STATE BANK OF INDIA		
Project Name –Construction of Residential Twin Towers at Block No 41, Gift City, Gandhinagar, Gujarat		
SUMMARY OF PROJECT COST		
Sr. No.	**Particulars**	**Amount In Rs**
A i	**CIVIL WORK**	
A ii	**PLUMBING WORK INTERNAL & EXTERNAL**	
B	**FIRE FIGHTING WORK, FIRE ALARM, PA SYSTEM.**	
C	**ELECTRICAL INTERNAL, EXTERNAL, LIFT , DATA & TELEPHONE WORKS**	
D	**SECURITY SYSTEM WORKS – BMS, CCTV, BOOM BARRIER WORKS**	
E	**GARBAGE CHUTE**	
F	**Puzzle Car Parking 96 No. Car**	
G	**HVAC SYSTEM**	
	GRAND TOTAL :-	
Notes:		
1	Above Amount is exclusive of GST	

Construction of Residential Twin Towers at Block No 41, Gift City, Gandhinagar, Gujarat					
Ai) ABSTRACT SHEET OF CIVIL WORKS					
SR. NO	**DESCRIPTION OF WORK**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
	Preamble				
	Rate shall be inclusive of following;				
i	The serviceable and unserviceable materials shall be stacked separately and properly in the designated place and to be Stacked/Stored at designated till the disposal / reuse of the same. The debris, excess materials is to be carted outside the premises and disposed off at the Municipal Corporation / GIFT City designated place up to any lead, lift and level by the Contractor at his own cost.				
ii	For all the civil work 53 grade OPC cement of approved make to be used. For Plastering & waterproofing works PPC cement of approved make can be used. (Approved Make: Ambuja, Birla, Ultratech, ACC and L&T or as approved by SBI)				
iii	Crush Sand to be used shall be VSI quality.				
iv	All the civil work , whether new or repair, must be cured for at least 7 days preferable by ponding, using gunny bags etc.				
v	For all work, water to be used must be fresh, potable and pure without any salinity and turbidity.				
vi	The rates quoted for all the items of the BOQ shall include the following specifications: -				
a	All the works are to be carried out at all heights and locations i.e. from foundation level, Ground Floor of the building up to the Over Head Water Tank roof slab or Mumty roof slab, as applicable.				
b	Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to any height (entire height) of the building structure made out of 40 mm dia. M.S. tubes, 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding including the working platform etc. and maintaining it in a serviceable condition for the entire required duration as approved and directed by the SBI/APMC & removing it thereafter.				
c	The scaffolding system shall be stiffened with bracing, runners, connection with the building fascia etc. wherever required & including providing vertical supports which shall be sound and strong, tied together with horizontal steel / metal support pieces over which scaffolding planks shall be fixed properly & secured at required locations including the essential safety features for the workmen etc. complete as per directions and approval of SBI/APMC. Note: - The scaffolding shall not be removed without prior approval of SBI/APMC .				
d.	Providing & fixing temporary support arrangements such as Steel Props (Up to any number whenever and wherever as directed by the SBI/APMC) to support the structure provisionally during the project duration for all trades of work, etc. and maintaining the props in position till required & as directed by the consultant including other safety elements such as bracing, steel angles, working platforms, plates etc., which shall be provided & considered in the quoted rates for the areas in the vicinity in adequate numbers as directed. All trades of works indicated herein under shall include all leads & lifts & working up to any heights, depths & levels.				
e.	Providing & fixing safety net around the work so that loose plaster/ concrete does not cause damage to the property or any human being, if necessary and removing the same after completion of work.				
f.	Providing and covering entire external surface with Hessian cloth curtains through out the duration of project and carefully removing the same after completion of work.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
g.	Providing all type of PEE (Personal protective Equipment) to the workforce such as safety shoes, safety helmets, reflective safety jacket, full body safety harness, goggles, gloves, etc. complete for all types of workforce engaged on site for execution of the work.				
h	The quoted rate should include cost of necessary scaffolding, staging, centring, shuttering etc. as required for execution of the job at any height and location including removal of same. The scaffolding should be erected and anchored into the concrete members with help of expandable bolts, which are to be cut as the scaffolding is removed, no wall is to be punctured, at no extra cost to the Bank.				
i	Rates shall be inclusive of all enabling works like tower cranes all safety measures, aerial lift, man & material lift, Temporary lift, scaffolding, Cup lock system, labour camp, storages, godowns, all required permissions from local governing respective authorities to carry out the works, all insurances, all licenses, administration, all S.H.E. (Safety, Health, Environment) related measures, security , watch and ward measures, barricades other than specified, traffic management, tree protection, property damage repairs, water, electricity, DG as per requirement, all tools, machineries, vehicles, etc. Complete.				
j	Before starting of Excavation NGL levels shall be got verified and approved by SBI/APMC and RL levels to be at the top of different layer and based on the difference levels excavation qty shall be calculated. Area for excavation shall be arrived . Excavation measurement must be only P.C.C. area around Foundation/Raft as per direction from SBI/APMC .				
k.	All rates should be inclusive all loading, unloading, shifting,all leads, lifts, sorting, transportation, labours, tools, plants, machinery etc. complete				
l	All the above-mentioned points including the requisite elements & items as mentioned shall be considered included within the quoted rates of the line items of the BOQ and nothing extra would be paid on this account.				
m	Though Locations of execution are mentioned for specific items, Contractor have to execute those all items at all required/necessary locations at no extra cost as per direction from SBI /APMC				
n	Contractors to be fully equipped with GIFT CITY regulations/guidelines available at their site and GIFT CITY guidelines/rules are to be followed by contractor till the completion of the project.				
o	Water test is mandatory before using for construction purposes and test results shall be submitted to Consultants / Bank. Test shall be carried out at Contractor's cost.				
p	The said plot shall be covered all around by MS pre coated sheet over Steel structural frame up to desired height, min. 6m, or as per GIFT City guidelines till the total tenure (Start to Completion) of project.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – A : EARTH WORK				
1	**Excavation in all kinds of soil, including soft murum, hard murum, Soft rock.**				
	Excavation in all kinds of soil, including soft, hard murum, soft rock, wet or dry, in loose and slushy condition including clearing the site removing shrubs, tree roots, rank vegetation etc., to the required level for foundations, trenches, pits, rafts, plinths, plinth area levelling, etc.; to required depth from existing ground level including carting away / disposing of unwanted excavated material, stacking suitable earth for backfilling and disposing off surplus excavated material off the site as per direction of the SBI/APMC at no extra cost; using mechanical/ electrical means such as poclain, JCB, rock breaker, chisel tools, compressor, dumper, dozers etc., bailing/pumping out water with required capacities with dewatering pump of required numbers to keep the site dry at all times at location as directed by APMC/ SBI , including making temporary stepping / sloping, sectioning, trimming, dressing of sides, levelling or grading including sprinkling of water cleaning, removing and excavating loose pockets and consolidating them by backfilling all as directed by SBI / APMC.				
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas for all lifts and heights / levels including getting out and disposal of excavated earth to the places approved by GIFT city/ Municipal authorities, as directed by SBI / APMC.				
i	From 0 to 6m Height	Cu m	33,670.00		
ii	From 6 to 18m Height	Cu m	59,370.00		
	(2) Qty. of Excavation is inclusive of side Slope and working space. Amount will be paid to the contractor only for excavation within plot area.				
2	**Excavation in all kinds of Hard rock or old foundation**				
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means in Hard rock or old foundation to required (any) depth/ heights and lifts over areas including carting away and disposing off excavated material off the site as per direction of the SBI/APMC at no extra cost; using mechanical/ electrical means such as poclain, JCB, rock breaker, chisel tools, compressor, dumper, dozers etc., bailing/pumping out water with required capacities with dewatering pump of required numbers to keep the site dry at all times at location as directed by APMC/ SBI , including making temporary stepping / sloping, sectioning, trimming, dressing of sides, levelling or grading including sprinkling of water cleaning, removing all as directed by SBI / APMC.				
	Hard Rock	Cum	400.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
3	**Close timbering over areas including strutting, shoring and packing cavities**				
	Close timbering over areas including strutting, shoring and packing cavities (wherever required) etc. complete. (Measurements to be taken of the face area timbered)	Sq m	1,935.00		
	All kinds of soil.				
4	**Providing , Filling and banking with outside Murum in foundations, trenches, plinths, area levelling**				
	Providing , Filling and banking in foundations, trenches, plinths, area levelling etc. in layers not exceeding 200mm in depth, breaking clods, watering, compacting each layer with vibrator/ compactor and at inaccessible places with wooden/steel rammers at optimum moisture content; dressing up embankments; if required, bailing/pumping out of water to keep site dry while back filling; cost includes conveyance of all materials, labour, machinery, mechanical mean such as dumpers, dozers, poclain/JCB for lifting from any height etc. taking permission of local authorities and paying royalty including density tests etc. Complete as per direction of the SBI/ APMC complete.				
	RL shall be taken for before laying of Murum and after completion of Laying and compaction of Murum and the difference in Levels shall be multiplied by Plan area to arrive on the actual qty after making necessary deductions,				
4a	Excavating, supplying and filling of good quality Murum (including royalty) by mechanical transport up to any lead including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation ; Item also include proctor density test etc. complete.	Cum	10,540.00		
4b	**Providing , Filling and banking with approved quality excavated earth available on site in foundations, trenches, plinths, area levelling**	Cu m	7,100.00		
	Providing , Filling and banking in foundations, trenches, plinths, area levelling etc. in layers not exceeding 200mm in depth, breaking clods, watering, compacting each layer with vibrator/ compactor and at inaccessible places with wooden/steel rammers at optimum moisture content; dressing up embankments; if required, bailing/pumping out of water to keep site dry while back filling; cost includes conveyance of all materials, labour, machinery, mechanical mean such as dumpers, dozers, poclain/JCB for lifting from any height etc. taking permission of local authorities if required including density tests etc. Complete as per direction of the SBI/ APMC complete.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
5	**Providing & Laying Dry Rubble Stone Soling of 23 to 30 cm thickness**				
	Providing & Laying Dry Rubble Stone Soling of 23 to 30 cm thickness using locally available stones 80mm to 150mm size, hand-packed and set on ends with interstices, voids filled tight with stone chips and screened with murrum/sand including sprinkling of water, compaction with mechanical vibratory roller compactor complete to satisfaction of SBI/ APMC & as per design , drawing including hand packing, watering, compacting etc. Complete.	Cum	1,700.00		
	TOTAL OF SECTION -A	**Rs**			
	SECTION B – ANTI TERMITE TREATMENT				
6	**Pre-constructional Anti termite Treatment**				
6	Providing pre-constructional anti-termite treatment by treating the bottom surface & sides of excavation in soil with plinth beams, plinth filling and periphery confirming as per IS : 8944 & IS : 6313 Part-II 1981 or any latest revision and furnishing 10 years guarantee in required proforma all complete. (Reference Specification- IS-6313 Part-II of 1981 and IS-IS-8944- 1978) Chemical used- Chemical name Trade Name Manufacturer Indian Standard Concentrations Chlorpyriphos 20% EC Cologuard Gharda Chemicals IS-8944- year-1978 1% Imidacloprid 30.5% SC Premise Bayer CIB 0.075% Treatment for Buildings with basement- The treatment will start after site survey, when the excavation is completed and before doing soling and PCC. The agency shall submit guarantee for Anti-termite treatment carried out by them for a period of 10 years on non-judicial stamp paper of required value as per format approved by the Bank. 1. Treatment to Soil below the RAFT :- The excavated area will be treated with chemical emulsion @ 5liter/ Sq mtr, before soling and PCC, the side wall of the pit up to height of raft will also treated with chemical emulsion. Roding will have carried out if required to facilitate chemical absorption. 2. Treatment to Soil along the Diaphragm / retaining wall :- The soil in immediate contact with retaining wall will be treated with chemical emulsion @ 5 litre /Sq mtr. The treatment will be done to back filling to facilitate continuity of chemical barrier. Roding will have carried out if required to facilitate chemical absorption. 3. Treatment of soil Along the External Perimeter of Building :- The External perimeter is treated by making holes with Iron bar @ 5 litre/running. The iron rod moved backward & forward to break up the earth and chemical emulsion is poured into the holes to establish continuity of chemical barrier. 4. Treatment to the Expansion Joints- The expansion joints are also treated to avoid termite entry from these expansion joints which are treated with the chemical emulsion @ 5 litre/running. (To Be Continue...)	Sqm	5,000.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	5. Treatment of the soil surrounding pipes and conduits :- This is also one of the important area from where the termite get easily entry, this area is treated @ 5liter/Sq mtr or linear mt. of chemical emulsion thoroughly, the total surrounding area is covered by pouring the chemical emulsion. Make : PCI/ Godrej/ Hi-care or equivalent as approved. 6. Treatment to internal Basement area's columns, footings horizontal & vertical surfaces, Below Trimix / parking floor horintal surfaces, vertical & horizontal surfaces of in contact with soil/ murum filling. (Internal basement Area's below ground floor)				
	Note:- Only plan area of basement shall be measured for payment				
	TOTAL OF SECTION -B	**Rs**			
	SECTION C – STEEL REINFORCEMENT				
	Providing & laying including straightening, cutting, bending and binding in position of steel reinforcement bars (Make :- SAIL, TISCON, RINL, JINDAL, JSW or as aprroved make) confirming to BIS, to correct shape and size as per detailed drawings, specifications and approved bar-bending schedules, Including preparing & Maintaining bar bending schedules in substructure / superstructure walls, columns, Shear Wall, slabs, beams, Diaphragm wall, retaining Wall, sloping slab & steps for staircase, chajja, lintel, patali, Fins, all types of Paradi, pergola, Including water tanks, Septic tank etc.; with correct size with Super fine micro concrete cover blocks and annealed binding wire (G.I.) of 18 gauge including dewatering to keep site dry etc. complete at all heights and leads to the satisfaction of the APMC/SBI. Measurement of steel is strictly as per I.S. Code. No extra for bending will be permitted. Weights shall be calculated by taking Average weight of 3 no. samples of steel rods and paid with lowest of average weight or theoretical weight . Rate includes Chairs, hooks, pins as well. Laps will be paid extra.				
	With TMT / Fe 500 bars conforming to IS : 1786/1139 High yield strength corrosion resistant bars with respect to physical properties and of approved chemical properties in all RCC work.				
7	**Reinforcement Steel Works up to plinth**				
	Steel reinforcement including for R.C.C. work including straightening, cutting, bending, placing in position, binding all complete up to plinth level.				
	Thermo-Mechanically Treated bars of grade Fe-500 / Fe-500D/ Fe-550/ Fe-550D or more.	MT	2,675.00		
8	**Reinforcement Steel Works Above plinth**				
	Steel reinforcement including for R.C.C. work including straightening, cutting, bending, placing in position, binding all complete above plinth level.				
	Thermo-Mechanically Treated bars of grade Fe-500 / Fe-500D/ Fe-550/ Fe-550D or more.	MT	2,955.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	Note:- Contractor shall provide Manufacturer's Test Certificates (MTC) at no extra cost for each lot with required nos of Tests to be carried out as specified in the said IS Code.				
