitable for operation on <b>11 kV 3 phase, 50 cycle</b> , earthed system with a rupturing capacity of 350 MVA at 11 kV Panel shall be equipped with following accessories and as per specifications and schematic drawing.						
i)		1No. - Metal Clad housing with having 630A Vacuum circuit breaker with Electric operated mechanism (spring charged motor - 230V AC)						
ii)		1Set- Tripping coil & closing Coil 24V DC						
iii)		1 - Set of isolating plug and receptacle						
iv)		1 - Set of Automatic safety shutter						
v)		1- Set of breaker control switch (TNC)						
vi)		1 -Set of dual core CT's as follows:						
vii)		Core I - 75-120/5A class 5P-10 (15 VA)						
viii)		Core II - 75-120/5A class -1 (15 VA)						
ix)		1set of 11/ 3KV / 110/ 3 Volt, 50 VA burden & accuracy class 1, 3 nos. single phase construction, dry type cast resin PT						
x)		1 - Set of ON/OFF/Trip/ Spring Charged & Trip circuit healthy and phase indicating lamps.						
xi)		1 No.- H.T. Cable joint box for 3C x 240 Sq.mm aluminium conductor XLPE cable,11 KV(E)						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
xii)		1- set of IDMT relay with 2 element of O/C protection(50%-200%) & 1 element of E/F protection (20%-80%).						
xiii)		1 no. U/V & O/V relay						
xiv)		1 no. Anti Pumping Relay						
xv)		1 no. Trip Circuit supervision relay.						
xvi)		1 no. Master Trip relay.						
xvii)		1 Set of Power Pack 220 Volt A.C. / 24 Volt D.C. complete as required.						
		<b>Supplying, Installation, Testing &amp; Commissioning Rate for 11 kV HT Panel as described above</b>	1	Set				
5		<b><u>11 KV HT SWITCHBOARD ( FOUR PANEL) - INDOOR DUTY</u></b>						
		Supply, delivery, erection, testing and commissioning of a FOUR panel ( one incomer +three outgoing) <b>indoor duty</b> totally enclosed sheet steel clad floor mounting, vermin proof, fully interlocked vertical isolation, extensible, horizontal draw out, air insulated, metal clad switchboard having double isolation features complete with circuits as detailed below. The switchboard would be complete with necessary PVC insulated copper busbars, small wiring, labels, cable eyes, cable termination to receive XLPE cables, foundation bolts and suitable for operation on 11 kV 3 phase, 50 cycle, earthed system with a rupturing capacity of 350 MVA .This HT panel must be extendable for future requirement in such a manner not to disrupt ongoing services at the point of use during extension.						
		All Incoming and outgoing feeders shall have fault trip auxiliary contacts for wiring to annunciation						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		fault trip indication panel						
		<b>One Incoming panel equipped with :</b>						
i)		1- Air insulated metal clad housing						
ii)		1- set of 3 phase PVC insulated copper busbars 630 amps rating						
iii)		6- single pole cluster type isolating contacts i.e. plug and switches						
iv)		1- Triple pole draw out truck mounted 11kV 350 MVA, 630 amps Vacuum circuit breaker fitted with arc control devices.						
v)		6 NO/NC contacts for remote ON/OFF/TRIP status at BMS						
vi)		1- Trip free 230 V AC, motor charged spring release closing mechanism complete with necessary auxiliary switches, emergency hand trip device and mechanical 'OFF' & 'ON' indicator.						
vii)		1 - 24 Volt DC shunt trip coil						
viii)		3 - Dual Core Cast resin Current transformers of ratio 75-120/5A Class 5P10 and Class 1.0, 15 VA burden for protection & metering.						
ix)		1- 3 Phase cast resin horizontal draw out line potential transformer ratio 11 KV/V3:110/V3 Volt, class 1.0, 200 VA connected star/star with H.V. and L.V. connections, H.V.fuses and LV MPCB of adequate rating to withstand fault level in PT circuit, isolating plugs for H.V. and L.V. connection.						
x)		1- Strip heater to prevent absorption of moisture						
		<b>The instrument and relay panel fitted with :</b>						
xi)		1- Square voltmeter of 96 x 96 mm scaled 0-15000 volt with 3 way and OFF selector switch.						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
xii)		1- Square Ammeter of 96 x 96 mm scaled 0-150 amps with 3 way and OFF selector switch.						
xiii)		1 no. energy analyzer to measure voltage, current, power factor, frequency, kW/kVA, kWh, kVAh, kVAh, Real time, date with communication module.						
xiv)		1 - no. circuit breaker control switch for electrical (T/N/C)						
xv)		1- Triple pole numerical I.D.M.T. overcurrent & earth fault relay with two outer elements connected for overcurrent protection and the middle element for earth fault protection overcurrent setting 50% - 200% Earth fault setting 20% - 80% (51 and 51N)						
xvi)		1 - Electro mechanical Master trip relay (86)						
xvii)		1 - Electro mechanical Anti pumping relay (94)						
xviii)		1 - Trip Circuit supervision relay.						
xix)		1- set of Red/Green indicating lamps for close and open position						
xx)		1- Amber indicating lamp for auto trip						
xxi)		1- clear indicating lamp for trip circuit healthy						
xxii)		1- set of white indicating lamps one per phase						
xxiii)		1 - blue indicating lamp for spring charged						
xxiv)		1 - push button on front door for emergency trip						
xxv)		1- Four window annunciation display to indicate fault trip of incoming and outgoing feeders including audio alarm hooter with accept push button, internal wiring, protection fuses etc. complete.						
xxvi)		1- cable box suitable for cable termination to receive 11 KV XLPE Cable 3 Core 240 sqmm.						
xvii)		1 Set of Power Pack 220 Volt A.C. / 24 Volt D.C. complete & suitable as required for the complete item.						
		<b>THREE NOS OUTGOINGS TRANSFORMER FEEDERS EACH EQUIPPED WITH:</b>						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
i)		1- Air insulated metal clad housing						
ii)		1- set of 3 phase PVC insulated copper busbars 630 amps						
iii)		6- Single pole cluster type isolating contacts; i.e. plug and switches						
iv)		1- Triple pole drawout truck mounted 11 kV 350 MVA, 630 amps Vacuum circuit breaker fitted with arc control devices.						
v)		1- Trip free 230 V AC, motor charged spring release closing mechanism complete with necessary auxiliary switches emergency hand trip device and mechanical 'OFF' and 'ON' indicator.						
vi)		6 NO/NC contacts for remote ON/OFF/TRIP status at BMS						
vii)		1 - 24 volts DC shunt trip coil						
viii)		3 - Dual Core Cast resin Current transformers of ratio 40/5 Class 5P10 and Class 1.0, 15 VA burden for protection & metering.						
ix)		1- Strip heater to prevent absorption of moisture						
x)		The instrument and relay panel fitted with						
xi)		1- Square Ammeter 96 mm x 96 mm scaled 0-35 amps with 3 way and OFF selector switch						
xii)		1- Triple pole numerical I.D.M.T. over current and earth fault relay, with two outer elements connected for over current and the middle element for earth fault protection over current setting 50% - 200% Earth fault setting 20% -80% and with instantaneous element on all 3 pole settings 500-2000% on over current and 200-800% on earth fault (51, 50, 51N & 50N)						
xiii)		1 - Electro mechanical Master trip relay (86)						
xiv)		1 - Electro mechanical Anti pumping relay (94)						
xv)		1 - Trip Circuit supervision relay.						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
xvi)		1 - set of electro mechanical auxiliary relay for OLTC						
xvii)		1- set Electro mechanical auxiliary relay for transformer fault ALARM for winding temperature conditions (63x)						
xviii)		1- set Electro mechanical auxiliary relay for transformer fault TRIP for winding temperature conditions (63x)						
xix)		1 - no. circuit breaker control switch for electrical (T/N/C)						
xx)		1- set of Red/Green indicating lamps for close and open position						
xxi)		1- Amber indicating lamp for auto trip						
xxii)		1- clear indicating lamp for trip circuit healthy						
xxiii)		1- set of white indicating lamps one per phase						
xxiv)		1 - blue indicating lamp for spring charged						
xxv)		1- cable termination suitable for cable joint to receive 11 KV XLPE cable 3 core 240 sqmm .						
xxvi)		The switchboard shall be complete with all interconnections, label wiring, etc as required and as per direction						
		<b>Supplying, Installation, Testing &amp; Commissioning Rate for 11 kV HT Panel as described above</b>	1	Set				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
6		Supply, erection, testing and commissioning of 230V, single phase 2 wire AC to 24V DC Batteries charger with semiconductor/IGBT fullwave rectifier with auto /manual float cum boost facility complete with 24V DC, 120 AH sealed maintenance free batteries including one no. distribution board having 63 Amps DP MCCB as incomer and 12 Nos. 20/16A DP MCB's (D.C. duty) as outgoing complete as required and as per technical specifications.	1	Set				
7		Supply, installation, testing and commissioning of <b>630 kVA 11000/433 volts Deta/Star, vector group DYN11, outdoor mounting</b> , oil cooled, ONAN transformer with ON Load Tap Changer (OLTC) plus AVR ,AVS relay and RTCC for automatic sensing of incoming voltage, automatic operation of OLTC and facility for remote manual operation of On Load Tap changer, suitable for incoming voltage variation of +10% to -10% in 16 steps in 1.25% to give a constant secondary voltage. The transformer shall be provided with fittings, accessories, protection, first filing of oil etc. including Buchholz oil temperature alarm/trip protection and space for mounting differential protection CT's in LV chamber complete as per specifications and as required. The transformer shall be provided with arrangement to terminate XLPE cable on HT side and to connect XLPE Cable on LT side, complete as required.						
		<b>Supplying, Installation, Testing &amp; Commissioning Rate for distribution transformer as described above</b>	2	Set				
8		Supplying OF following size of aluminum conductor, XLPE insulated armoured and over all PVC sheathed, 11 KV (E) grade earthed cable as per technical						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		specifications						