9	**Reinforcement Couplers**				
	Providing and fixing parallel threaded couplers conforming to IS code on "Reinforcement Couplers as per required diameter of bar for Mechanical Splices of Bars for Concrete Reinforcement - Specification", to reinforcement bars of DEXTRA/ Unitech/ J. K. Industries/ Lokpal industries or as approved make by SBI/ APMC including threading, enlargement at connection by forging, protecting the prepared reinforcement bars and related operations as required to complete the works per direction of SBI / APMC.				
9a	Coupler for 16 mm diameter reinforcement bar	each	1,000.00		
9b	Coupler for 20 mm diameter reinforcement bar	each	57,000.00		
9c	Coupler for 25 mm diameter reinforcement bar	each	69,000.00		
9d	Coupler for 32 mm diameter reinforcement bar	each	20,000.00		
9e	16 to 20 mm dia reducer coupler	each	57,000.00		
9f	20 to 25 mm dia reducer coupler	each	57,000.00		
9g	25 to 32 mm dia reducer coupler	each	20,000.00		
	TOTAL OF SECTION -C	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – D : PCC / RCC WORKS				
	PREAMBLE : Contractor to ensure the following while quoting their rates for all Concrete/RCC work:				
a	All shuttering material used for concreting / RCC Work should be of good quality using waterproof plywood of minimum 12 mm thickness to ensure smooth finish.				
b	The scope of work under the items includes execution of work at all heights and location including all shapes, curved walls etc. Complete.				
c	In case there is bulging / minor honey combing is noticed after removal of shuttering, the contractor will have to rectify the work at his own cost. If in case Major Bulging/ Honey combing noticed on site, contractor has to do the rectification as per decision given by structural consultant at his own cost. The decision as to what constitute minor & major honey combing/ bulging is left to the SBI/APMC.				
d.	The Contractor will be responsible or arranging "design of concrete mix" through approved Institute at their own cost within the quoted rates only and will submit the report to SBI/APMC for approval. No extra payment shall be eligible on this account.				
e.	The flooring. raft & slab curing is to be done for minimum 7 days by ponding method only .				
f.	Checking of top level of slab & all structural components should be done at every floor & it should be within IS tolerance limit / SBI or APMC requirement.				
g.	Frequency of testing for all materials like sand, aggregates, cement, steel. Concrete should be as per IS standard. Testing should be done with material on site & from 3rd party agencies as per mentioned frequency. Refer Tender document for details.				
h	The use of admixture, fly ash & crush sand should be as per concrete mix design.				
i	Note:- For lesser/Higher grades of concrete only cement difference shall be calculated based on RMC batch report/Design mix report and same shall be added/deducted including ±15% (Contractor's Profit) from the respective item rates.				
j	Concrete mix design to be prepare by contractor & shall submit it to APMC/ SBI for approval. Upon approval of concrete mix design from SBI/ APMC contractor permitted to use the same for execution on site.				
k	All the Concrete shall be measured in Cum basis only.				
l	Rate shall inclusive of all heights, Sub structure, Superstructure, lift & leads, etc. Complete.				
10	**Providing and laying ready mixed or site batched design mix cement concrete for plain cement concrete**				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Ordinary Portland cement (Ultratech/ ACC/ Ambuja/ JK Cement/ Birla or approved equivalent make), admixtures (SIKA, Pidilite, CICO, FOSROC or as approved) in foundations, for bases of foundations, walls, plinths, rafts, plinth beams, floor slabs, pits to make up level etc.; coping, sill concrete, including cost of Centering and shuttering, compacting, curing, dewatering, cleaning, preparing surfaces, junctions, etc.; complete at all leads, levels, lift and depths (Sub structure & Super structure.) as per the drawing and to the satisfaction of the APMC/SBI in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete at any heights to site of laying, curing, Ponding at horizontal area's & Gunny bags/ hessian cloth for vertical surfaces, carriage for all leads, lifts, at any floors & heights; including the cost of centring, shuttering and finishing as per direction of the SBI / APMC; for the following grades of concrete. RMC: Lafarge/ Godrej/ Ultratech/ACC/ JK Cement/ Birla or as approved make.				
	All works up to plinth level :				
	PCC M-15 grade plain cement concrete (cement content considered @ 240 kg/cum) in foundations & plinth beams. & also in sub structure & Super structure for all Heights/Depths & leads. Concrete cube testing is compulsory.	Cum	1,560.00		
	Note:- All PCC Work payment shall be done only for plan area and not more than 150 mm Projection outside the structural member over the PCC.				
	All concrete should be Ready Mixed Concrete/Cast in Situ & all raw material used for concrete like Sand, Cement, Metal Plasticizer, Fly Ash etc. Should comply with the norms of Green Building & should be approved by APMC/ SBI . Only RMC should use for any concreting works.				
	Concrete mix design to be prepare by contractor & shall submit it to APMC/ SBI for approval. Upon approval of concrete mix design from SBI/ APMC contractor permitted to use the same for execution on site.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
11	**Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work**				
	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Ordinary Portland cement (Ultratech/ ACC/ Ambuja/ JK Cement/ Birla or approved equivalent make), including cost of admixtures (SIKA, Pidilite, CICO, FOSROC or approved equivalent) in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength and durability; including pumping of concrete to site of laying, curing, carriage for all leads, levels and heights/depths manufactured as per mix design for reinforced cement concrete work at all leads, levels and heights/depths, including pumping of R.M.C. from transit mixer to site of laying, Including cost of Centering and shuttering with plywood shuttering , strutting, scaffolding staging, Bracing, finishing the exposed surfaces properly, de shuttering and hacking the surfaces as desired curing etc. complete And with including making Cut outs, Holes, Core cut, Providing Sleeves Rungs with no extra cost Etc. (excluding steel reinforcement which is paid separately) including strutting, propping, staging, scaffolding at any heights, all leads, lifts etc. Complete as per direction of the APMC/SBI. All supporting, scaffolding & bracing material shall be of MS but excluding the cost of reinforcement as per direction of the APMC/SBI. RMC : Lafarge/ Godrej/ Ultratech/ACC/ JK Cement/ Birla as approved. Only RMC should use for any concreting works.				
	All works up to plinth level				
11a	Footing, Raft				
i	M40 Grade	Cu m	9,140.00		
11b	Shear Wall, columns				
i	M40 Grade	Cu m	2,000.00		
11c	Ramp Pardi, UG Tank Walls, retaining wall (part area)				
i	M35 grade	Cu m	435.00		
ii	M40 grade	Cu m	195.00		
11d	Slabs, Roofs, balconies, landings, Access platforms				
i	M30 grade	Cu m	2,227.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
11e	Sloping Slabs of ramps, staircase				
	M30 grade	Cu m	165.00		
11f	Beam, plinth Beam, Lintel Beam				
i	M30 grade	Cu m	621.00		
12	**All works above plinth level**				
12a	Shear Wall, columns, OH tank pardi				
i	M40 Grade	Cu m	2,870.00		
ii	M35 grade	Cu m	2,840.00		
iii	M30 grade	Cu m	3,565.00		
12b	Slabs, Roofs, balconies, landings, Access platforms				
i	M30 grade	Cu m	4,487.00		
ii	M35 grade	Cu m	25.00		
12c	Floor Beams at all levels/ Lintel beams/ Patli /Sill levels beams				
i	M30 grade	Cu m	3,982.00		
ii	M35 grade	Cu m	25.00		
12d	In sloping slabs and steps for staircase				
	M30 grade	Cu m	555.00		
12e	Chajja concrete				
	M30 grade	Cu m	165.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
13	**Diaphragm Wall**	Cu m	7,600.00		
	Providing & casting diaphragm walls with corner & end wall structure as per design & drawing including excavation of diaphragm wall from given level to founding level including polymer / bentonite clay for required thickness of wall with hydraulic grab & all the machineries includes placement & removal of stop end, reinforcement, M30 grade concrete casting for diaphragm wall by tremie pipe method including shuttering if require. Item also includes fixing water stopper at joints, reinforcement cage fabrication, binding, tying & lowering (reinforcement will be paid in respective items). Item also includes providing, fixing, Fabricating structural steel members like MS plates , angles, channels, stiffeners (Structural Steel will be paid in respective items). Item also includes providing & fixing anchors as per given specification & spacing with stressing & distressing, drilling, grouting etc. Complete. Item also includes disposal of bentonite clay off the site as per permission of local authorities , all leads, lifts, water stops at joints etc. Complete all as approved by SBI/ APMC (Excluding reinforcement & structural steel but including anchors, cement grouting), Casing shall be used for anchoring /grouting if required.				
Note:-					
i	Rig age should not be more than 3 years. Contractor should attach invoice of the same with matching Serial No./ Chasis no. & date. Of deployed machinery.				
ii	Rig Should have minimum 20 tonne capacity.				
iii	Rig should have free fall winch to excavate hard strata.				
iv	Rig should have vertical control, Koden test should be done. Result of the test shall be check as per IS Code.				
v	Rig should have free kelly suspended grab.				
vi	Verticality should be as per IS code.				
Vii	Water proofing guaranty shall be given by contractor against leakages.				
Viii	All temporary works like Guide Walls, PCC shall form the part of the above item and nothing extra shall be paid against these items				
	TOTAL OF SECTION -D	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – E : MASONRY WORK				
	Measurement shall be considered Per Cum or Per Sq m for respective items deduction shall be done for RCC Items as per relevant BIS/ standards				
	Rate shall inclusive of all heights, Sub structure, Superstructure, lift & leads, scaffolding etc. Complete.				
14	**Autoclaved Aerated Cement blocks (Grade1) masonry 100mm thick & above**				
	Providing and constructing 100 mm thick AAC block masonry in structure at all floor level, Having rough surface to receive the plaster effectively, blocks conforming to IS 2185 (Part-III) masonry with approved block laying polymer modified adhesive mortar per manufacturer's instructions, including providing RCC patli beam(Lintel) of 100mm thick at every 1.00m c/c with 2 nos. 8 mm dia Tor bars and 6 mm dia links at 300 c/c in cement concrete of mix M 20, required form work complete with raking out joints, curing, independent double legged scaffolding as per specifications etc. at heights, depths and leads as directed by PM to his entire satisfaction. (Patli beam/ Lintel Steel will be paid separately). Make: Siporex, Aerocon, Biltech, Ecolite, Ascolite Ultratech or equivalent as approved	Sq m	1,800.00		
15	**Autoclaved Aerated Cement blocks (Grade1) masonry 150mm thick & above for Below plinth level**				
	Providing and laying autoclaved aerated cement blocks masonry with 150mm thick & above AAC blocks in sub structure Below plinth level with M20 RCC band at sill level and lintel level with Having rough surface to receive the plaster effectively, blocks conforming to IS 2185 (Part-III) masonry with approved block laying polymer modified adhesive mortar required form work complete with raking out joints, curing, independent double legged scaffolding as per specifications etc. at heights, depths and leads all complete as per direction of APMC/SBI his entire satisfaction. (The payment of reinforcement shall be paid for separately). Make: Siporex, Aerocon, Biltech, Ecolite, Ascolite Ultratech or equivalent as approved	CUM	300.00		
16	**Autoclaved Aerated Cement blocks (Grade1) masonry 150mm thick & above for above plinth level**				
	Providing and laying autoclaved aerated cement blocks masonry with 150mm thick & above AAC blocks in super structure above plinth level with M20 RCC band at sill level and lintel level with Having rough surface to receive the plaster effectively, blocks conforming to IS 2185 (Part-III) masonry with approved block laying polymer modified adhesive mortar required form work complete with raking out joints, curing, independent double legged scaffolding as per specifications etc. at heights, depths and leads all complete as per direction of APMC/SBI his entire satisfaction. (The payment of reinforcement shall be paid for separately). Make: Siporex, Aerocon, Biltech, Ecolite, Ascolite Ultratech or equivalent as approved	CUM	5,450.00		
	TOTAL OF SECTION -E	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION - F : PLASTER WORK				
	Note:- All plaster works Measurements shall be considered only as Surface Areas of application and no extra/separate payment for dhar, kani, groove, strips, bands etc.				
	Only MS Scaffolds shall be used for the all Plastering , painting Works.				
	Rate shall inclusive of all heights, Sub structure, Superstructure, lift & leads, curing etc. Complete.				
	Providing External Double coat plaster about 20 to 25 mm average thickness cement plaster in two coats using approved sand in all positions, Heights/Depths & leads under layer 12 to 15mm thick (average) cement plaster 1:4 (1 cement : 4 sand) mixing waterproofing compound (MYK Laticrete, SIKA, Dr. Fixit, CICO, FOSROC or equivalent as approved) with Adhesive approved by APMC / SBI in the proportion approved by the manufacturer of the said waterproofing compound and Polypropylene Fiber (Recron - 3S Reliance IL or approved equivalent) in appropriate proportion and curing the same for not less than 2 days including and keeping the surface of base coat rough to receive sand faced treatment including Providing fibre-mesh at joints of brickwork and concrete and also while making good the chase cut for the purpose of electrification / Plumbing and a top layer 8 to 10 mm mm thick cement plaster 1:4 (1 cement : 4 sand) and finishing the surface by taking out grains in desired finish making grooves, Kani, Dhar, Drip Mould, strips, bands, finishing top of chajja in Slope etc. and curing for 14 days including preparing the surface and strictly double legged MS scaffolding including fiber mesh at all junctions of RCC & brickwork etc. Complete as directed by the APMC/SBI.				
17	**External Double coat plaster Below plinth (all shafts, ducts, cutouts etc.)**	Sqm	1,500.00		
18	**External Double coat plaster Above plinth**	Sq m	42,900.00		
19	**Single Coat 15mm thick plaster without Neeru in single coat**				
	Providing Single Coat Plaster with 15 mm average thick in single coat in cement plaster 1:4 (1 cement : 4 sand) with screen and washed River sand / Gujrat Sand to concrete or brick/Block surface in all positions, heights & leads including scaffolding curing, etc. complete. Including Providing fibre-mesh at joints of brickwork and concrete and also while making good the chase cut for the purpose of electrification / Plumbing , Filling all gapes along the wooden door frames, Making moist the surface before plastering & Curing the plaster surface for 15 Days. Rate includes adding polypropylene fibre (Recron - 3S Reliance IL or approved equivalent) of approved quality as per proportion specified in the manufacturers specifications, fiber mesh at all junctions of RCC & brickwork, making grooves, Kani, Dhar, Drip Mould, strips, bands, finishing top of chajja in Slope etc. etc. complete as directed by the APMC/SBI. (For Basement's columns, shear walls, rooms & staircase with lobby outer side etc.)	Sqm	10,410.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
20	**Internal cement plaster 12 mm avg. thickness in a single coat without neeru**				
	Providing internal cement plaster about 12 mm avg. thickness in a single coat in cement mortar 1:4 (1 cement : 4 sand) making the surface rough / finished without neeru finish with screen and washed River sand / Gujrat Sand to concrete or brick/Block surface in all positions, heights & leads including scaffolding(Single/ Double.), curing, etc. complete. Including Providing fibre-mesh at joints of brickwork and concrete and also while making good the chase cut for the purpose of electrification / Plumbing , Filling all gapes along the door frames, Making moist the surface before plastering & Curing the plaster surface for 15 Days. Rate includes adding polypropylene fibre (Recron - 3S Reliance IL or approved equivalent) of approved quality as per proportion specified in the manufacturers specifications, fiber mesh at all junctions of RCC & brickwork etc. complete as directed by the APMC/SBI. (For Flats, Lobbies, passage, Common Areas, Area backside Dado, cladding, Staircase etc.)	Sqm	89,260.00		
21	**Internal smooth finish cement plaster in a single coat**				
	Providing internal smooth finish cement plaster about 12 mm avg. thickness in a single coat in cement mortar 1:4 with cement with screen and washed River sand / Gujrat Sand to concrete or brick/Block surface in all positions, heights & leads including scaffolding (Single/ Double.), curing, with making the surface smooth finish with neat cement punning etc. complete. Including Providing fibre-mesh at joints of brickwork and concrete and also while making good the chase cut for the purpose of electrification / Plumbing , Filling all gapes along the door frames, Making moist the surface before plastering & Curing the plaster surface for 15 Days. Rate includes adding polypropylene fibre (Recron - 3S Reliance IL or approved equivalent) of approved quality as per proportion specified in the manufacturers specifications, fiber mesh at all junctions of RCC & brickwork etc. complete as directed by the APMC/SBI. (Lift Pit, Water tank walls etc.)	Sqm	1,045.00		
	TOTAL OF SECTION -F	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – G : MARBLE & GRANITE WORK				
	Note:- All Flooring/dado /cladding works: Measurements shall be the exposed, visible finished surface area of application. No extra/separate payment for Groove , chamfer edge Polish, moulding, rounding, nosing, overlapping portions, chiselling in walls, tile, curing etc.				
	Rate shall inclusive of all heights, Sub structure, Superstructure, lift & leads, etc. Complete.				
	Rate is including covering the Flooring, kitchen otta with POP / PVC Material as instructed by APMC / SBI & contractor is solely responsible for protection of flooring / tiling material & needs to be replace if found broken, cracked, shade variation at his own cost.				
22	**Granite Stone Vanity counters, window sills, facias**				
	Providing and fixing 18mm thick (with deviation of +/-2 mm thickness) thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for Vanity counters, window sills in single / double layer strips, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thk (average) base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups,, uniformly in line and level including making cut outs / openings for basins, rubbing, curing, moulding and polishing to edges to give high gloss finish , cleaning etc. complete at all levels as per as per design, drawing & direction of APMC/SBI his entire satisfaction. Jet Black, Cherry Red, Elite Brown, Cat Eye or approved equivalent shade & colour only. Note :- Only exposed visible area shall be considered for payment (Basic Rate= Rs 1800 / Sqm)				
	Granite of any colour and shade				
22a	Area of slab up to 0.50 sqm	Sqm	495.00		
22b	Area of slab over 0.50 sqm	Sqm	550.00		
23	**providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter**				
	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, cleaning etc. Complete at all levels as per direction of APMC/SBI his entire satisfaction.	each	180.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
24	**Granite Stone of work for wall lining up to any height**				
	Granite Stone of 18mm thick (+/-2 mm thickness) tile work for wall lining up to any height with approved special adhesive over 20 mm thick (Average) bed of cement mortar 1:3 (1 cement : 3 coarse sand), including High gloss polishing, pointing in white cement with an admixture of pigment to match the stone shade, epoxy touch ups, including , groves, rubbing, curing, moulding / chamfering and polishing to edges to give high gloss finish, cleaning etc. complete at all levels as per design, drawing & as per direction of APMC/SBI his entire satisfaction. Jet Black, Cherry Red, Elite Brown, Cat Eye or approved equivalent shade & colour as approved only. (Lift Cladding, Skirting, Riser, Door Frame etc.) (Basic Rate= Rs 1800 / Sqm)				
	Granite stone of any colour and shade	Sqm	2,180.00		
25	**Polished Granite stone flooring, Tread**				
	Providing and laying Polished Granite stone flooring, tread of 18mm thick (+/-2 mm thickness) in required design and patterns, in linear as well as curvilinear portions of the building all complete as per the design, drawings with 18 mm (+/- 2 mm thickness) thick stone slab over 50mm thick (Average) 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 mirror polishing, groves, rubbing , curing, cleaning etc. complete at all levels as per design, drawing from & as per direction of APMC/SBI his entire satisfaction. Jet Black, Cherry Red, Elite Brown, Cat Eye or approved equivalent shade & colour or equivalent as approved only. (Staircase Area etc.) (Basic Rate= Rs. 1800 / Sqm)				
	Polished Granite stone slab colour of Black, Cherry/Ruby Red or equivalent	Sqm	622.00		
26	**Kota stone slab flooring, skirting**				
	Kota stone slab flooring, skirting over 2 5 mm (+/-2 mm thickness) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing, nosing, grooving and mirror polishing, curing, cleaning complete with 50mm thick (Average) base of cement mortar 1 : 4 (1 cement : 4 coarse sand) laid and jointed with cement slurry and pointing with cement slurry admixed with pigment of matching shade etc. complete at all levels as per design, drawing & as per direction of APMC/SBI his entire satisfaction. (Fan room, meter room, pump room, above ground floor staircase, passages, common area etc.) (Basic Rate= Rs. 500 / Sqm)	Sqm	3,920.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
27	**Kota stone slab over 25 mm thick in Tread of steps**				
	Kota stone slab over 25 mm thick in Tread of steps (+/-2 mm thickness) in single length on base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including groving, rubbing , polishing, nosing with base of cement mortar 50 mm thick (Average) 1 : 4 (1 cement : 4 coarse sand) etc. complete at all levels as per design, drawings & as per direction of APMC/SBI his entire satisfaction. (Staircase area above gr. Floor etc.) (Basic Rate= Rs 700 / Sqm)	Sqm	1,405.00		
28	**Kota stone slabs 25 mm thick in risers of steps**				
	Kota stone slabs 25 mm thick in risers of steps (+/-2 mm thickness) in single length laid on 20 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 etc. complete at all levels as per design, drawing & as per direction of APMC/SBI his entire satisfaction. (Staircase area above gr. Floor etc.) (Basic Rate= Rs 700 / Sqm)	Sqm	825.00		
29	**Granite Kitchen Platform**				
	Providing and fixing in position Granite Kitchen Platform with max. 750 mm made out of average 18mm thick (+/-2 mm thickness) approved quality Granite stone. vertical supports (two Kota slabs sandwiched together with Araldite) placed at specified spacing as per drawing at all heights & leads. The top of the platform shall be provided with 20-25mm thick kota/Kadappa Stone base slab finished from top using approved colour and shade or any other approved shade average 18mm thick (+/-2 mm thickness) Mirror finish Granite stone slab over 20mm thick (Average) 1:4 Cement Mortar with full round moulded edges complete as per sample approved by the SBI/APMC. Rate to include providing 50 to 60 mm Granite band with full rounded moulded edges, making cut outs for SS Kitchen sink, Tapes, Gas pipe, joints treated with Epoxy based joint filling compound mixed with matching pigment, including curing, necessary scaffolding etc. complete as per detailed drawing and site instructions of the APMC/ SBI (Top Plan Area Shall Be Measured for Payment) (Basic Rate= Rs 1800 / Sqm)	Sqm	900.00		
	TOTAL OF SECTION -G	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION- H : WOOD WORKS				
	Note:- Before fixing Door frame back side of door frame shall be treated with anti termite/black japan paint in 2 coats. Also Frame shall be fixed with minimum 3 Holdfast on each side and shall be fixed in concrete which is to be done in wall to take hold fast				
	Rates shall be inclusive of List of hardware items specified in the end of Section H.				
30	**Main Door Shutter with Laminate**				
	Providing and fixing in position 40 mm thick FSC certified BWP grade ply with 1mm thick Laminated Flush Door Shutters Rates to include necessary SS hard wares like 4 nos. heavy duty 125 x 75mm Butt Hinges, with all fixtures as mentioned below in List of Hardwares for door (SI. No. A to j) etc. Complete as approved by the SBI/APMC. The rates are inclusive of all the hardware items specified. Make: Archidply Door, Greenply Door, century ply or approved equivalent. Hardware: Godrej, Enox, Dorma, Haffle, ozone or approved equivalent. (Main Door etc.)	Sqm	520.00		
31	**Internal Door Shutter with Laminate**				
	Providing and fixing in position 35 mm thick FSC certified BWP grade ply with 1mm thick Laminated Flush Door Shutters. Rates to include necessary SS hardwares like 4 nos. heavy duty 125 x 75mm Butt Hinges,with all fixtures as mentioned below List of Hardwares for door (SI. No. A to j) etc. Complete as approved by the SBI/APMC. The rates are inclusive of all the hardware items specified. Make: Archidply Door, Greenply Door, century ply or approved equivalent. Hardware: Godrej, Enox, Dorma, Haffle, ozone or approved equivalent. (internal Door etc.)	Sqm	1,450.00		
32	**Teak Wood Door frame**				
	Providing and fixing in position P/F approved quality second class seasoned Teak wood door frame in design, shape and profile size as per drawing with black japan paint to the surface in contact with plaster/ masonry/ RCC. The over all sectional size as required including fixing in position with 6 nos. M.S. hold fasts anchored in 1:2:4 cement concrete of approximate size 200 x 200 x 150mm, making arrangements for fixing aldrop, tower bolts, slip way (tadi) in the frame. The frame is finished with two or more coat of melamine polish/enamel paint after preparing surface complete. Rates to include necessary hardware, screws, etc. Complete. (For Main Door and Internal Doors)	Cu m	70.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
33	**FRP Doors for Toilet and Utility Area**				
	Providing and fixing in position 35 mm thick approved quality and design water proof, solid FRP Doors shutters as per sample approved by the SBI/APMC for wash rooms, Utility area. Each door shutter will be provided with 125 x 75 mm 3 Nos. butt hinges, with all fixtures as mentioned below in List of Hardwares for door (SI. No. A to j) etc. Complete as approved by the SBI/APMC. The rates are inclusive of all the hardware items specified. Make: Durian/ Astral/ Durofenster/ Engineer Ply or approved equivalent. Hardware: Godrej, Enox, Dorma, Haffle, ozone or approved equivalent. (Toilet Door etc.)	Sqm	1,150.00		
34	**Aluminium doors for shaft**				
	Providing & Fixing powder coated Aluminium doors for shaft with with 50 x50x 2 mm thick square pipe for frame fixed into wall with 10 mm dia double threaded Carbon Steel galvanized (min 5 micron) dash fastener of 120mm depth, shutter consists of 50 x 25 x2 mm aluminium pipe for outer side with horizontal pipe welded to outer frame of shutter at both sides with 25 x 25 x2 mm thk. Hollow pipe with 50 mm clear opening. Item includes Powder coating to all members from all sides, 100x75x4 mm Aluminium butt hinges 6 no.s, Nickled Chromium Brass cupboard lock 40 mm size, Handles, all welding & finishing of complete as per detailed drawing and site instructions of the APMC/ SBI	Sqm	500.00		
	List of Hardware for Doors				
Sl. No.	**Description**	**Main Door**	**Internal Door**	**Toilet Door**	
	Hardware Brass CP (Godrej, DORSET, Ozone, Kich, Haffle or equivalent make)				
a.	Mortise Lock set with Lever at both side of 240 mm	Yes			
a1.	Handle 200 mm wide 10 mm dia C/ D type- Both Side		Yes	Yes	
b.	Rim Night Latch	Yes			
c.	Magic eye (Minimum 1 " Dia)	yes			
d.	250 x 16 mm Al Drop with Locking Arrangement (Bedroom, toilet)		yes	Yes	
e.	250 X 16 mm Door Latch without Lock Hole Bracket (Bedroom,Toilet)		Yes	Yes	

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
f.	150 x 10 mm Tower Bolt	Yes			
g.	150 x 10 mm Tower Bolt		Yes	Yes	
h	Door buffers with magnetic catcher	Yes	Yes		
i	Hanging type door stopper	Yes	Yes		
j	Door Safety Chain	Yes			
	TOTAL OF SECTION – H	**Rs**			
	SECTION-I : STEELWORK				
	All structural steel items are including fabrication, welding, riveting, bolting, scaffolding, finishing, with all accessories, anchor fasteners of Hilty, Fischer or equivalent make including all lead, lifts, heights etc. Complete ; all as per design, drawings , as per manufacturer's specification & instructions given by SBI/ APMC				
35	**structural steel work in rolled sections like joists, channels, angles, tees, Sections trusses**				
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees, sections,trusses and framed works etc. as per detailed design and drawings or as directed including cutting, fabricating, hoisting, erecting, fixing in position making riveted / bolted /welded connections without connecting plates, braces etc. and including ready mixed red oxide zinc chromate primer with 2 coats of synthetic enamel paint of approved brand and manufacture on steel galvanised iron/ steel works up to satisfaction of APMC/SBI inclusive all heights, Sub structure, Superstructure & leads, etc. Complete.	MT	517.00		
36	**Galvanized Steel Deck Sheet**				
	Providing and fixing roofing consist of 1.00 mm thick galvanized steel deck sheet confirming to IS 277:1992 used as permanent shuttering over which MS wire mesh 3mm laid at 100x100 mm grid including edge trim covered with concrete. This metal deck will be supported on structural steel beam with shear studs. complete as per detailed drawing and site instructions of the APMC/ SBI (Structural steel like Beam, column, joists etc. & concrete of different grade as per design will be paid separately). Make: Jindal/ JSW/ TATA/ RINL/as approved.	Sqm	600.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
37	**MS tube hand rail**				
	Providing and fixing MS tube hand rail of approved size by welding etc. to steel ladder railing, balcony railing, and similar works at all heights including fabricating ,fixtures, erecting , necessary welding , grinding , finishing, applying priming coat of approved steel primer with synthetic enamel paint of 2 or more coats of approved shade , complete as per detailed drawing and site instructions of the APMC/ SBI. (Dry balcony etc.)	Kg	460.00		
38	**Glossy/mat finish stainless steel (Grade 304) railing**				
	Providing & fixing Stainless Steel 304 Grade Railing over stair case steps / landings at 1050 mm height from FFL (in landing height will be around 750 mm from sill level) comprising of 50 mm dia and 16 gauge SS top glossy finish pipe supported by 40 mm dia, 16 gauge SS glossy finish at 600 mm c/c (in alternative treads in stairs), 2 - 4 nos 25mm dia horizontal SS pipe in between with proper fixing arrangements including providing SS round cover at a junction of each support and hand rails, rate also includes of all necessary Patch fittings of Dorma/ Enox Ozone/ Haffle /As approved etc all complete as per specification and the pattern as provided in the drawing and as per direction of the SBI/APMC. (For Staircase etc.)	Rmt	1,650.00		
39	**12 mm thick Toughened glass S S railing**				
	Providing and fixing 12 mm thick toughened glass S S railing of height up to 1.2m in combination of Glossy/mat stainless steel (Grade 304) pipe of 50 mm dia and 16 gauge SS top glossy finish pipe supported by 40 mm dia, 16 gauge SS glossy finish 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, including 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 rate also includes of all necessary Patch fittings of Dorma/ Enox/ Ozone/ Haffle /As approved etc all complete as per specification and the pattern as provided in the drawing and as per direction of the SBI/APMC. (for payment purpose only length of surface shall be considered and no extra for fixing accessories such as nuts, bolts, fasteners, drills etc.). (Balcony Etc.)	Rmt	1,200.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
40	**Multicell polycarbonate panel**				
	Supply and Installation of translucent roof with DPI Flux standing seam multicell polycarbonate panel system. The system with complete assembly of co extruded UV protected multicell panels incorporated into a complete system. Co-extruded UV protected polycarbonate panel system of min 8 mm thick of 900 mm (min.) width with angular daylighting concept. Panels with all fixing accessories to ensure best performance for wind uplift, vibration, oil canning and visual appearance. Panels shall be manufactured with vertical standing seam at both sides of the panel. Panels shall be fixed on Purlin with snap on connectors with double tooth grip lock locking mechanism and will be secured on MS structure (will be paid Separately) with 3 numbers self-drilling screws & trapezoid SS fasteners holding the base of the standing seam offering best stability as per IS codes. Panel shall be with additional End cap/Aluminium U/F profile/ Glazing Bar for ends as required as per approved drawings. Trained and factory authorized labour with supervision to complete the entire panel installation as per drawing & direction of the APMC/SBI. Colour: As per Approval . (Excluding the MS structural framing Works). Make :- FLUX, Lexan, Sunlite, Sunpal or equivalent as approved . (Duct Covering at terrace etc.)	Sqm	40.00		
41	**Rolling shutters with partly grill**				
	Supplying and fixing rolling shutters with partly grill 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 with ball bearing, mechanical device chain and crank operation etc. and including ready mixed red oxide zinc chromate primer with 2 coats of synthetic enamel paint of approved brand and manufacture up to satisfaction of APMC/ SBI .Complete as per detailed drawing and site instructions of the APMC/ SBI	Sqm	53.00		
42	**M.S. grills of required pattern in frames of windows**				
	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. With cutting, fabricating, welding, hoisting, erecting, fitting, finishing, cleaning including priming coat with approved steel primer & two or more coats of enamel paint & as per approved design/drawing all complete as directed by the APMC/SBI	MT	49.00		
	TOTAL OF SECTION -I	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – J : FLOORING				
	Note:- All Flooring/dado /cladding works: Measurements shall be the exposed, visible finished surface area of application. No extra/separate payment for Groove , chamfer edge Polish, moulding, rounding, nosing, overlapping portions, chiselling in walls, tile, etc.				