i)		3C x 240 sq.mm. XLPE insulated Al. Ar. Cable	150	RM				
		TOTAL C/F TO SUMMARY						
11.		<b><u>SUB HEAD - XI :DG SETS AND ACCESSORIES</u></b>	-	-				
		<b><u>SUB HEAD :- XI:- SUPPLY, INSTALLATION, TESTING AND COMMISIONING OF DG SET INCLUDING ALL ACCESSORIES (NON DSR)</u></b>						
			-					
		-	-					
1		<b><u>DG SETS</u></b>	-					
1.1		Design, manufacture, supply, erection, testing & commissioning of following rating of DG Sets in Accoustic Enclosure, having self-excited & self-regulated 415 V, 3 Phase, 4-Wire, 50 Hz, 0.8 p.f. Alternator coupled with multi-cylinder, turbo-charged/ turbo-charged after cooled as called for, Diesel Engine capable to generate the power not less than the required BHP to achieve the alternator capacity as given below, with Air-cooled radiator, hospital type silencers and Electronic governor suitable PCC (Power Command Control) or equivalent for Synchronised Operation including providing of AMF relay, Circuit Breaker as ccalled for, & Engine control panel, 24V batteries of suitable rating, battery-charger with battery leads,inbuilt oil fuel tank and complete with all standard accessories & protection as required and as per specifications, including first filling of lube oil providing common base plate, anti-vibration pads, drip trays, foundation bolts, nuts, bolts, cable termination/adopter box suitable to terminate upto 3 nos. of 3.5Cx300 sq.mm. XLPE cables as required						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		for a complete installation including initial filling of fuel and lubricants required during trial run of DG sets on full load for 12 hours followed by 10% overload for one hour in any 12 hours duration, as per specifications & drawings complete with RCC/PCC foundation for DG set as per the structural detail for Dynamic Load submitted by the Vendor and approve by the Consultant.						
		<b>Note</b> : The exhaust system should have exhaust bellow just near to DG sets and before the exhaust silencer to accommodate the expansion in the exhaust system.						
		500 KVA (With Acoustic Enclosure)	2	Sets				
<b>2</b>		<b><u>EXHAUST PIPE &amp; CHIMNEY</u></b>						
		<b><u>EXHAUST PIPE</u></b>						
		Supply, installation, testing and commissioning of exhaust pipe fabricated out of 6 mm thick MS pipe with all fixing accessories and hardwares. The exhaust pipes shall be dual insulated with first layer of 25 mm thick ceramic fibre wool insulation (128 Kg/ cubic metre density) and second layer of 50 mm thick mineral wool (150 Kg/ cubic metre density) insulation wrapped in chicken mesh and clad with 24 gauge aluminium sheet including all support as required. (Exhaust support structure Steel qty has been taken in Civil BOQ)						
		250 mm dia	40	Mtrs				
		<b>Safety Mats</b>						
<b>3</b>		Providing a mat made of elastomeric polymers Material(Class B)1 mtr. wide and 2.5 mm thick to withstand 11 KV dielectric strength AS PER IS 15652 :	50	mtr				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		2006						
4		Providing a mat made of elastomeric polymers Material (Class C)1 mtr. wide and 03 mm thick to withstand 33 KV dielectric strength AS PER IS 15652 : 2006	15	mtr				
5		Providing and fixing of Water Cooler having Cooling and Heating facility both for water with RO water purifier of approved make from Kent /Aqua Guard /Aquafresh /Krona/Dr RO or approved by EIC with minimum tank capacity of 25 ltrs having water purification rate @ 25 ltr per hour. The service provider shall provide 2 years free maintenance inclusive filter ,membrane etc . Filter shall be changed at the interval of 6 months regularly complete in all respect as per Engineer in Charge.	5	each				
		TOTAL C/F TO SUMMARY						
12.		<b><u>SUB HEAD - XII : CLOSE CIRCUIT TELEVISION SYSTEM</u></b>						
1	1.17	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel / PVC conduit as required.						
1.1	1.17.3	3 x 1.5 sq. mm	800	Mtrs				
2	1.2	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit complete as required and as per direction of Engineer in Charge.						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.1	1.20.2	<b>25mm</b>	<b>550</b>	Mtrs				
3	1.19	Supply and drawing of Co-axial TV cable RG-6 grade, 0.7mm solid Cu. Conductor PE insulated, shielded with fine tinned Cu. Braid & protected with PVC sheath in existing surface / recessed steel/ PVC conduit complete as required and as per direction of Engineer in Charge..	<b>100</b>	Mtrs.				
		<b>Supply, installation, testing and commissioning of following UL/EN Listed items as per the technical specification as below</b>						
4		1/3" Super HAD CCD II, sensor resolution 600TVL, Sensitivity 0.01lux , (Lens 2.8 to 12 mm) ,Signal-to-Noise Ratio >52 dB(AGC Off) ,True Day/ Night,Digital Noise Reduction ,ATR,HLC ,OSD Menu for Easy Operation ,Digital Image Stabilizer, Varifocal Manual zoom and focus adjustment, including 230V AC / 12V DC Adaptor electrical Shutter (convertor) and plug top with shielded wires and Ceiling mounting bracket for camera complete in all respect and as per direction of Engineer in Charge.(For Indoor application)	<b>10</b>	No.				
5		True day/night Indoor PTZ dome camera with 1/4" Super HAD CCD II Outdoor 700TVL Analog PTZ Colour DWDR Dome Camera, 3DNR, True Day/Night, 0.2 lux minimum illumination sensitivity for colour and 0.02 for B/W, electronic shutter, 36X Optical Zoom, 16X Digital Zoom, 360 Degrees continuous pan rotation, unobstructed 0 Degree to +90 Deg Tilt, Switchable automatic gain control, auto white balance, Auto Tracking, Privacy Masking, Motion Detection The Camera system shall have minimum 256 presets, built in menu system for setup of	<b>2</b>	No.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		programmable functions. The PTZ camera shall support multiple protocols. <b>Above complete in all respect and as per direction of Engineer in Charge.(indoor High Speed PTZ Cameras )</b>						
6		1/4" CCD image sensor, high Speed PTZ Dome Camera having 470 TV Lines resolution, 0.7 Lux, 36X optical and 12X digital Zoom with continuous auto focus, back light compensation, auto iris control, 360 degree of endless rotation, high speed pan/tilt, including 230V AC / 12V DC Adaptor (convertor) and plug top with shielded wires and Ceiling mounting bracket for camera complete .The PTZ camera shall support multiple protocols. The camera shall have suitable housing for outdoor applications and shall be supplied with suitable mounts. the camera shall work on 24VAC ,Should be IP66 . Above complete in all respect and as per direction of Engineer in Charge <b>(outdoor High Speed PTZ Cameras for Outdoor &amp; Terrace).</b>	2	No.				
7		16 channel <b>D IGITAL VIDEO RECORDER (DVR)</b> with two video outputs & 21" totally flat colour LCD monitor as per Specification. Contractor shall size the DVR for real time 400 FPS / 4 CIF resolution 30 days of continous recording and submit data sheet of their storage calculation for both MPEG 4 and H.264 recording formats. The DVR with TCP / IP connectivity, DVD R/W & USB connectivity with all necessary software along with standalone UPS with 15 min. Battery back upMin 6HDD Slots.	1	No.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
8		8 channel <b>D IGITAL VIDEO RECORDER (DVR)</b> with two video outputs & 21" totally flat colour LCD monitor as per Specification. Contractor shall size the DVR for real time 400 FPS / 4 CIF resolution 30 days of continous recording and submit data sheet of their storage calculation for both MPEG 4 and H.264 recording formats. The DVR with TCP / IP connectivity, DVD R/W & USB connectivity with all necessary software along with standalone UPS with 15 min. Battery backup Min 6HDD Slots.Above complete in all respect and as per direction of Engineer in Charge	1	No.				
9		Supply Installation Testing & Commissioning Joystick controller (for PTZ camera's) complete in all respect and as per direction of Engineer in Charge	1	NO.				
10		Supply, Installation and commissioning of 32" Color Monitor including all accessories as per specifications & complete in all respect and as per direction of Engineer in Charge	2	Nos.				
11		Supply & laying of following Solid annealed bare electrolytic grade copper conductor, co-axial cable with PE dielectric, poly-laminated aluminum tape followed by copper braiding & overall PVC sheathed cable.						
11.1		RG -11 coaxial cable	200	RM				
12		Supplying, drawing, connecting & testing of 4 pair CAT-5 wire for PTZ High speed camera's in existing conduit complete in all respect and as per direction of Engineer in Charge	300	RM				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
13		Supply , installation, testing & Commissioning of EAPBX System comprising of PRI card – 5 digital channel, 300 extension card, 4 digital extension, digital operator console, UGW card, MRC card, CLI facility for internal & external line, 300 port MDF with protection module, champ cable, SMPS, Float cum boost charger, battery back for 1 hr backup, complete as required and as per direction of Engineer in Charge.	1	set				
14		Supplying and fixing testing and commissioning of 42U rack with front glass, back steel door and side panels, with casters, fan housing units with fans, cable manager, AC main channel with required outlets, earthing kit, Mounting hardware, Stationery shelf complete as required and as per direction of Engineer in Charge.	1	set				
15		Providing, laying, connecting and testing of Cat-6 patch cords of 7 feet length (red, blue & yellow color) complete as required and as per direction of Engineer in Charge.	300	Each				
16		Supplying and fixing testing and commissioning of 24-port unloaded modular jack panel, 1U (for voice & data) complete as required.	7	Each				
		TOTAL C/F TO SUMMARY						
13.		<b><u>SUB HEAD - XIII : UPS SYSTEM</u></b>						
1		Supply, installation, Testing and commissioning of the following rating UPS as per specifications and complete in all respects.						

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		80 KVA UPS (in parallel redundant mode) 3 phase (415 V + 15%) Volts input & 3 phase output (415 V + 1%), 50 Hz, Input harmonic Current THD <=3% typical at 100% load, <=6% maximum at 50% load with Isolation Transformer and 20 min battery backup for each UPS along with battery cabinet complete in all respect including supporting steel structure for UPS and Battery as required. Quoted price shall be inclusive of required rating single core copper conductor cable including terminations, connections of UPS to panels, batteries etc complete in all respect and as per direction of Engineer in Charge.	2	Set				
		TOTAL C/F TO SUMMARY						
14.		<b>SUB-HEAD XIV- <u>Fire Suppression system</u></b>						
		<b><u>Novec 1230 GAS or Equivalent FLOODING SYSTEM</u></b>						
		<b><u>Gas Based Fire Suppression system for Electrical panel</u></b>						
1		Design, supply, Installation, Testing & Commissioning of Novec 1230 gas or equivalent based fire suppression system comprising of the following						
		<b>For Electrical panel</b>						
		Supply, fixing, testing and commissioning of automatic Linear pneumatic Tube Detection based Novec 1230 System or equivalent for Electrical Panels(Linear Pneumatic Heat Detection Tube Panel Protection System), consisting of the Mentioned components						
i)		2kg capacity Novec 1230 or equivalent , DLP Assembly with automatic valve, push in connector for tube, Novec 1230 or equivalent , mounting	10	No.				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		bracket, End of Line adopter and low pressure switch for monitoring system activation.						
ii)		4kg capacity Novec 1230 or equivalent, DLP Assembly with automatic valve, push in connector for tube, Novec 1230 or equivalent , mounting bracket, End of Line adopter and low pressure switch for monitoring system activation.	5	No.				
iii)		Linear pneumatic heat Detection Tube with all necessary fittings & supports.	492	Mtr.				
iv)		A/V alarm as per standard of manufacturer or as approved by EIC	15	No.				
v)		Master Control Unit for controlling each system complete with pressure switches buzzzers including all necessary accessories & electrical wire harness to make entire system functional complete in all respect and as per direction of Engineer In Charge.	15	No.				
vi)		Installataion, Testing & Commisioning of above system complete in all respect and as per direction of Engineer in Charge						
		TOTAL C/F TO SUMMARY						
15.		<b><u>SUB HEAD - XV: External Street Lights and Solar Power Panels On Grid System</u></b>						
		Design, supply at site, installation, testing & commissioning of 3-phase, 415 volt, ON- GRID solar power plant synchronized with transformer supply including all accessories, inverter, solar panels, all cabling, certifications, liaison with authorities for subsidy, for the following KVA ratings complete as required.						
1		10KVA	1	Set				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		<b>SOLAR STREET LIGHT POLES</b>						
2		Supply Installation Testing Commissioning of Solar street light poles with pressure die-cast aluminum housing of IP 65 rating LED fixture having a system wattage of 18W (LED lamp + driver) with minimum 1100 lumen output , high efficiency crystalline solar panel of 12V, 75Wp and certified IEC 61215 and 12V,75Ah @ C10 tubular lead-acid battery with BIS approval with 3 days autonomy. The charge controller shall provide reverse polarity and short-circuit protection using auto-resettable fuse. Temperature compensated charging of the battery must be provided . The battery should be housed in a weather proof box .The luminaire arm and panel mounting frame must also be powder coated. Th solar system should be mounted on a 6.0mtrs height circular G.I. pole. The cost of LED Light Fixture with LED Lamp, Solar Panel, Battery , GI 6 mtr Pole(oct) , Arm of required length, required cu wiring,earth wire , switch , MCB with its weather proof box,etc and their Installatin complete in all respect including CC foundation minimum size 350mm x350mmx500mm with 300x300x10 mm MS plate including nut bolt as required and complete in all respect as per direction of Engineer in Charge .	20	Each				
3	NSR	Supply, fixing, testing & commissioning of the Gate Lighting Fixture equivalent to Philips cat no. Metronomois CDS 570 including 1 no. 150 watt CDM-T MH lamp along with ignitor, necessary brackets, including connections ,required wiring ,conduit , as required.	4	Each				