	Rate shall inclusive of all heights, Sub structure, Superstructure, lift & leads, etc. Complete.				
	Rate is including covering the Flooring, kitchen otta with POP / PVC Material & contractor is solely responsible for protection of flooring / tiling material & needs to be replaced if found broken, cracked, shade variation found at his own cost				
43	**Ceramic glazed wall tiles of 300 x 600 mm**				
	Providing and fixing 1st quality ceramic glazed wall tiles of 300 x 600 mm / approved size in dado / walls of conforming to IS: 15622 (thickness to be specified by the manufacturer), laid on 20 mm thick (average) cement mortar 1:4 (1 Cement : 4 Coarse sand) of approved make & colours, shades of any size including digital print as per sample approved by the SBI. Skirting, risers of steps and dados, and fixing the same on plastered surface with cement based high polymer modified quick set tile adhesive of approved make (water based) conforming to IS: 15477, including pointing in white cement mixed with pigment of matching shade Cleaning, curing etc. Complete as per approved design/drawing all complete as directed by the APMC/SBI. (Kitchen Wall Tile etc.) Make: Kajaria/Somany/Nitco/H.R Johnson/Simpolo/ as approved. (Basic rate of Tile Rs 510 / Sqm)	Sqm	800.00		
44	**ceramic glazed wall tiles of 300 x 600 mm**				
	Providing and fixing 1st quality ceramic glazed wall tiles of 300 x 600 mm / approved size in dado / walls of conforming to IS: 15622 (thickness to be specified by the manufacturer), laid on 20 mm thick (average) cement mortar 1:4 (1 Cement : 4 Coarse sand) of approved make & colours, shades of any size including digital print as per sample approved by the SBI / APMC. Skirting, risers of steps and dados, and fixing the same on plastered surface with cement based high polymer modified quick set tile adhesive of approved make (water based) conforming to IS: 15477, including pointing in white cement mixed with pigment of matching shade Cleaning, curing, scaffolding etc. Complete as per approved design/drawing & all complete as directed by the APMC/SBI. (Dry balcony, Toilet Wall, Basin dado/ wall Tile, inside water tanks etc.) Make: Kajaria/Somany/Nitco/H.R Johnson/ Simpolo/ as approved. (Basic rate of Tile Rs 510 / Sqm)	Sqm	10,923.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
45	**Ceramic floor tiles of size 300x300 mm**				
	Providing and laying Ceramic glazed floor tiles of size 300x300 mm / approved size (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved quality & make in any colours such laid on 50mm thick (average) cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey / white cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment, cleaning, curing etc., complete as per approved design/drawing & all complete as directed by the APMC/SBI (Garbage Room, inside water tanks, below rubberise flooring etc) Make: Kajaria/Somany/ Nitco /H.R Johnson/Simpolo/ as approved (Basic rate of Tile Rs 510 / Sqm)	Sqm	615.00		
46	Providing and laying vitrified floor tiles, skirting of 100mm height / as per design, drawing, 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, fixing uniformly in line and level in approved design laid on 50mm thick (average) cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments cleaning, curing etc., complete as per approved design/drawing & all complete as directed by the APMC/SBI. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, levelling system and rubber mallet for placing the tiles gently and easily . Make: Kajaria/Somany/Nitco/H.R Johnson/Simpolo or as approved				
46a	**Double Charged Vitrified tiles of size 600 x 600**				
	Gloss/ matt finished Double Charged Vitrified tiles of size 600 x 600 mm / as approved by the APMC/SBI (Common Lobby etc.) (Basic rate of Tile Rs 650 / Sqm)	Sqm	1,450.00		
46b	**Double Charged Vitrified tiles of size 800 x 800 mm**				
	Gloss/ matt finished Double Charged Vitrified tiles of size 800 x 800 mm / as approved by the APMC/SBI (Common Lobby etc.) (Basic rate of Tile Rs 760 / Sqm)	Sqm	500.00		
46c	**vitrified Wooden textured tiles of 600 x 1200 mm**				
	Double charged vitrified Wooden textured tiles of 600 x 1200 mm/ as approved by the APMC/SBI (Master Bed etc.) (Basic rate of Tile Rs 810 / Sqm)	Sqm	3,670.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
46d	Double charged Vitrified Tiles of Size 800 x 1600mm Providing and laying Double charged Vitrified Tiles of Size 800 x 1600mm for Flooring, skirting of 100mm height / as per design, drawing, 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, fixing uniformly in line and level in approved design laid on 50mm thick (average) M15 grade cement Concrete Floor (IPS) with sandwiched layer of High quality modified polymer adhesive of 5mm thick (Average) between tile & Concrete floor, including grouting the joints with epoxy grout of matching colour & cleaning, curing etc., complete as per approved design/drawing & all complete as directed by the APMC/SBI. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, levelling system and rubber mallet for placing the tiles gently and easily . Make: Kajaria/Somany/Nitco/H.R Johnson/Simpolo or as approved				
	Gloss/ matt finished Double charged Vitrified Tiles of Size 800 x 1600mm/ as approved by the APMC/SBI (Living, Bedroom & Passage etc.) (Basic rate of Tile Rs 865 / Sqm)	Sqm	10,400.00		
47	Providing and laying Vitrified tiles in floor with skirting of 100mm height / as per design, drawing, (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS:15622, of approved brand & manufacturer, in all colours and shade, fixing uniformly in line and level laid on 50 mm (average) thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments, cleaning, curing etc complete as per approved design/drawing & all complete as directed by the APMC/SBI. The tiles must be cut with the zero chipping diamond cutter only . Laying of tiles will be done with the notch trowel, plier, wedge, clips of required thickness, levelling system and rubber mallet for placing the tiles gently and easily Make: Kajaria/Somany/Nitco/H.R Johnson/Simpolo or as approved. (Basic rate of Tile Rs 650 / Sqm)				
47a	**600 x 600 mm Anti Skid Vitrified**				
	600 x 600 mm / as approved Anti Skid Vitrified (Toilets, Attached Terrace, Dry balcony etc.)	Sqm	6,090.00		
47b	**600 x 600 mm Rustic Vitrified Flooring**				
	600 x 600 mm/ as approved Rustic Vitrified Flooring (Kitchen etc.)	Sqm	2,800.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
47c	**Italian Marble stone flooring , skirting**				
	Providing and laying machine cut, mirror polished Italian Marble stone flooring of not less than 1m x1m (Minimum Size) with skirting 100 mm high in single length laid in required design & pattern in linear as well as curvilinear portion of the building all complete as per drawings, with 18 mm thick (variation of +/- 2mm) stone slab laid over 50 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry @ 4.4 kg/sqm including pointing with white cement slurry admixed with pigment to match the marble shade including Mirror Polishing, groves, rubbing, curing and polishing, curing, cleaning etc. Complete at all levels as per design, drawing & as per direction of APMC/SBI his entire satisfaction. (Entrance Lobby gr. Floor etc.) (Basic rate of Rs 3200 / Sqm)	Sqm	185.00		
	18mm thick Italian Marble stone slab as approved by APMC/ SBI				
48	**Italian Marble Tread**				
	Providing and laying machine cut, mirror polished Italian Marble Tread with nosing in single length laid in required design & pattern in linear as well as curvilinear portion of the building all complete as per drawings, with 18 mm thick (variation of +/- 2mm) stone slab laid over 50 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry @ 4.4 kg/sqm including pointing with white cement slurry admixed with pigment to match the marble shade including Mirror Polishing, groves, rubbing, curing and polishing, curing, cleaning etc. Complete at all levels as per design, drawing & as per direction of APMC/SBI his entire satisfaction. (Entry Area at gr. Floor etc.) (Basic rate of Rs 3200 / Sqm)	Sqm	60.00		
49	**Italian Marble Stone work for Riser**				
	Providing and fixing machine cut, mirror/ eggshell polished , Italian Marble stone work for Riser 18 mm thick (variation of +/- 2mm) in single length including dado, skirting etc., in required design and pattern wherever required, stones of different finished surface texture, on 20 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) laid and jointed with white cement slurry @ 3.3 kg/sqm including pointing with white cement slurry admixed with pigment of matching shade, including polishing , rubbing, curing, cleaning etc. Complete at all levels as per design, drawing & as per direction of APMC/SBI his entire satisfaction. (Entry Area at gr. Floor etc.) (Basic rate of Rs 3200 / Sqm)	Sqm	40.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
50	**Cement concrete Flooring of M-30 grade with vaccum dewatering**				
	Providing and laying design mix cement concrete Flooring of M-30 grade with vaccum dewatering, 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, levelling 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. Rate shall include joint fillers, sealants, dowel bars with sleeve/ tie bars, treatment of Expansion joint, construction joint by using silicon sealant/bitumen and Baker rod of approved make complete all as per manufacturer's specification & direction of SBI/ APMC, curing, cleaning at all the locations and height with necessary scaffolding, shuttering etc. Complete. (Parking, Drive way, Roads etc.) Cement concrete manufactured in automatic batching plant (RMC plant) including transportation to site in transit mixer.	CUM	2,800.00		
51	**80 mm thick C.C. paver block of M-30 grade**				
	Providing and laying factory made chamfered edge Cement Concrete paver blocks of 80 mm thick C.C. paver block of M-30 grade with approved colour design and pattern in footpath, parks, lawns, drive ways or light traffic parking etc, 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 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 sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete at all locations and height all as per direction of SBI/ APMC & as per manufacturer's specifications. Make :- Vyara Tiles / Shivalik Pavers/ JP Blocks or equvalent as approved.	Sqm	800.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
52	**35 mm thick Rubberise Flooring**				
	Providing & Fixing 35 mm thick Rubberise Flooring (+ / - 2mm) of approved make & as per Design & Drawing of any colour, shape with adhesive if required soft and porous two layer system rubber flooring consisting of base layer of Black SBR rubber of 30mm thick and 6 mm thick EPDM top layer colored granules both mixed with full polyurethane binder to be installed at site on the levelled and finished good quality concrete surface to a total thickness of either 36 mm over PCC/Concrete surface as per manufacturer specification with 5 years manufacturer's warranty. Item includes making pattern of various colours like Red/Green/Gray/Blue as per design, cutting tiles as per design, wastage, Non hazardous, hygienic and as per ASTM standards etc. Complete & as per direction of SBI/ APMC & as per manufacturer's specifications.. Item also includes all Taxes, leads, lifts, transport, labour Cess etc. Complete. (Item Excluding Concreting/PCC Cost) Indoor game, Yoga meditation, gymnasium etc Make :- Asian, Sunflex, Ecoflex, Aditya or equivalent as approved	Sqm	300.00		
	TOTAL OF SECTION -J	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – K : WATERPROOFING WORK				
53	**Toilet Waterproofing**				
	Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved				
	All the waterproofing items shall be carried out by the reputed approved agency as mentioned in the tender and duly approved by the SBI/ APMC. Items includes ponding test, sealing of pipes/sleeve at no extra cost. The treatments shall be tested for water tightness and shall be guaranteed for water tightness in bone dry conditions for at least 10 years period during which period if any leakage is observed, the same shall be rectified to the satisfaction of the Owners. Such undertakings shall be furnished on Rs. 500/- stamp to cover all the above conditions. Only plan area shall be measured.				
	1.Drain pipes and Core Cut treatment: Cleaning and preparation of surface with the help of wire brush or grinder. Clean the surface with water to remove the dust. Insert the pipe with Bathseal tape (Non reinforced twin sided self adhesive bituminous membrane) of approved make wrapped over the pipe into the core and support with form work. Pack the core cut junction with non-shrink free flow cementitious grout of Micro Concrete of approved make. Mix ready to use grout with water @ ratio of w/p as per manufacturer's specification(depending upon the flowability required) with paddle mixer and pour by providing necessary shuttering and support. Allow the grout to set for 24 hrs. And do the moist curing for 5 days. The area around the pipes shall be dressed in the 40-60 GSM geotextile in wet-on wet condition by applying high performance elastomeric 1K waterproof coating Bathseal tape (Non reinforced twin sided self adhesive bituminous membrane of approved make. 2.Angle Fillet treatment Roughen and clean the junction of wall and floor with air blower and water to remove the dust particles. Moisten the surface with water & apply a bond coat of URP of approved make and cement (1:1) by volume with brush. Providing & Laying angle fillet (gola) of size 50 x 50 mm in width over the bond coat when it's in wet condition. Preparing PMM by taking 1 kg URP/ equivalent, 5 kg fresh cement, and 15 kg graded quartz sand. (i.e., in the ratio of 1:5:15) on RCC surface (slab and wall junction) finishing in smooth finish. Including water curing for 3-4 days, etc complete. (Continued .....)	Sqm	1,850.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	3.Waterproof Coating: The concrete surface must be brought into surface saturated dry condition (SSD). Providing and applying a self-priming coat of Bathseal tape (Non reinforced twin sided self adhesive bituminous membrane) of approved make with 50% water dilution at of floor & walls extending 1 m height coverage at the rate 8-10 Sq.mt/ litre. Allow the primer to cure for 6 hrs. All joints / corners / angle fillet and penetrations shall be sealed with liberal amount of the waterproofing coating Bathseal tape (Non reinforced twin sided self adhesive bituminous membrane) of approved make followed by reinforcing specialized tape or 40 to 60 Gsm geo textile fabric and min 100 mm width in between 2 coats. Apply two top coats of Bathseal tape (Non reinforced twin sided self adhesive bituminous membrane) of approved make by brush or roller without dilution at the rate 1.1 -1.2 litre/ Sq.mt in the interval of 6 hrs. to achieve DFT of 500 – 600 microns. While the first coat is still wet fix 45 Gsm geo textile fabric on the angle fillets extending about 10 - 20 mm on wall and floor, also warp it around PVC, joint fittings ensuring the perimeter of the pipe/substrate abutment is sealed. Over the splash zone / shower wall taking the coating up the full height and up to 1 meter height on vertical surface and on other walls and 0.3 metre on horizontal surface below threshold for complete bathroom waterproofing.				