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Sl.No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
4	NSR	Supply, fixing, testing & commissioning of the bollard Lighting Fixture equivalent to Philips Cat. No. BCP 151 Bollard including 1 no. 8 watt LED lamp of approved shade along with ignitor, necessary brackets, including connections, wiring, conduit ,civil works as required and complete in all respect as per direction of engineer in charge.	15	Each				
		TOTAL C/F TO SUMMARY						
		<b>GRAND TOTAL</b>						

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Sl. No	DSR Code No_0.6 20014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		<b>LIFTS</b>						
1		Supplying, installation, testing and commissioning of 13 Passenger (884 Kg) Gearless lifts having contract speed of 1.5 MPS serving different floors in the lift shaft as per detailed specifications and as under:						
		Floor: 2B+S+4						
		Travel : 26Meters (approx.)						
		Stops and Opening : 7 Stops & 7 Opening						
		Controller: AC Variable voltage and variable frequency						
		Automatic rescue device complete with dry maintenance free batteries as required						
		Operation: Microprocessor based single automatic push button / duplex selective collective/ with/ without attendant						
		Power: 415V 3phase 50 HZ, 4-wire system						
		Type of door: a. Car: power operated center opening horizontal sliding, stainless steel scratch proof (Hairline finish) b. landing doors: stainless steel scratch proof (hairline finish) with 2hr fire rating						
		A hand rail not less than 600mm long at 900 mm above floor level to be fixed adjacent to control panel in the lift car						
		Voice announcement system in the car to announce the position of the elevator in the hoist-way as the car passes or stops at a floor served by the elevator						
		Lift as per Above description complete as required.	2.00	Set				
		<b>TOTAL COST FOR LIFT WORK</b>						

Addition -----  
Deletion -----  
Correction -----  
Overwriting -----

SUMMARY OF FIREFIGHTING WORKS			
Sl.No.	Description	Quoted amount in Figures (in Rs.)	Quoted Amount in words (in Rs.)
1.	<b>SUBHEAD-I(A &amp; B):</b> Fire Pump Works (Sprinkler + Hydrant)		
2.	<b>SUBHEAD-II (A ) :</b> Piping For Fire Fighting System (Sprinkler+ Hydrant)		
3.	<b>SUBHEAD-III(A)</b> Sprinkler System		
4.	<b>SUBHEAD-IV(A):</b> Fire Extinguishers		
5.	<b><u>SUBHEAD-V (A):</u></b> Electrical Works - Fire		
	<b>TOTAL AMOUNT IN RS.</b>		

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		<b>BOQ FOR FIRE FIGHTING WORKS</b>						
1.		<b>SUBHEAD-I(A): FIRE PUMP WORKS FOR HYDRANTS &amp; SPRINKLER SYSTEM</b>						
	Note:	1. NOC from fire authority shall be in the scope of Contractor . Only fee paid to the fire authority shall be reimbursed against the submission of the receipt and nothing shall be paid extra.						
		2. All the Fire Fighting works shall be done in compliance of Fire Fighting authority requirement.						
1.1	NDSR	<b>FIRE PUMPS - ELECTRICAL</b>						
		Supply ,installation, testing and commissioning of electrically driven fire-pump, suitable for automatic operation consisting of the following :  Horizontally mounted end suction centrifugal pump, suitable for operation on 415 volts $\pm$ 10%, 3 phase, 50 HZ A.C supply, complete with flexible coupling and coupling guard as required. Fire pump having C.I. body, bronze impeller and S.S. Shaft with mechanical seal, capable for delivering 2280 Lpm water at 85 mts. head to ensure a minimum pressure of 3.5 kg/cm <sup>2</sup> at the Terrace/farthest hydrant. Complete with necessary pressure gauge with gun metal shut off cock on delivery side. The pump should meet the condition of Local fire Authority). Squirrel cage induction motor, TEFC type of suitable rating for operation on 415 volts, 3 phase 50 HZ A.C supply, for the above pump with synchronous speed of 2900 RPM. Common base	2	Set				

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		plate for above pump and motor from M.S. Channel as required size. Suitable PCC/RCC foundation with plaster, Anti-vibration arrangement of cushy foot mountings.						
1.2	NDSR	<b>FIRE PUMPS – DIESEL</b> Supply, installation, testing and commissioning of Diesel Engine driven fire pump suitable for automatic operation comprising of the following : Horizontally mounted end suction centrifugal pump, suitable for operation on 415 volts $\pm$ 10%, 3 phase, 50 HZ A.C supply, complete with flexible coupling and coupling guard as required. Fire pump having C.I. body, bronze impeller and S.S. Shaft with mechanical seal, capable for delivering 2280 LPM of water at 85 mts. head to ensure a minimum pressure of 3.5.kg/cm <sup>2</sup> at the terrace/farthest hydrant. Complete with necessary pressure gauge with gun metal shut off cock on delivery side. The pump should meet the condition of Local fire Authority/NBC).	1	Set				
		Water Cooled Diesel engine of speed 1800 RPM for the above pump with automatic starting mechanism and other accessories including fuel tank (fabricated from 3mm MS sheet painting with two coats of synthetic enamel paint over a coat of primer) capacity 600 lts (fitted with Magnetic oil level indicator, MH with cover drain valve, Air vent hydraulic pumps including structural supports (painted with approved shade), 2 Nos. x 12 volt battery, heat exchanger with necessary piping connections & fittings flexible coupling, coupling guard & exhaust pipe ( 150 mm diameter M.S. Class 'C' diesel pump exhaust pipe including all fittings, like						



Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		bends, tees etc. clamps / structural steel supports. The pipe shall be provided with 75mm thick fiberglass insulation & covering the insulation with 500 g polythene sheet giving proper overlaps & sealing the joints with suitable adhesive compound. The pipe shall be provided with 24 gauge aluminum sheet cladding.) As per drawing complete as required. Common base plate for above pump and Diesel Engine from M.S. channel of required size.						
		Suitable PCC/RCC foundation with plaster, Anti-vibration arrangement of cushy foot mountings. 24 volts, 180 AH Lead battery - Exide make ( 12 volts- 2 Nos) with boost / trickle charger for starting the engine automatically as required.						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.3	NDSR	<b>JOCKEY PUMP:-</b>  Supply, installation, testing and commissioning of jockey pump comprising of the following : Horizontally mounted end suction centrifugal pump, suitable for operation on 415 volts $\pm$ 10%, 3 phase, 50 HZ A.C supply, complete with flexible coupling and coupling guard as required. Fire pump having C.I. body, bronze impeller and S.S. Shaft with mechanical seal, capable for delivering 180 LPM of water at 85 mts. head to ensure a minimum pressure of 3.5 kg/cm <sup>2</sup> at the terrace/farthest hydrant. Complete with necessary pressure gauge with gun metal shut off cock on delivery side. The pump should meet the condition of Local fire Authority). Squirrel cage induction motor TEFC type for operation on 415 V, 3 phase 50 HZ AC supply for the above pump with a speed of 2900 R.P.M. with flexible coupling and coupling guard etc. as required. Common base plate for above pump and motor from M.S. channel as required size. Suitable cement concrete foundation with plaster, Anti-vibration arrangement of cushy foot mounting.	1	Set				
1.4	NDSR	Pressure Switch						
1.4.1		Supplying, installing, testing and commissioning 0 to 12 Kg/ cm <sup>2</sup> ON/OFF pressure switch in delivery line of pump along with control wiring for auto starting and auto stopping of hydrant / sprinkler and jockey pumps. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.	4	Nos.				