	4.Horizontal Protection – Brick Bat Coba for protection and slope: Providing & laying brickbat Coba of minimum 120 mm thick laid over a bed of cement mortar (1:4), including integral waterproofing admixture, of approved make conforming to IS 2645:2003 & as per manufacturer's specification. The surface should be neatly finished with the help of wooden / steel hand trowel. The vertical surfaces of the adjoining walls are to be treated up to a height of 300mm including rounding of junction. The curing should be done for 2 weeks. 5.Vertical wall Protection plaster: Apply 1 coat of spatter dash bond coat mixed in the ratio of 1 part URP of approved make Cement and 2 parts of clean fine coarse sand and 1 part water to make thick slurry coat over the waterproof coating on the vertical walls. Apply 12mm thick plaster over the prepared surface of cement sand mortar admixed with integral waterproofing compound conforming to IS 2645:2003, of approved make as per manufacturer's specification, Including finishing & water curing of plaster for minimum 7 days..“All above operations to be done in order and as directed and specified by the APMC/SBI. Only plan area will be measured for payment.				
	All Waterproofing Work Should be Done by only Authorized Skilled Applicator of Company.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
54	**Attached Terrace + Dry balcony**				
	1. Surface preparation Cleaning and preparation of surface with the help of wire brush or grinder. Wash the roof with clean water pressure jet. Remove all loose concrete, grease, oil using wire brush, and scrubber. Undulation in RCC roof slab surface, honeycombs, pin hones, imperfections should be chiselled shall be repaired with Polymer Modified Mortar mixed by adding 1 kg URP of approved make, 5 kg fresh cement, and 15 kg graded quartz sand. (i.e., in the ratio of 1:5:15) or with dual shrinkage compensated of approved make as approved Polymer Modified Mortar HB. Etc., complete. All pipes to be placed / inserted in the core cut areas, apply a coat of URP of approved make Epoxy bonding agent over this, sprinkling fine sand / quartz sand and fill the gap with shrinkage compensating water proofing compound of approved make Polymer modified mortar HB / non-shrink grout. 2. Angel Fillet treatment Roughen and clean the junction of wall and floor with air blower and water to remove the dust particles. Moisten the surface with water & apply a bond coat of URP of approved make and cement (1:1) by volume with brush. Providing & Laying angle fillet (gola) of size 75 x 75 mm in width over the bond coat when it's in wet condition. Preparing PMM by taking 1 kg URP of approved make, 5 kg fresh cement, and 15 kg graded quartz sand. (i.e., in the ratio of 1:5:15) on RCC surface (slab and wall junction) finishing in smooth finish. Including water curing for 3-4 days, etc complete. 3. Waterproof Coating: The concrete surface must be brought into surface saturated dry condition (SSD). Providing & Applying 2 coats of high performance two component high performance cementitious waterproof coating two component acrylic cementitious system of approved make, with a mix ratio of (liquid: Powder), parts by wt. - 1:2 at the rate 0.42 - 0.50 Sq.mt / Kg for 2 coats to achieve the DFT on 1.2mm in a span of 4 - 6 hours with a roller / brush on the prepared concrete substrate . The floor surface & wall surface up to 450 mm in height, as per the manufacturers' specification of approved make waterproofing. All the coats to be applied in perpendicular direction to each other. Allow the coating to air cure for 3-5 days before conducting water ponding test for 24 Hrs.	Sqm	2,250.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	4. Horizontal Protection: A - Brick Bat Coba for protection and slope Option – 1 Brick Bat Coba for protection and slope: Providing & laying brickbat coba of minimum 120 mm thick laid over a bed of cement mortar (1:4), including integral waterproofing admixture of approved make conforming to IS 2645:2003@ 200 ml per bag of cement. The surface should be neatly finished with the help of wooden / steel hand trowel. The vertical surfaces of the adjoining walls are to be treated up to a height of 300mm including rounding of junction. The curing should be done for 2 weeks. 5. Vertical wall Protection plaster: Apply 1 coat of spatter dash bond coat mixed in the ratio of URP of approved make as per manufacturer's specification with fine coarse sand and water to make thick slurry coat over the waterproof coating on the vertical walls. Apply 12mm thick plaster over the prepared surface of cement sand mortar admixed with integral waterproofing compound conforming to IS 2645:2003 of approved make @ 220ml per bag of cement. Including finishing & water curing of plaster for minimum 7 days.				
	All Waterproofing Work Should be Done by only Authorized Skilled Applicator of Company.				
55	**Water tank waterproofing**				
55a	Providing and laying water proofing treatment to horizontal and vertical surfaces of RCC water tanks, including cleaning the surface with wire brush, treating all surface cracks, construction joints and honeycombs by grouting with specialised non shrink grout, chamfer preparation at wall - slab joint and preparation of surface in all aspects to receive the waterproofing, which consists of :	Sqm	315.00		
	Preparation of chamfer or vatta at wall & raft junction: The junction between RCC raft & Pardi / retaining wall should be treated by preparation of vatta of size min. 50mm X 50mm with Polymer Modified Mortar prepared using URP of approved make as per manufacturer's specification fixing with cement and sand. Preparation of construction joints: The tie rod holes should be filled with Non Shrink Free Flow Grout Like of approved make @ 10 liter per 50 kg bag of cement & 150 kg zone II sand. Only plan area will be measured for payment. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
55b	Bore Packing For Over Flow Pipes if any:- Cleaning and preparation of surface with the help of wire brush or grinder. Clean the surface with water to remove the dust. Insert the pipe with Bathseal tape (Non reinforced twin sided self adhesive bituminous membrane) of approved make wrapped over the pipe into the core and support with form work. Pack the core cut junction with non-shrink free flow cementitious grout Micro Concrete of approved make. Mix ready to use grout with water @ ratio of w/p = 0.13 – 0.15 (depending upon the flowability required) with paddle mixer and pour by providing necessary shuttering and support. Allow the grout to set for 24 hrs. And do the moist curing for 5 days. The area around the pipes shall be dressed in the 40-60 GSM geotextile in wet-on wet condition by applying high performance elastomeric waterproof coating of approved make. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved	No	10.00		
55c	Waterproofing application on positive side: Providing & Applying 2 coats of high performance two component high performance cementitious waterproof coating of approved make, with a mix ratio of (liquid: Powder), parts by wt. - 1:1.4 at the rate 0.42 - 0.50 Sq.mt / Kg for 2 coats to achieve the DFT on 1.2mm in a span of 4 - 6 hours with a roller/ brush on the prepared concrete substrate. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved	Sqm	1,230.00		
55d	Protective Plaster :- providing and laying avg. 15 mm thick, Cement Mortar 1:3 plaster admixed with Integral Waterproofing Compound of approved make as per manufacturer's specification mixed with cement, items also including curing cleaning etc. Complete as per instruction by APMC/ SBI. (rate is including 15mm thk. cement mortar 1:3)	Sqm	1,230.00		
55e	Application of food grade epoxy (Anti-microbial Coating)Inner side of tank: Providing & applying 2 coats of Damp proof coating – two component, water-based epoxy resin having anti-algae, antifungal,Nontoxic, hygiene cum damp-proof coating Certified by CFTRI as per 21 CFR 175 – 300 of US – FDA, having mixing Ratio (Base: Hardener: Water) – 1:1:1 to be applied @ 4 sqm / Kg, as per manufacturer's specification of approved make. The coating shall have Specific Gravity: 1.2, Water vapour permeance: 244.48 g/m2/24 hrs, as per IS 7809/Pt 2/1977, Adhesion strength: 2 N/mm2 as per ASTM D4541: 02, all as per manufacturers' specification, etc, complete. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved	Sqm	915.00		
	Item also include ponding, curing, scaffolding. The whole Water tank so finished shall be flooded with water for a minimum period of two weeks for curing and for final test."All above operations to be done in order and as directed and specified by the APMC/SBI. All Waterproofing Work Should be Done by only Authorized Skilled Applicator of Company. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
56	**Top Terrace brick bat waterproofing with China mosaic tiles**				
	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of top 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 APMC/SBI over the RCC slab including adjoining walls up to 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 thick with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by APMC/ SBI 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 SBI / APMC to required slope and treating similarly the adjoining walls up to 300 mm height including rounding of junctions of walls and slabs. (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by APMC/SBI (d) Finishing the surface with 20 mm thick cement mortar of mix 1:4 (1cement :4 coarse sand) admixed with water proofing compound (conforming to IS : 2645) at the rate of 1 Kg per bag, Including laying in required position flooring of broken China Mosaic (broken pieces of China Chips) of approved colour and pattern including neat cement float, giving proper slops, compaction, curing, finishing preparing bell mouth etc. approved by SBI/APMC. along with Kani plaster over Round portion.(i.e. Vatta) (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test.“All above operations to be done in order and as directed and specified by the APMC/SBI.	Sqm	1,900.00		
57	**Terrace garden Waterproofing**				
	Ground floor Area of Lawn & Shrub				
57a	Surface preparation: Clean the surface by using vacuum and ensure the surface is free from laitance, loose or friable materials, debris etc. Ensure the substrate has properly cured and the concrete is profile free, no ridges or troughs. Surface profile shall be prepared to take all above coating . If concrete surface found to be defective with pinholes, bug roles, honeycombs etc., it must be repaired using scratch coat prepare by mixing 16D primer or equivalent and 4 mm down silica sand at ratio of 1:1 by weight. Apply the scratch coat by using suitable spatula/squeeze to get level surface for the upcoming primer. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved.	Sqm	2,200.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
57b	Angle Fillet treatment: Angle Fillets/Vata/Coving must provide at size of 50 x 50 mm on all vertical up-stands & junctions /corners with cement sand Polymer modified mortar all around the periphery. Alternatively, all vertical upstands and junctions, wall floor joints, mechanical installation shall be treated with Joint Tape of approved manufacturer & as recommend in technical data sheet and Mechanical installations. All above process shall be done as per manufacture's specification & as per instruction from SBI/ APMC. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved.				
57c	Crack Treatment: Non leaking cracks :- <30mm expansion joints and Visible surface cracks which are more than 1 mm should be cut open in square or V -groove manner up to 10 mm width by using mechanical cutter and treat with PU Sealant/Hybrid Sealant and allow it to cure as per datasheet(manufacturer's specification) The sealant with shore A hardness of 25, have elongation at break, 400 %, movement accommodation factor 25 % for butt joints and 50 % for lap joints. Allow sealant to cure for minimum 7 days before carrying out any testing. Prevent the joints from water after application at least for 24 hrs (best for 7 days). Primed surfaces apply 1 coat of Dr Fixit Flexi PU 270(I) or Equivalent then apply 100 mm width geo textile strip of 60 GSM and saturate the fleece with Dr Fixit Flexi PU 270(I) or equivalent. >30mm expansion joints must be treated waterproofing Tape of approved brand with Adhesive with two part epoxy based adhesive 1-2mm thickness on each side of the joint where at least 50mm stays beyond the edge are sealed with recommended epoxy adhesive. Providing and carry out expansion joint treatment after proper surface preparation to remove loose mortars, dust, foreign particles from joints, fixing of tightly packed closed cell polyethylene based back up rod or filler board to ensure no gaps or voids exists, mask face edge of the joint using masking tape for neat finish, mixing of waterproofing Tape adhesive of approved brand Adhesive– Two part Epoxy Adhesive using slow speed drill till get homogeneous mix, apply it to prepared joint 1-2mm thick with notched trowel or putty blade, tooled to a smooth finish and finally fixing of waterproofing Tape of approved brand– Flexible expansion joint membrane available in 1mm thickness exhibiting superior mechanical properties like, Elongation >500%, Tensile Strength >12N/mm2, Tear Strength >200N above joint followed by another layer of epoxy adhesives waterproofing Tape adhesive of approved brand as complete as per manufacturer's specification. (To be Continued...)				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	For joint over end laps, the overlaps surfaces must be clean, wiped and heat welded with at hot air welding gun with 100 mm overlap. After application the system should be allowed to cure for 7 days. In case of exposed condition/ Trafficable joint/higher water pressure joints > 1.5 bar up to 3 bars, protect the joint with a metal plate screwed at one end. The Adhesive area can be painted by any acrylic coating as a protective top coat. Leaking cracks on RCC slab :- Clean the identified crack and remove drilling dust before placing the nozzle. Seal and pack the nozzle with fast setting approve brand of waterproofing Instant Leak Plug compound. Injection of cement slurry admixed with admixture Pidicrete AM (225gms/ bag of cement) or equivalent by using 40PSI grout pump. Plasticizing grout additive Dr. Fixit Pidicrete AM or equivalent of approved brand; the product is to be dispensed in water & added to 50 kg of cement at a water cement ratio of 0.4-0 – 0.45. The mixture thus batched is to be used for injection grouting.				
57d	Waterproof Coating :- Providing & applying of High Solid Content, Cold Liquid- Applied Elastomeric Water Proofing Membrane using Brush/ roller / airless spray to form a minimum system thickness of 1.5mm in three coats with a total consumption is 2.5Kg/m² to achieve 1.5mm DFTor as per manufacturer's specification. 2.5 kg/m² is minimum recommended consumption when applied in three layers to achieve a DFT of 1.5 mm to comply with ASTM C 898 Standard Guide for use of High Solid Content, Cold Liquid- Applied Elastomeric Water Proofing Membrane. Allow the membrane to air cure for 7 days before any activity over it. The PU membrane shall be terminated 300mm above FFL, self-curing for 7 days. The Waterproofing material shall have Solids > 85%, Tensile strength > 2 MPa as per ASTM D 412, Elongation > 400% as per ASTM C 1305, crack bridging up to 3.2mm, Shore A Hardness > 50 as per ASTM D 2240, Adhesion to concrete > 1.5Mpa as per ASTM D 903, Water vapor permeability > 14gm / m2 / day.				
57e	Separation Layer :- Providing & Laying more than 100 GSM Geotextile (non-woven polyester) membrane with a min of 100mm wide overlap loosely laid over PU membrane, etc., complete.				
57f	Horizontal Protection - Mortar screed for protection & Slope:- Providing & laying of average 100 mm thick protective screed of M20 grade by keeping minimum 50mm thickness at drainage point with slope 1:100 containing 12 mm, 100% virgin polypropylene fibres @ 0.9 Kg/Cu.m with a broom finish, well compacted, curing for 7 days etc. complete. The screed shall be raised to the wall in the form of vatta to achieve a smooth corner. The screed shall be divided into panels of 4 mtr X 4 mtr with 6 mm wide x10mm deep construction joint and filling the same with PU sealant, confirms to ASTM C-920-S, NS, 25 & BS EN ISO—11600: 2003 Type F & G as per manufacturer specification, etc, complete.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
57g	Vertical wall Protection plaster :- Providing & laying 15mm THK protective plaster of C:M – 1:4 admixed with integral waterproof compound conforming to IS 2645:2003,of approved brand as per manufacturer's specification per bag of cement, over the waterproofing membrane for vertical protection after application of Epoxy Bonding agent / 16D primer and sprinkling of quartz sand to create key for the plaster. Including finishing & water curing of plaster for minimum 7 days.				
57h	Anti-Root Barrier Membrane :- Providing & laying 1.5mm THK SBS modified self-adhesive, cross laminated HDPE Valero lining waterproofing membrane, Dr. Fixit Samshield XL 1500 / 2100 or equivalent, conforming to IS 16471:2017 Type A, over the solvent based bituminous Dr. Fixit Torchshield primer @ 4 sq.mt/litre or equivalent as per manufacturer's specification. The lap with HDPE membrane shall be 100mm treated with double sided tape. The SBS membrane shall have Roll Size: 1 Mtr X 10 Mtr, Mass per Unit Area > 1.8 Kg/m2 as per ASTM D 5147, Puncture resistance > 200 N as per ASTM E 154, Elongation > 180% as per ASTM D 412-06, Crack bridging (10 cycles) > 1.5mm as per ASTM C 836, Tensile Strength > 4 Mpa as per ASTM D 412- 06, Tear resistance > 20 N/mm as per ASTM D 4073, Softening Point (^{0}C) ≥ 105^0 as per IS 1205/1978, Low temperature Flexibility – 10^0 C as per ASTM 2 | P a g e D 5147, Chemical Resistance (pH) as per ASTM D 543, Hydrostatic pressure > 50M as per DIN 1048. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved.				
57i	Drain board with filter media :- Installation of Rolled Matrix Soil Filter cum surface drainage System as per manufacturers' specifications consist of dimple raised, moulded polypropylene sheet bonded to a high strength polypropylene geotextile fabric having compressive strength of 600 Kg / Sq.mt. and thickness of 10 – 12 mm. System as specified by Landscape architect / engineer shall be laid over the Sloped screed before soil filling. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved.				
	Rate includes The entire treatment will be taken up to 300mm/450mm on parapet wall or up to parapet projection as per architectural drawing. For the purpose of measurement the entire treated surface will be measured. Item also include ponding, curing for two weeks, scaffolding, The whole Water tank so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the APMC/SBI. Make :- BASF, MYK, Dr. Fixit, Fosroc, cico or Equivalent as approved.				
	All Waterproofing Work Should be Done by only Authorized Skilled Applicator of Company.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
58	**40mm thick Cement concrete flooring 1:2:4 Grade**				
	Providing & placing 40 mm thick with 20 mm nominal size stone aggregate 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 with curing, scaffolding etc. Complete as per instruction by APMC/ SBI. (Lift pit etc.)	Sqm	170.00		
59	**Water Proofing of Basement**				
	HDPE Membrane Waterproofing System				
59a	Horizontal Surface (Below Raft) - Supplying and laying composite 1.5mm thick, pre-applied, fully bonded HDPE weldable membrane of approved make over P.C.C. conforming to BS 8102 & IS 16471:2017, requirements of UG waterproofing structures. The system should be fully bonded to the Raft and consists of highly resilient HDPE film, pressure sensitive layer and weather protective layer. Typical application includes surface preparation by removing loose aggregates from PCC, foreign material, cleaning the surface etc., cutting membrane to convenient length, carefully aligning the membrane over blind concrete and rolling it out with sand coated side facing up, laying adjacent sheets by keeping side B25overlap of 75 mm, carry out hot air fusion welding by using suitable machine, end overlaps to be welded in 75 mm width after removing sand and adhesive. The membrane shall be continued over the vertical surface leaving 50 mm from top of the Raft and fixed to shutter using double side adhesive tape. Item rate is inclusive of all material, labour, tools & tackles, scaffolding & transportation etc. complete as per specification & as directed by SBI/ APMC. Make :- MYK, Dr. Fixit, Fosroc, cico, BASF or Equivalent as approved .	Sqm.	5,650.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
59b	Retaining wall waterproofing with SBS Membrane (after de shuttering & curing) - Providing & laying 1.6mm THK SBS modified self-adhesive, cross laminated HDPE valeron lining waterproofing membrane, of approved make, conforming to IS 16471:2017 Type A, requirements of UG waterproofing structures, over the solvent based bituminous of approved make primer @ 4 sq.mt/litre. The lap with HDPE membrane shall be 100mm treated with double sided tape. This shall include surface preparation by cleaning work, removal of loose concrete and filling cracks with polymer modified mortar & treatment of tie rod holes, bracing angle etc with plugging mortar dual shrinkage cementitious flow able grout, which are anchored in shuttering for holding the same and other projections as per manufacturers' recommendation, followed by the installation of 8-10mm THK polyethylene dimpled drain board having compressive strength > 400kN/m2 (as per ISO 25619-2) and puncture resistance of 1250N as per ISO 12236 over the waterproofing membrane for vertical surface stuck to the membrane by spot bonding method, using synthetic adhesive with butt joints to protect the membrane from damages from back-filling materials, all followed by termination of the membrane minimum 200mm above FGL with aluminium termination bar shall be fixed with non-corrosive fastener @ 4 no's per RM, sealing of termination bar with PU Sealant / epoxy mortar / putty, as per manufacturer specification, etc. complete. Item rate is inclusive of all material, labour, tools & tackles, scaffolding & transportation etc. complete as per specification & as directed by SBI/ APMC. Make :- MYK, Dr. Fixit, Fosroc, cico, BASF or Equivalent as approved.	Sqm	425.00		
	Crystalline waterproofing system				
59c	Concrete admixture for Diaphragm / retaining wall & raft concrete (During casting) : Supplying and mixing integral full section crystallization based waterproofing treatment of approved make having to be added into the concrete of Base slab up to 300mm Raft thickness, at a dosage rate of 1% by weight of the cement contents of the concrete. Integral concrete waterproofing system of approved make shall be added to the concrete in the form of thin slurry by mixing Integral concrete waterproofing system of approved make with water as per manufacturer's specification. Slurry formed shall be added to the concrete directly into the RMC transit mixer at site prior to pumping of the concrete. After adding Integral concrete waterproofing system of approved make slurry into the concrete, the transit mixer shall be rotated at a full speed for around 5 minutes to ensure the uniform mixing of the Integral concrete waterproofing of approved make into the concrete.	Cum	16,900.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
59d	Construction joint treatment (During casting) - Providing and applying water re-swellable-bar SealArm Waterbar of approved make at starter & all construction joints, it shall have unrestrained volumetric expansion > 800% after 14 days. It shall be fixed to the concrete using a gun grade hydrophilic adhesive / or mechanically fixed by non corrosive nailing as recommended by manufacturer. It shall be fixed at centre of concrete element using cross nailing in alternate manner so that it shall not be displaced from its original position. Before fixing of Waterbar, surface of concrete element on which waterbar to be fixed shall be levelled. Make :- MYK, Dr. Fixit, Fosroc, cico, BASF or Equivalent as approved. (Note :- This Item is excluding quantity of diaphragm wall as rate of diaphragm wall is including this item.)	R mt	1,000.00		
	All Waterproofing Work Should be done & certified by only Authorized Skilled Applicator of Company.				
	TOTAL OF SECTION -K	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	Section – L : PAINTING WORKS				
	Note:- All plaster works Measurements shall be considered only as Surface Areas of application and no extra/separate payment for dhar, kani, groove, strips, bands etc.				
	Only MS Scaffolds shall be used for the all Plastering , painting Works.				
	Rate shall inclusive of all heights, Sub structure, Superstructure, lift & leads, levelling, finishing curing etc. Complete up to the satisfaction of SBI / APMC.				
	Painting works to be done by authorised applicator only. Certificate / registration of the same to be submit to SBI / APMC before starting of the work.				
	All painting works to be done with LOW VOC paints as approved by IGBC/ GRIHA/ Green building norms or required for any other certification.				
60	**Synthetic Enamel Paint**				
	Providing and applying synthetic enamel paint with low VOC content of approved brand or equivalent of approved colour shade & quality to new surfaces with one coat of primer & two or more coats / up satisfaction of APMC/SBI with uniform shade including scaffolding all complete at stilts and podiums and all floors, height , leads & lifts , cleaning etc. Complete as directed by the APMC/SBI. Make:- Asian / Nerolac/ Berger/ Dulux or approved equivalent make.	Sqm	1,000.00		
61	**White Cement Base Putty**				
	Providing and applying 2 mm thick (average) White cement base Putty on hacked / uneven background such as bare RCC work/ plastered surface on walls & ceiling at all floors , heights and locations, finished in smooth line and level with necessary scaffolding , Rubbing the surface with sand paper to give smooth surface & cleaning as per the instruction of the APMC / SBI complete. Make :- Birla, Asian, Nerolac, Berger, JK or approved equivalent make. (flats, common lobby, staircase, passages, common areas etc.)	Sqm	1,23,100.00		
62	**Acrylic emulsion paint with low VOC content to internal walls/ceiling**				
	providing & applying of one coat of approve make Primer & two or more coats of Acrylic emulsion paint with low VOC content to internal walls/ceiling with uniform shade of flats, common lobby, staircase, passages, common areas etc. Of approved brand, colour & shade at all heights, levels including necessary scaffolding, cleaning as per the instruction of the APMC / SBI complete. Make:- Asian / Nerolac/ Berger/ Dulux or approved equivalent make.	Sqm	1,23,100.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
63	**Exterior Grade Acrylic Emulsion Paint with low VOC content**	Sq m	11,910.00		
	Providing and applying Acrylic Emulsion with low VOC content / ACE with uniform shade of make of approved , colour, shade & quality to new surfaces in two or more coats over a coat of primer, filling up the services and over sand face plaster including scaffolding all complete at (Basements , Ducts etc.) Make : (Asian, Berger, Nerolac, Jotun) or approved equivalent make.				
64	**EXTERNAL PAINTING WITH TEXTURE PLASTER & HIGHER GRADED ELASTOMERIC PAINT WITH LOW VOC**	Sqm	42,900.00		
	a) Preparing the existing surface by scrapping and rubbing with sandpaper to remove all loose adhered particles followed by washing with water using wire brush to ensure thorough cleaning.				
	b) Providing and applying Texture plaster with finishing with texture material of approved make in 3 to 4 millimetre thickness on previously plastered surface, including Plaster Groove 6mm thickness or Tape Grooves 35 to 45 mm Width or as required, in all position including preparing the surface, scaffolding etc. complete.				
	c) Providing and applying one coat of water based acrylic anti fungal Primer of approved quality and make as per sample approved.				
	d) Providing and applying one coat of fibre reinforced membrane paint water proofing Coat of "Protek Basecoat" of Asian/ "Weather coat Roof Guard" of Berger / "Aqua Touch" of dulux or equivalent approved by the APMC / SBI having crack bridging ability up to 2.00 mm, superior anti-carbonation & water proofing property.				
	e) Providing and applying 2 or more coats of approved quality low VOC Higher graded External Acrylic Emulsion paint, Exterior grade having anti fungal property, resistance to dust & dirt accumulation, resistance to fading of colours etc. of approved colour and shade Apex Ultima (Asian) / Weathercoat All Guard (Berger) / Weather Shield Max (Dulux) or equivalent approved by the SBI / APMC.				
	Note: Rates to include cleaning afterwards, necessary scaffolding/Cradle, debris safety netting, labour etc complete.				
	Make: Asian Paints Ultima Protek / Berger Weathercoat Long Life or approved equivalent.				
	Note:- All Painting Works shall be Measured as per application surface area no extra/separate payment for Band, grooves, strips painting. For Grills /Jali MS Gates if not mentioned specifically /separately. Payment area shall be calculated as per Mode of Measurement given in Technical Bid Document/ BIS/As per Standards				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
65	**Oil Bound Distemper**				
	Providing & Applying of Oil Bound Distemper to new work with acrylic distemper in 2 or more coats over and including water thinnable priming coat, to give even shade of approved colour, shade & quality to new surfaces in two or more coats / up satisfaction APMC/SBI including putty for filling holes, rubbing of surface to make it even and smooth, scaffolding all complete at basements, ground and all floors, height , leads & lifts cleaning etc. Complete as directed by the APMC/SBI. (inside of Lift Shafts Etc.) Make : Nerolac/ Asian/ Berger or approved equivalent make.	Sqm	6,149.00		
66	**Cement paint**				
	Providing & Applying of Cement paint to new work with 2 or more coats to give even shade of approved colour, shade & quality to new surfaces in two or more coats / up satisfaction APMC/SBI including scaffolding all complete at stilts and podiums and all floors, height , leads , lifts cleaning, rubbing of surface to make it even and smooth etc. Complete as directed by the APMC/SBI. (Diaphragm / Retaining wall from inside etc.) make : Asian paints, Shalimar/ Nerolac / Indigo/Jotun / snowcem Topecem, Nitcocem approved equivalent make	Sq m	3,795.00		
	Note: Rates of painting , gypsum, plastering to include cleaning afterwards, necessary scaffolding/Cradle, debris removing, safety netting, labour etc complete.				
	TOTAL OF SECTION -L	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – M : WINDOWS, VENTILATORS, SLIDING DOORS ETC.				
67	**UPVC Windows**				
	Providing & fixing in position factory made uPVC white colour casement /Sliding /casement cum fixed fully glazed Doors/ sliding window/ ventilator comprising of 6mm thick Toughened glass for all window & 5mm thick frosted glass for ventilator, uPVC multi-chambered frame with in-built roller track and sash extruded profiles duly reinforced with with 1.5 to 2.52 mm thick depending upon the window glavanised mild steel section made from roll formaing process of required length (shape & size according to uPVS profile), appropriate dimensions of uPVC extruded glazing beads and uPVC extruded interlocks, EPDM gaskets, stainless steel (SS 304 grade) friction hinges, zinc alloy (white powder coated) casement handles, wool pile, touch locks with hooks, with single nylon rollers (weight bearing capacity to be 80/ 150 Kg), SS fasteners 100 x 8 mm size for fixing frame to finished wall and 5 degree gradient slope in track (drainage track) comes with threshold, low threshold without threshold option & necessary stainless steel screws etc 12 mm thick toughened glass panes (ST 136), fixed in shutters, flush handle, C handle, D handle with locking arrangements as per manufacturers specifications etc. Complete. Profile of frame & sash shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant of approved quality, including Mosquito net all complete as per approved drawing & direction of SBI/APMC. Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be mad. Make: Fenesta, deceunick, Saint Gobain, Tostem, Koemmerling, prominance or approved equivalent. (Refer detailed windows/ door schedule provided by the SBI/APMC.)				
67a	**3 track 3 panels UPVC sliding window with fly proof S.S wire mesh**				
	Three track three panels sliding window with fly proof S.S wire mesh (Two nos. glazed & one no. wire mesh panels) made of (big series) frame 116 x 45 mm & sash 46 x 62 mm both having wall thickness of 2.3 ± 0.2 mm and single glazing bead / double glazing bead of appropriate dimension. (Area of window above 1.75 sqm).	Sqm	1,970.00		
67b	**2 track 2 panels UPVC sliding window**				
	Two track two panels sliding window made of (big series) frame 67 x 50 mm & sash 46 x 62 mm both having wall thickness of 2.3 ± 0.2 mm and single glazing bead / double glazing bead of appropriate dimension . (Area of window above 1.75 sqm up to 2.50 sqm). staircase	Sqm	380.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
67c	**UPVC ventilators**	Sqm	200.00		
	UPVC ventilator as per design & drawing with 8mm thick toughened glass in casement shutter having wall thickness 2.3 ± 0.2 mm and single glazing bead / double glazing bead of appropriate dimension & partly fixed with provision for exhaust fan. (Area of window above 0.5 sqm up to 1 sqm) (Toilet area etc.)				