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.5	NDSR	Pressure Vessel Providing, fixing, testing and commissioning of pressure vessel (450 mm dia & 2000 mm height) for pressurization of fire system complete with pressure switches with isolation valves, pressure gauge with isolation valve, valves at outlet / drain to operate as per operating sequences including 25 mm dia drain valve, air release valve with stop cock on the top Duly painted from inside and outside complete as required. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.	1	No.				
1.6	NDSR	Providing, fixing, testing & commissioning of resilient rubber lined single arch vibration eliminators suitable for raw water up to 45 deg. C temperature, working pressure 8.8 Kg/cm <sup>2</sup> and test pressure 14 Kg/cm <sup>2</sup> . It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.						
1.6.1	NDSR	200 mm dia	3	Nos.				
1.6.2	NDSR	150 mm dia	3	Nos.				
1.6.3	NDSR	80 mm dia	2	Nos.				
1.7	NDSR	Supply, installation, testing, trial run and commissioning of hydrants. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.						
1.7.1		Internal hydrants/landing valves generally as specified and all complete with:	15	Set				

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Supply, Installation, Testing & Commissioning of Double headed, Gunmetal ISI marked oblique pattern hydrant landing valve with 80 mm dia flange inlet and 63 mm dia instantaneous type female out let complete with gunmetal cap and G.I chain twist release type plug and all accessories as per IS:5290-1983						
		Providing & fixing swinging type First Aid hose reel in red colour with 36 mts long and 20 mm dia heavy duty rubber water hose, 20 mm dia globe valve stop cock, terminating with G.M. coupling & nozzle of 5mm outlet with shut off valve confirming to IS 8090 - 1976 complete with drum and brackets for fixing on wall, bolts & nuts conforming to IS:884-1969 complete as required.						
		Providing & fixing Non percolating flexible hose (RRL type – A) ISI marked (IS:636 Type A) 63 mm dia x 15 m long complete with ISI marked Male and female coupling (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 Sq.mm. copper wire. bursting pressure not less than 22 Kg/Sqcm. (two nos. for each hydrant-valve)						
		Providing & Fixing of standard short size 63mm dia. Stainless Steel branch pipe with gun metal nozzle of 20 mm nominal bore outlet with instaneous type 63 mm dia coupling complete & confirming to IS:903						
		Providing and fixing standard firemans axe with heavy rubber handle.						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Providing & Fixing of MS door made up of 16 gauge MS Sheet capable of accommodating fire hose reel, landing valve, hose pipes, fittings, 1 No. CO2 & 1 No. Dry powder type portable fire extinguishers & accessories. The door shall have a front glass with lock and key arrangement & shall be painted with one coat of primer & two coat of finished stove enameled post office red colour paint & "FIRE HOSE" written on front. (Approx. size of door: 1200 mmx2100 mm )						
1.7.2	NDSR	External hydrant valve, IS marked of gunmetal with generally as specified and as required all complete.	3	Set				
		Supply, Installation, Testing & Commissioning of Double headed, Gunmetal ISI marked oblique pattern hydrant landing valve with 80 mm dia flange inlet and 63 mm dia instantaneous type female out let complete with gunmetal cap and G.I chain twist release type plug and all accessories as per IS:5290-1983						
		Providing & fixing Non percolating flexible hose (RRL type – A) ISI marked (IS:636 Type A) 63 mm dia x 15 m long complete with ISI marked Male and female coupling (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 Sq.mm. copper wire. bursting pressure not less than 22 Kg/Sqcm. (two nos. for each hydrant-valve)						
		Providing & Fixing of standard short size 63mm dia. Stainless Steel branch pipe with gun metal nozzle of 20 mm nominal bore outlet with instaneous type 63 mm dia coupling complete & confirming to IS:903						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Providing & Fixing of M.S. fire hose cabinet (750x600x250mm) made out of 16 gauge M.S. sheet capable of accommodating landing valve, hose pipes, fittings & accessories. The box shall have a front glass door with lock and key arrangement & shall be painted with one coat of primer & two coat of finished stove enameled post office red colour paint & "FIRE HOSE" written on front.						
1.8	NSR	Supply, installation, testing and commissioning brass orifice plates in pipelines to reduce pressure from 8 kg. to 3.5 kg/sq.cm. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.	14	Nos.				
1.9	NSR	Providing, installing, testing & commissioning of fire brigade inlet connection (fire department connection) consisting of 4 Nos. 63 mm dia instantaneous inlet arranged on a 50 mm dia header, 1 No. 150 mm diameter sluice valve, 1 No. 150mm dia. Non-return valve and wall mounted box of M.S. construction made out of 16 gauge MS Sheet with glass door to house the above mentioned components. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.	1	Set				

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
1.10	NDSR	Providing, installing, testing & commissioning of fire brigade draw out connection (fire department connection) with suction pipe MS class 'C' 100 mm dia. & 100 mm dia. foot valve & steel chain including wall mounted box M.S. construction made out of 16 gauge MS Sheet with glass door to house the above mentioned components. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge. (to be connected to static water tank)	1	Set				
1.11	NDSR	Providing and fixing inlet breeching having C.I. body Two way gun metal 63 mm dia instantaneous inlets conforming to IS 903 fitted with non-return valves, 25 mm dia gun metal drain cock, blank cap, brass chains and 150 mm dia flanges with all accessories suitable for local fire tender complete as required in Down Comer Riser	1	No.				
		TOTAL C/F TO SUMMARY						
		<b>SUBHEAD-I(B): PIPING FOR FIRE FIGHTING SYSTEM FOR HYDRANT &amp; SPRINKLER SYSTEM</b>						
1.12	18.59	Providing and fixing C.I. double acting air valves of approved quality with bolts, nuts, rubber insertions etc. complete ( The tail pieces, tapers etc. if reqd. will be paid separately)						
1.12.1	18.59.1	50 mm dia.	3	Nos.				
		TOTAL C/F TO SUMMARY						
2.		<b>SUBHEAD-II(A):PIPING FOR FIRE FIGHTING FOR HYDRANT &amp; SPRINKLER SYSTEM</b>						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.1	NDSR	Supply, fabrication , laying, testing & commissioning of heavy grade IS marked & as approved make list black mild steel piping confirming to IS 1239/3589 complete with all fittings, pipe supports, clamps etc. as approved with welded jointing for external hydrant system in ground including excavation, refilling the trench & providing cement concrete blocks as supports, not exceeding 3 meters centre to centre. These pipes shall be provided with 2mm thick weather proof anticorrosive treatment (pypkote tape) as per IS 10221. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.						
2.1.1	NDSR	150 mm nominal bore	99	Rmt				
2.2	16.11	Supply, fixing, testing and commissioning of following valves, gauges and strainers for condenser water circulation as per specifications:-						
	16.11.1	Butterfly valve (manual) with C.I body SS disc nitrile sheet & O ring & PN 16 Pressure rating as specified 100 mm nominal bore						
2.2.1	16.11.1.4	100 mm dia.	4	Nos.				
2.2.2	16.11.1.2	150 mm dia.	10	Nos.				
2.2.3	16.11.1.5	80 mm dia.	3	Nos.				
2.2.4	NDSR	25 mm dia.	14	Nos.				
2.2.5	16.11.1.1	200 mm dia.	6	Nos.				



Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.2.6	16.11.1.7	50 mm dia.	4	Nos.				
2.3	16.11.2	Non - return valve with dual plate of CI Body SS plates vulcanized NBR seal flanged end & PN 16 rating as specified.						
2.3.1	16.11.2.4	100 mm dia.	2	Nos.				
2.3.2	16.11.2.2	150 mm dia.	9	Nos.				
2.3.3	16.11.2.5	80 mm dia.	3	Nos.				
2.4	NDSR	Supply, installation testing & commissioning double flanged MS pot strainers with M.S. body and SS 40-grade mesh strainer. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.						
2.4.1	NDSR	Size 200 mm dia.	3	Nos.				
2.5	NDSR	Supply, fabrication & laying heavy grade IS marked & as per approved make list black mild steel piping confirming to IS 1239/3589 complete with all fittings, pipe supports, clamps & painting with one coat of primer & two coat of finished stove enameled post office red colour paint etc. as approved with threaded /welded jointing for Wet Riser/Sprinkler System. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.						
		Note:						
		Threaded joint upto 50mm diameter pipe.						
		Welded joint above 50mm diameter pipe.						

Addition -----  
Deletion -----  
Correction -----  
Overwriting -----

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
2.5.1	NDSR	200 mm nominal bore	20	Rmt				
2.5.2	NDSR	150 mm nominal bore	232	Rmt				
2.5.3	NDSR	100 mm nominal bore	200	Rmt				
2.5.4	NDSR	80 mm nominal bore	292	Rmt				
2.5.5	NDSR	65 mm nominal bore	125	Rmt				
2.5.6	NDSR	50 mm nominal bore	335	Rmt				
2.5.7	NDSR	40 mm nominal bore	203	Rmt				
2.5.8	NDSR	32 mm nominal bore	179	Rmt				
2.5.9	NDSR	25 mm nominal bore	1,729	Rmt				
2.6	NDSR	Providing and fixing dial type pressure gauge with isolation cock and copper pipe on main header Dial diameter 100 mm celebration 0-14 / sq. cm.	23	No.				
		TOTAL C/F TO SUMMARY						
3.		<b>SUBHEAD-III(A): SPRINKLER SYSTEM</b>						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.1	NDSR	Supply, installation, testing and commissioning of 150 mm dia Installation Control Valve inclusive of 2 nos 150 mm dia Butterfly Valve, strainer, Alarm Valve with Water Motor Gong, Pressure Gauges, Test Lines with Ball Valves with necessary MS Class "C" piping with threaded fittings of required sizes. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.	2	Set				
3.2	NDSR	Supply, installation, testing and commissioning of 150 mm dia Zonal Control Valve inclusive of 1 nos 150 mm dia butterfly valve, 150mm diam. non return valve, Flow Switch, water pressure gauges & 25 mm dia. Auxiliary Drain valve with sight glass with necessary MS Class "C" piping with threaded fittings of required sizes. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.	7	Set				
3.3	NDSR	Providing, fixing, testing and commissioning of quick response 15 mm dia. gunmetal quartz bulb type sprinkler head to operate at 68 degree centigrade including two piece of adjustable C.P. Rosset complete as required. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.						
3.3.1	NDSR	Side wall type	15	Nos.				
3.3.2	NDSR	Pendent / Upright type	1331	Nos.				

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
3.4	NDSR	Supply, Installation, Testing & Commissioning of steel flexible heavy extension pipe 25mm diameter with complete accessories & with supporting arrangements	300	Each				
		TOTAL C/F TO SUMMARY						
<b>4.</b>		<b>SUBHEAD-IV(A): FIRE EXTINGUISHER (NON SCHEDULED ITEMS)</b>						
4.1	NDSR	Providing, storing, handling, shifting, installation, testing and commissioning of halon free portable fire Extinguishers as described below:						
4.1.1	NDSR	4.5 kg carbon dioxide extinguisher, IS marked, with high pressure discharge tube, horn, control valve, CCE approved cylinder	26	Nos.				
4.1.2	NDSR	6 kg Mono Ammonium Phosphate (ABC) type cartridge operated extinguishers	17	Nos.				
4.1.3	NDSR	9 kg Mono Ammonium Phosphate (ABC) type cartridge operated extinguishers	2	Nos.				
4.2	NDSR	Providing and fixing signage printed on photo luminescent U1000 aluminum sheet of 1.0 mm (+-10%) containing Lumigen II as base chemical, covered under UV stabilized coating and of appropriate size including fixing on wall, door, ceiling etc. with proper clamps, hangers, cleats, anchor fasteners etc. complete in all respects as directed by Engineer-in-charge.	750	Square Inch				
		TOTAL C/F TO SUMMARY						
<b>5.</b>		<b><u>SUBHEAD-V (A): ELECTRICAL WORKS</u></b>						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.1	NDSR	FIRE FIGHTING PANEL						
		Supply, installation, testing and commissioning of firefighting panel suitable for 415V, 3 phase, 4 wires, 50 HZ power distribution system. The panel shall be floor mounted sheet metal sheet enclosed, dust and vermin proof conforming to IP-52, Compartmentalized design, fabricated out of 14SWG sheet steel, painting, earthing numbering, danger plate as per specifications and drawings, flush front with Aluminum bus bars, separate earthing to be provided throughout the length of the panel. The incoming and outgoing feeder breakers, fuses, indicating lamps etc shall be accommodated in modular multitier arrangement. The painting shall be done as per relevant IS codes/as specified in the specifications. Adequate size cable alley shall be provided all round the panel and in the back for each cable bending and termination.						
		The panel shall be fabricated by TAC/Fire authority approved vendor. The outgoing feeders inside the panel shall be connected through solid bus bars. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge. Bus bars shall be provided with heat shrinkable sleeves and shall be colour coded . The panels shall be suitable for cable entry from bottom/ top. The minimum fault rupturing of all incoming and outgoing switches/breakers shall be 35KA. The panels shall be fabricated after the approval of fabrication drawings comprising of :	1	Set				
A)		INCOMER						
(i)		1No. 250A TPN MCCB (35 KA)						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
(ii)		<b>METERING &amp; INDICATION</b> 1 set of R,Y,B phase indicating lamps Digital Multifunction meter for Voltage, Current & KW with selector switch. Each with 3nos. Of 2A SP MCB & 3nos 250/5A CTs rating BUS-BAR 1 Set of 300A TPN Aluminum Bus Bar with colour coded PVC Sleeves						
B)		OUTGOINGS						
(i)		3 Nos. 200A TPN MCCB (35 KA) 4 Nos. 40A TP MCCB (20 KA) 2 No. S/D starter with self-illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 90 HP Motor or as required. 1 No. DOL starter with self-illuminated Push button for ON & OFF and suitable rating of contactor and O/L relays, suitable for 7.5 HP Motor or as required.						
(ii)		1 No. space for S/D starter with self-illuminated Push button for ON & OFF. 1 No. space for DOL starter with self-illuminated Push button for ON & OFF. AMF Control & Starter for 90 HP Diesel Engine complete with Contactors, Fuses, MCBs & relays of suitable rating, as required. Connector Block/Strip of suitable no. of pairs complete with wiring upto all Starters, for parallel operation from control desk.						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
(iii)		Contractor shall include in his rates for providing level controllers, switches, wiring, cabling from level controller to panel etc. complete as required to operate the system automatic/manual and pump shall be protected against running dry.Dewatering Pump 1 working & 1 standby, with 2 No. - 16A TPN MCCB (16 KA) with suitable HP fully automatic star/delta starter with overload protection, current sensing type single phase preventer complete with all accessories and internal wiring required for automatic operation, level sensor, selector switch for local/remote, auto/manual OFF operation as per direction of Engineer in Charge.						
(vi)		Three No. pressure Switch or as required Wiring from pressure switch to starter - Lot electrical hooter with ON/OFF switch for the above pumps running indication Wiring from pressure switch to starter -1 Lot for above pumps						
(v)		Suitable rating TPN MCCB for Diesel Engine Control panel						
(viii)		Set of control system to make the system automatic /BMS compatible as per functional as requirements.						
(ix)		Control Panel for Diesel Engine comprising: Auto/Manual selector switch & 3 attempt starting device, timers and relays as required, push buttons, start/stop in manual mode.						
(x)		Indication lamp for High/Low Lub. oil pressure, High Water Temp. and Engine ON Indication.						
(xi)		Battery charger suitable for 24V DC with boost and trickle selector switch, with digital panel meter for AC, DC voltage and Ammeter for battery charging current						