68	Providing and fixing factory made UPVC white colour sliding glazed door with 6mm Toughened thick glass in single glss unit comprising of uPVC multichambered frame with in-built roller track and sash extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), appropriate dimension uPVC extruded glazing beads, uPVC extruded interlock, stainless steel (SS 304) friction hinges and uPVC extruded Inline sash adaptor (if required), EPDM gasket, wool pile, zinc alloy (white powder coated) handle with key on one side of extreme panels along with zinc plated mild steel multi point locking having transmission gear with keeps, zinc alloy (white powder coated) cament handles, wool pile, touch locks with hooks, Single nylon roller, cresent lock (if required), stainless steel (SS 304 grade) body with adjustable double nylon rollers (weight bearing capacity to be 120 kg), S.S. fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealent over backer rod of required size and of approved quality, all complete as per approved drawing & direction of SBI/ APMC. Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be made. Note: For uPVC frame and sash extruded profiles minus 5% tolerance in dimension i.e. in depth & width of profile shall be acceptable Make: Fenesta, deceuninck, Saint Gobain, Tostem, Encraft, Koemmeling or approved equivalent. (Refer detailed windows/ door schedule provided by the SBI/APMC.)				
	3 track 3 panels UPVC sliding door with fly proof S.S wire mesh				
	Three track three panels sliding door with fly proof S.S wire mesh (Two nos. glazed & one no. wire mesh panels) made of (big series) frame 116 x 45 mm & sash 46 x 82 mm both having wall thickness of 2.3 ± 0.2 mm and single glazing bead / double glazing bead of appropriate dimension. (Area of door above 2.00 sqm upto 5.00 sqm)	Sqm	850.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
69	**Powder Coated Aluminium vertical fins**				
	Providing & fixing in position Powder Coated Aluminium vertical fins to Duct with openable door outer frame of 75x40x1.5 mm box section, inner frame of 75 x40x1.5mm thick box section & vertical fins of 75x40x1.5 mm box section with 75mm clear opening with fixing of frame in to wall with fasteners, Aluminium butt hinges locking arrangement , welding of all corners, joints properly & rubbing of all welding joints, Powder coating to each member, sections to all sides properly as per design , drawing & as per instruction by SBI / APMC.	Sqm	1,900.00		
70	**Toughened glass door**				
	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot , hydraulic floor spring 120kg capacity 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 and making necessary holes, CP Door handle, lock, all patch fittings, stopper etc. , door fittings, all complete as per manufacture's specification, design, drawings, as per instructions by SBI/ APMC. All fittings & fixtures of Dorma/ Hettich/ dorset/ approved equivalent brands.	Sqm	20.00		
	TOTAL OF SECTION -M	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – N : MISCELLANEOUS WORKS				
71	**Providing, Fixing and maintaining Nylon Safety Nets**				
	Providing, Fixing and maintaining, Nylon safety Nets (35mm X 35mm square with 5 mm thick nylon rope.) having width of 4.5 mts. horizontal to the periphery of the Building with supporting structure of 50 mm dia MS hollow (40 nb) pipe duly anchored on slab with 10 mm thick base plate and anchor fastener (hilti) 4 No at all corners, and free end of pipe to be tied up with upper floor column with the help of nylon rope 16 mm dia. same supporting system is to be followed for every 4.5 Mtrs. in such a way to have a proper slope during Construction, and removing and re fixing part of the same as and when required/ necessary for smooth progress of the work for 4 individual layers (at 2nd slab above Podium slab followed by 7th slab , 14^{th}, 21^{st} slab above.) & same should be maintained with cleanliness. All complete as approved by the SBI/ APMC.	Sq m	1500.00		
	Note :- 1) One time payment shall be made for providing Safety Net from start of work till completion of work i/c shifting as required and directed. The Safety Net provided shall remain property of the contractor on completion of the work. 2) Only Projected area beyond building outline shall be considered for measurement.				
72	**M.S. Rungs**				
	Providing & Fixing MS Rungs in Over Head Water Tank & Under Ground Water tank to be fitted at the time of casting RCC walls for Tanks without any extra cost for fixing & necessary changes in shuttering of size 600 X 300 mm , with 25 mm thk. Bars with Epoxy Paint all complete. Weight to consider for 1 rungs is 2.5 kgs.	Kg	400.00		
73	**Rebaring reinforcement bar dowel**				
	Providing and rebaring reinforcement bar dowel in RCC including drilling hole at required or specified , placing the dowel in position and effectively grouting the hole with specified hilti / Equivalent make epoxy/chemical grout material (as per manufacturer specification) at all levels including scaffolding etc. complete as directed by the APMC/SBI . Make :- Hilti, Fischer, Fosroc / approved Equivalent make				
73a	8 mm dia bars	No	200.00		
73b	10 mm dia bars	No	200.00		
73c	12 mm dia bars	No	9,075.00		
73d	16 mm dia bars	No	9,075.00		
73e	20 mm dia bars	No	3,100.00		
73f	25 mm dia bars	No	3,100.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
73g	32 mm dia bars	No	100.00		
74	**M.S. Sleeves**				
	Providing and fixing, M.S Sleeves as per IS :1239 (Class C) to be placed on the RCC wall, Brick wall, beams or any other RCC members for pipes to pass through including filling of the gap with glass wool and sealing both end with water and fire proof sealant complete in all respects as directed & up to satisfaction of Project Manager. Note: Any displacement of sleeves shall be rectified by the Contractor at his own cost no claim in this regards will be entertained against this work.				
74a	50 mm dia ranging from 100 to 500mm length	R mt	200.00		
74b	75 mm dia ranging from 100 to 500mm length	R mt	200.00		
74c	110 mm dia ranging from 100 to 500mm length	R mt	200.00		
74d	150 mm dia ranging from 100 to 500mm length	R mt	200.00		
75	**PVC Sleeves**				
	Providing and fixing PVC sleeves (6kg / Sq m) properly fixed in wall, column, beams, floor and top slab of following diameters , sealing both faces by plastic tape as directed & up to satisfaction of Project Manager. Note: Any displacement of sleeves shall be rectified by the Contractor at his own cost no claim in this regards will be entertained against this work.				
75a	50 mm dia ranging from 100 to 500mm length	R mt	20.00		
75b	75 mm dia ranging from 100 to 500mm length	R mt	60.00		
75c	110 mm dia ranging from 100 to 500mm length	R mt	100.00		
75d	150 mm dia ranging from 100 to 500mm length	R mt	100.00		
76	**Corner guards**				
	Providing & Fixing 1m height and 75 mm X 75 mm X 10 mm thk Corner Guards of approved make made up of flexible and high strength, tamper proof rubber with international standard bright colours with Black Base and with attractive & reflective Yellow colour strips as per approved design & drawing etc. Complete. (Parking Area etc.)	No	1,696.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
77	**Thermoplastic paint**				
	Providing and applying 2.5 mm thick road marking strips (retro- reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of SBI/ APMC and accordance with applicable specifications.	Sq m	1,100.00		
78	**Rubberised Speed Breakers**				
	Providing and fixing water resistant, weather resistant Rubber Speed Breakers humps which are made up of EPDM as per ASTM standards , ASTM D2240, D412, D412, D395, D573, D624 etc. in 500 X 350 X 50 mm Size and in combination of Black and Yellow colour. laying to be done as per width of the road and wherever instructed by APMC/SBI on roadways/ driveways with necessary anchors/bolts, hardware etc. Item includes all transport, handling, wastage, cutting fixing, laying as per profile and as per instructions form APMC/SBI. Approved makes – Deesawala Rubber Industries/ Acutel Solutions/ Axnoy Industries/ Realtek / Equivalent / As approved by APMC/SBI	Rmt	400.00		
79	**Glow studs of size 100x20 mm made of heavy duty**				
	Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact polystyrene) or ABS having electronically welded micro- prismatic lens with abrasion resistant coating as approved by SBI /APMC. The glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 (+/-5) degress to base .The reflective panels on both sides with at least 12 cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4 : 1973. The studs shall be fixed to the Road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of SBI/ APMC.	No	750.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
80	**Expansion joint system related with floor location**				
	Providing and fixing of expansion joint system related with floor location as per design, drawings and direction of APMC / SBI. 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 APMC / SBI. (Material shall confirm to ASTM 6063).				
	Floor Joint of 50 mm gap	R mt	200.00		
81	**Expansion joint system related with wall joint**				
	Providing and fixing of expansion joint system related with wall joint (internal/external) location as per drawings and direction of SBI / APMC. 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).				
	Wall Joint of 50 mm gap	R mt	250.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
82	**Expansion joint system related with roof location**				
	Providing and fixing of expansion joint system of approved make and manufactures for various roof locations as per approved drawings and direction of APMC / SBI. The joints shall be of extruded aluminium base members with, self aligning and self centering arrangement support plates as per 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 aluminium 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 aluminum 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).				
	Roof Joint of 50 mm gap	R mt	60.00		
83	**Artificial Lawn**				
	Providing & fixing of 35mm thick Artificial lawn made of polyethylene with high UV protection with PP Woven fabric primary & secondary backing , applied on concrete / finished surface with adhesive of approved quality, make, colour as per design , drawing & Manufacturer's specification having with 5years of warranty & as per instructions from APMC/ SBI	Sq m	1,700.00		
84	**kerb stone**				
	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete 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 to more than 5mm), including making drainage opening wherever required complete etc. as per direction SBI / APMC. (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by SBI / APMC).	Cum	50.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
85	**Coloured Thermoplastic road marking paints**				
	Providing and applying blue and white/As Instructed coloured thermoplastic road marking paints for marking a 3ft x 3 ft universal accessibility symbol within the parking bay as per the drawings and up to the satisfaction of the APMC/SBI.	No	80.00		
86	**M. S. Gates Sliding/ Openable**				
	Providing fabricating and fixing in position M. S. Gates Sliding/ Openable as per design & drawings with ms angles including framing, M.S box sections , hold fast to be embedded in adjacent RCC Columns, hinges, Sliding Channel, guiding plate, MS Wheel, ball bearings, Rollers, Stopper, locking arrangement,with all welding cutting, fitting, finishing, etc. with one coat of Red Oxide Primer two coats of synthetic enamel paint of approved shade and colours , all the joints, surfaces shall be well finished etc. Complete to satisfaction of the APMC/SBI.	Kg	5,000.00		
87	**G.I. chain link fabric fencing**				
	Providing and fixing G.I. chain link fabric fencing of 1.8m height is fixed in frame by welding / Riveting from top , bottom , side & in cross length of frame & supported with vertical support welded to vertical sides of frame & those vertical supports are embedded in to M15 grade concrete of 450 mm in length & 650mm in depth or as per design drawings & instruction from PMC/ APMC. GI Chain link fencing of width in mesh size 50x50 mm including strengthening with 4 mm dia wire or nuts, bolts and washers,, with all fabrication, welding / bolting / Riveting, rubbing , cutting, fitting, finishing, with one coat of red oxide primer & two or more coats of synthetic enamel paint of approved make & shade, , all the joints, surfaces shall be well finished etc. Complete to satisfaction of the APMC/SBI.	Sq m	600.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
88	**false ceiling**				
	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 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm 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, 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 25mm 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 up to 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 trap door as per drawings, making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per design, drawings, specification and direction of the SBI / APMC but excluding the cost of painting with :				
	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) :2011 (Board with BIS certification marks) (all flats & common area to cover fire line etc.)	Sq m	6,600.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
89	**Acrylic sheet tiled false ceiling**				
	Providing and fixing Acrylic sheet tiled false ceiling of specified materials of size 595x595 mm in true horizontal level, suspended on inter locking 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 centre to centre and cross "T" of size 24x25 mm made of 0.30 mm thick (minimum) sheet, 1200 mm long spaced between main "T" at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24x25 mm 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 24x24x0.3 mm 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 galvanised butterfly level clips of size 85 x 30 x 0.8 mm spaced at 1200 mm centre to centre 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. (Toilets etc.)	Sq m	1,800.00		
90	**chromium plated brass curtain rod**				
	Providing and fixing chromium plated brass curtain rod of 25mm dia having wall thickness of 1.25mm with two chromium plated brass brackets fixed with C.P. brass screws and PVC sleeves etc., wherever necessary complete.	R mt	1,820.00		
91	**Aluminium Composite Panel Cladding**				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building , for all heights and all levels etc. Including: (a) 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) Providing, fabricating and supplying and fixing panels of aluminium composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminium composite panel material consisting of 3mm thick FR grade mineral core sandwiched between two Aluminium sheets (each 0.5mm thick). The aluminium 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. (c) The fastening brackets of Aluminium 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 & instructions from SBI / APMC. The item includes 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 aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation.	Sq m	6,800.00		
	The Contractor shall provide curtain wall with aluminium composite panel cladding of any shade, 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 SBI / APMC. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminium Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.				
92	**S S Bird Spikes**	R mt	7,600.00		
	Providing & fixing of Stainless Steel Bird Spikes of moulded virgin grade polycarbonate base with UV stabilizer width minimum 20 CM diameter hole 4mm diameter of center projection 3.4 mm center spread 200mm of BIRD EDGE or equivalent make for bird control at given locations including all fittings, fixture, Hardwares, scafolding of approved quality, make as per design , drawing & Manufacturer's specification & as per instructions from APMC/ SBI				
	TOTAL OF SECTION -N	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – O : LANDSCAPING WORKS				
93	**Plum Concrete**				
	Providing & Laying Plum concrete consisting of 80% P.C.C. mix (M15) and 20% Rubble stone of maximum size of 150 mm laid in layers with ramming consolidating, watering including dewatering cost & conveyance of all materials, labour charges, machine mixing, finishing the surface etc. Complete	Cum	200.00		
94	**Supplying, stacking, spreading of good quality red Earth**				
	Supplying & stacking of good quality red earth at site including royalty mixed with bio organic manure from approved source for spreading at the require depth for making dome shape and levelling, filling of pits, filling of flower beds at the surrounding wall (20% of stack volume will be reduced for payment)	Cu m	500.00		
95	**Supplying & Planting of Shrubs**				
	Supplying of Shrubs of various colour with ornamental plants for covering of edges and boundary of lawn area and at the bottom of tall trees area in the R.G. like Nerium Dwarf, Tagar Green Variegated Acalypha with all colour, Green Lily, Hibiscus, Himalaya Pattern, Syngonium, Maranta Variegata, Rhoeo Compacta, Durantta Golden, Lump sum 1500 Plants, approx. height 1 to 1 $^{1}/_{2}$ feet with bag laying and survival value up to 6 month period with free of cost Maintenance.	Sq m	300.00		
96	**Carpet natural grass with lush green colour**				
	Supplying and laying of carpet natural grass with lush green colour having size of 1 x 2 ft. slab in Podium area as well as ground level 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 , poyta / Red soil filling, manure, preparing bed, supplying good earth, if needed.	Sq m	500.00		
	TOTAL OF SECTION -O	**Rs**			
	TOTAL AMOUNT OF CIVIL WORKS- (SECTION A+B+C+D+E+F+G+H+I+J+K+L+M+N+O)	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	Aii) ABSTRACT SHEET OF INTERNAL & EXTERNAL PLUMBING WORKS				
	SCHEDULE A: - INTERNAL & EXTERNAL CIVIL REPAIRS, RENOVATION & RESTORATION WORKS INCLUDING SITE DEVELOPMENT WORKS				
	GENERAL INSTRUCTION FOR VARIOUS WORKS ENNUMERATED IN THIS TENDER: -				
	No extra item should be executed without getting permission from concerned authorities. Any item executed other than in the tender rate analysis shall be provided prior to execution of work				
	The contractor has to visit site prior to quoting rates and get familiar with the site conditions.				