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
C		necessary potential free contact for indication of diesel engine driven fire pump running/fault in the addressable fire alarm panel/BMS Panel.						
		All standard relays and accessories for automatic operation of diesel engine. The diesel engine driven fire pump shall start automatically in the event of pressure drop beyond preset limit or mains failure or failure of electrical driven pumps to start						
		One (1) No. pressure Switch.						
		Wiring from pressure switch to Diesel engine control panel.						
		One (1) No. 150A TPN MCCB (35KA).						
		Any other accessories as required to complete in all respect above Fire panel requirement as per direction of engineer in charge						
		Note:- CABLE CONNECTION						
		Control Scheme as per specification						
		Following provisions to be made in the fire panel:						
		Audio visual alarm & indications having disconnect/reset facility with a range of 1/2 km. Annunciator to be provided in the Fire panel with hooter and acknowledge, test and reset buttons as required. The indication shall come on when electrical driven pump set fails to start on pressure drop or when there is power failure during pressure drop.						
		Facility for mode selection ie auto or manual test & local/remote.						



Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
		Protection failure & control cabling. Panel shall be interlocked in such a way when fire pump starts on pressure drop in the header, supply to working VRV A/c panels is disconnected. Necessary Control wiring upto A/c panels , relevant relays & contactors etc. as required complete in all respect shall be in the scope the Fire contractors (Control wire shall be paid extra). Remote indication of ON/OFF/TRIP shall be provided through potential free contact. Provision of remote starting/stopping (manuals) of the engine shall be made. All pumps operation shall be controlled by flow switches. The logic of control panel based on specifications described above TS. All pumps shall be working automatically or manually.						
5.2	NDSR	POWER, CONTROL CABLING & EARTHING						
		Supply, laying, testing and commissioning of power and control cabling, as per Standard specification including end termination as required. It should be complete as per manufacturer's specifications & as directed by Engineer- in-charge.						
5.2.1	NDSR	Power Cabling (XLPE) insulated and PVC sheathed, armoured, Aluminum Conductor of 1.1 KV grade on existing cable trays).						
5.2.1.1	NDSR	3.5C x 120 Sq. mm	60	Rmt				
5.2.1.2	NDSR	4C x 16 Sq. mm	60	Rmt				

Sl. No	DSR Code No_ 2014	Description	BOQ Qty.	Unit	Rate in Figures	Rate in Words	Amount in Figures	Amount in Words
5.2.1.3	NDSR	4C x 10 Sq. mm	30	Rmt				
5.2.1.4	NDSR	3C x 6 Sq. mm	30	Rmt				
5.2.2	NDSR	Control Cabling ( PVC insulated and PVC sheathed, armoured, Copper Conductor of 1.1 KV grade on existing cable trays).						
5.2.2.1	NDSR	5C x 1.5 Sq. mm	150	Rmt				
5.2.2.2	NDSR	Supplying and making end termination with brass compression gland & Al. lugs for following sizes of PVC insulated, PVC sheathed/XLPE Al. Conductor cables of 1.1 KV grade as required.						
		(a) for main pump cable(3.5C x 120 Sq. mm )	2	Sets.				
		(b) for main pump cable(3.5C x 120 Sq. mm )	2	Sets.				
		(c) for jockey pump cable(4C x 16 Sq. mm )	2	Sets.				
		(d) for dewatering pump cable(3C x 6 Sq. mm )	4	Sets.				
5.3	NDSR	Earthing Strip / Wires.						
5.3.1	NDSR	Supply and fixing of vertical down conductor 32 x 6 mm copper strip etc. on approved surface for earthing complete in all respects	30	Rmt				
		Contractor shall include in his rates for providing level controllers, switches, wiring, cabling from level controller to panel etc. complete as required to operate the system automatic/manual and pump shall be protected against running dry.						
		TOTAL C/F TO SUMMARY						
		<b>GRAND TOTAL (Rs.)</b>						