	Rates shall be quoted for all heights, leads and lifts i.e Ground to terrace level				
	For All materials, CP fittings, Sanitaryware etc prior written approval should be taken from APMC / SBI.				
	All pipes to be demarkated with respective colour bands (50mm wide) as per water quality and arrow signages to be marked on all exposed pipes at every 3m. All signages for shaft numbering to be installed at terrace and B3+B2+B1+Gr+26th floors.				
	All Items include Supply, Transportation, Loading, Unloading, Storing, Security, Installation, Testing Commissioning				
	PLUMBING WORKS:				
	Enabling works : Rates shall include all types types of works like wall chasing, making holes, re-plastering holes, Scaffolding , double H frames, working platforms, safety harness, testing as mentioned in tech. Spec. or as per BIS code, etc.)				
1	**SECTION A :- SANITARY FIXTURES & FITTINGS**				
1.1	First quality glazed vitreous china Wall mounting type (European style) Water Closet of approved colour, solid plastic seat with soft closing cover, SS hinges and rubber buffers, SS screws and washers, including cutting and making good the walls, floors wherever required, grouting including following accessories	Nos.			
	Wall Mounted EWC : Make: Jaguar CNS – 967NS (BR- Rs. 7,000) or equivalent make from Kohler or Hindware catalogue.				
	Dual Flush Valve : Make: Jaquar FLV-1089 or of equivalent make from Kohler or Schell catalogue, with flow rate of 3 litres per small lush and 6 litres per big flush at 4.0 Bar pressure		434.00		
1.2	Two Way Bib cock with CP wall flange Jaquar make (Cat. No. FLR 5041N), Plumber or equivalent along with Hand Spray (Health Faucet) (ABS Chrome Plated) with 8mm dia and 1 M long Flexible tube and wall hook (Cat. No. ALD 573) or equivalent upon approval make and design, with additional aerator/flow restrictor with flow rate of 3.8 LPM at 4.0 Bar, as per approval complete including fixing and connecting including all consumable materials like teflon tape, CP nipples, Flange with testing etc. Complete.	Nos.			
	Health Faucet : Make : Jaquar ALD 565 or of equivalent make from Kohler or Hindware catalogue.		434.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1.3	Long body bib cock of Jaquar make (Cat. No. FLR 5011N/ FLR 5047N), equivalent make from Kohler or Hindware catalogue upon approval, with additional aerator/flow restrictor with flow rate of 3.8 LPM at 4.0 Bar, and design as per approval complete including fixing and connecting and including all materials, teflon tape, CP nipples, cover plates with testing etc. complete (for Washing machine, Garbage room, Dry Bal, staff toilets, common area at G,B1,B2,B3, Terrace etc.)	Nos.	352.00		
1.4	Wash Basin below counter (Jaguar FLS-WHT-5701 equivalent of Hindware, Kohler) with C.I. oval brackets for fixing below counter, 15 mm C.P. brass wall mounted basin mixer tap (Jaguar Make : FLR-5441NK with concealed brass body or equivalent) with additional aerator/flow restrictor with flow rate of 2.5 LPM at 4.0 Bar, 32 mm C.P. brass waste pipe of standard pattern, including enamel painting of fittings and brackets, cutting and making good the walls wherever require.	Nos.			
	P Trap : Make : Syscraft or equivalent from Viega or Geberit catalogue.		608.00		
1.5	Shower Diverter 15mm CP brass single lever 4-way divertor, concealed type, Jaquar (FLR-5075K and concealed brass body) or equivalent from Hindware, Kohler, shower head, spout with provision for hand-shower with adjustable type arm with wall flange & hand shower with slip fit bracket connection, shower rail (SHA-1187N) with flexible braided CP pipe.	Nos.			
	Overhead Shower: Make : Jaguar OHS-1719 or equivalent with flow rate of 6 LPM at 4.0 Bar or equivalent make from Kohler or Hindware catalogue.		432.00		
1.6	C.P. brass towel Holder ring fixed to rawl plug with C.P. brass screws, making holes in walls and making good. (For Wash Basin of Residential Flats)	Nos.			
	Towel Holder Ring: Make : Jaguar SKU: ACN-1121BN or of equivalent make from Kohler or Hindware catalogue.		608.00		
1.7	C.P. brass Towel Rail 600 mm long as per model Jaguar make AC1101NM or equivalent make from Kohler or Hindware catalogue.	Nos.	432.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1.8	Stainless Steel Soap holder of approved make. Including providing and fixing screws, washers, cutting and making good the walls. (For Shower Area)	Nos.	432.00		
	Soap Holder: Model : Jaquar Soap Dish ACN-1131N or of equivalent make from Kohler or Hindware catalogue.				
1.9	C.P. brass liquid Soap Dispenser of approved make. Including providing and fixing screws, washers, cutting and making good the walls. (For Residential Flats & Common Area WCs)	Nos.	432.00		
	Soap Dispenser: Make : Jaquar ACN-CHR-1135N or of equivalent make from Kohler or Hindware catalogue.				
1.10	C.P. Brass Double Coat Hook fixed into wall with C.P.brass screws and rawl plugs etc. complete including cutting and making good the walls etc.	Nos.	432.00		
	Double Coat Hook: Make : jaguar make Model : ACN-CHR-1161N or of equivalent make from Kohler or Hindware catalogue.				
1.11	Stainless steel sink of size L (1000 to 1100mm) X W (450 to 520mm) X D (200 to 270mm), C.I. Painted brackets, 110mm dia. 100Mm dia C.P. waste coupling, 40mm dia CP P trap, SS strainer on coupling with necessary C.P. brass unions complete including painting the fittings and cutting and making good the walls wherever required, with CP Sink Cock.	Nos.	352.00		
	Kitchen Sink: Make: Nirali with drain board or of equivalent make.				
	Sink Cock, Swan neck, Swivel type, including CP brass extention piece with flange, with additional aerator/flow restrictor with flow rate of 3.8 LPM at 4.0 Bar, Jaquar. Model FLR-CHR-5347N or of equivalent make from Kohler or Hindware catalogue.				
1.12	Plumbing connections to installed Electrical Storage type Water Geyser, 25 ltr storage capacity, 3KW heating load (SITC of geyser measured separately under electrical works) by providing and fixing screws, cutting and making good the walls. Including angle cocks (2 nos), inlet outlet flexible braided hose pipe, telfon tape, flanges etc complete.	Set	432.00		
1.13	**Toilet paper Roll holder complete in all respects including cutting and making good the walls etc.**	Nos.	432.00		
	Toilet Roll Holder: Jaguar make Model No. : SKU: AKP-CHR-35751P or of equivalent make from Kohler or Hindware catalogue.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1.14	Mirror, 4mm thick of make modiguard/ saint gobain etc or equivalent of dimensions as directed by APMC/SBI, complete with flat polished edges, fitted on site on 12 mm BWP marine ply base, base having BTC lipping border and finished with 1 coat of primer followed by 2 coats of enamel paint on all surfaces of ply and lipping. The mirror shall be either pasted on the ply with silicon adhesive and fitted on wall with two ear hooks as per approval complete to the APMC/SBI satisfaction. (for W.B, size 600X600mm)	Sq.mt.	260.00		
1.15	Orissa pattern 'Indian' WC squatting pan with dual flushing valve including all necessary CP fittings, PVC P trap 110mm dia, flanges, adapters, stop cock, PVC connections etc. complete. Approx. size 60 x 40 x 30 cms. (for service staff toilets).	Nos.	2.00		
	Make: Hindware: 20042, Parry ware: CO-117, Cera: Cadell - S 3020102				
	Dual Flush Valve : Make : Jaquar. Model No. : FLV-1089 or of equivalent make from Kohler or Hindware catalogue.				
1.16	White glazed Flat back Urinal Pan with flush valve operated on sensor, flow spreader, CP flush pipe connection, waste coupling, P trap., including all fittings and connections complete. (Staff toilet and Recreation/Common areas)	Nos.	2.00		
	Make – Parryware: New Magnum- C-583, Hindware: Rhine-96008, Cera: Carys S-4020104				
1.0	**SUB TOTAL -SECTION A**	**Rs.**			
2.0	**SECTION B:- DRAINAGE - INTERNAL & VERTICAL DOWN-TAKES**				
	(SOIL, WASTE, VENT AND RAIN WATER PIPES & FITTINGS)				
2.1	Polypropylene pipes as per EN 1451 tested for Soil and Wastewater pipes including all fittings e.g. (plain or door) bends, junction, offsets, coupler, clean-outs, cowls, jointing with rubber ring joint (push-fit), laid at prescribed slope including cutting chase or holes in walls and floors and making good where required including fabricated pipe supports, GI brackets, clamps, U-clips etc complete. Testing by filling with water for 24 hours. (for internal underslung plumbing)				
	(Inside Toilet Area)				
2.1.1	110 mm dia.	R mt	1,488.00		
2.1.2	75 mm dia.	R mt	1,747.00		
2.1.3	50 mm dia.	R mt	1,637.00		
	(Basement + Ground Floor Ceiling Pipe)				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
2.1.4	50 mm dia.	R mt	11.00		
2.1.5	75 mm dia.	R mt	99.00		
2.1.6	110 mm dia.	R mt	50.00		
2.1.7	150 mm dia.	R mt	33.00		
2.1.8	200 mm dia.	R mt	292.00		
2.1.9	250 mm dia.	R mt	33.00		
2.1.10	300 mm dia.	R mt	33.00		
	(Vertical Down take)				
2.2.1	110 mm dia.	R mt	1,840.00		
2.2.2	75 mm dia.	R mt	1,480.00		
	(Terrace & Balcony Rainwater Pipe)				
2.2.3	150 mm dia.(Top terrace)	R mt	740.00		
2.2.4	110 mm dia.	R mt	1,768.50		
	(Basement + Ground Floor Ceiling Pipe)Rain water				
2.2.6	75 mm dia.	R mt	14.30		
2.2.7	110 mm dia.	R mt	12.10		
2.2.8	150 mm dia.	R mt	105.00		
2.2.9	200 mm dia.	R mt	187.00		
2.2.4	50 mm dia. (Sump Pipe)	R mt	55.00		
2.3	PP Floor trap 7'' (multi-type) of self cleansing design with water seal not less than 50 mm, including necessary 50mm waste water connections, set in cement concrete 1:2:4 mix complete including cost of cutting and making good the walls and floors where required	Nos.	906.00		
2.4	CP perforated Toilet Grating circular fixed in CP frame of 150mm X 150mm, including anti-crocroack trap fixed in floor tiling with matching grout etc complete. (for Toilets and Kitchen)	Nos.	1,260.00		
2.5	CP perforated Balcony Grating circular fixed in CP frame of 150mm X 150mm, fixed in floor tiling with matching grout etc complete. (for Balconies, podium drain)	Nos.	136.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
2.6	CI Scupper Drain with 150mm outlet, CI L-shaped grating, fixed in terrace waterproofing at proper level	Nos.	20.00		
2.7	Providing and laying perforated / slotted Subsoil Piping in PVC 6 kg/sqcm pipes wrapped in non-woven geotextile fabric of 150 GSM, with layer of murum/brick bat of 75mm ht on the pipe, laid to proper level and slope as per consultants drawing, excavation, compaction, watering, refilling and disposal of surplus earth, including making holes in walls, making connection with PVC pipe to subsoil drain / storm chamber etc complete (for basemant raft pore water release)				
2.7.1	110 mm dia.	R mt	165.00		
2.7.2	75 mm dia.	R mt	330.00		
2.8	Providing Sleeves / Core-cutting in RCC members like Slabs Beams, Sheer Walls as per MEP drawing and as per approval from Structural consultant upto 200mm deep of following dia:				
2.8.1	150 mm dia.	Nos.	96.00		
2.8.2	110 mm dia.	Nos.	3,580.00		
2.8.3	75 mm dia.	Nos.	894.00		
2.8.4	50 mm dia	Nos.	1,074.00		
2.0	**SUB TOTAL-SECTION B**	**Rs.**			
3.0	**SECTION C:- WATER SUPPLY - INTERNAL & EXTERNAL**				
3.1	3 layer PERT / PP-R (Polypropylene Random Copolymer) pipes SDR 7.4 / PN 16, UV stabilized & anti-microbial fusion welded, as per IS:15801 & having thermal stability for hot & cold water supply, including all PP-R plain & brass threaded polypropylene random fittings, including fixing the pipe with GI clamps at 1.00m spacing where ceiling-hung. This includes the cost of cutting, chases making holes and making good the same including testing of joints complete as per direction of Engineer in charge. (diameter below are ID of pipe) (for cold and hot water internal piping in Toilets)				
3.1.1	15 mm dia	R mt	8,143.30		
3.1.2	15 mm dia (Hot)	R mt	2,992.00		
3.1.3	20 mm dia	R mt	862.40		
3.1.4	32 mm dia (Flush Valve internal piping)	R mt	1,606.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
3.2	3 layer PERT / PP-R (Polypropylene Random Copolymer) pipes SDR 7.4 / PN 16, UV stabilized & anti-microbial fusion welded, as per IS:15801 & having thermal stability for hot & cold water supply, including all PP-R plain & brass threaded polypropylene random fittings, including fixing the pipe with GI clamps at 1.00m spacing where ceiling-hung. This includes the cost of cutting, chases making holes and making good the same including testing of joints complete as per direction of Engineer in charge. (diameter below are ID of pipe) (for cold and hot water external piping exposed in shafts)				
	(Vertical Down take)				
3.2.1	20 mm dia (AC drain piping)	R mt	2,160.00		
3.2.2	15 mm dia	R mt	25.00		
3.2.3	20 mm dia	R mt	421.30		
3.2.4	25 mm dia	R mt	1,125.30		
3.2.5	32 mm dia	R mt	1,477.30		
3.2.6	40 mm dia	R mt	2,041.20		
3.2.7	50 mm dia	R mt	2,008.65		
3.2.8	65 mm dia	R mt	455.70		
3.2.9	80 mm dia	R mt	50.40		
	(Terrace Pipe)				
3.2.10	50 mm dia	R mt	150.00		
3.2.11	65 mm dia	R mt	300.00		
3.2.12	80 mm dia	R mt	300.00		
3.2.13	100 mm dia	R mt	300.00		
3.4	Ball Valves of brass body nickel plated with stainless steel ball, lever operated and tested to 20kg /sq.cm.				
3.4.1	15 mm nominal bore	Nos.	440.00		
3.4.2	20 mm nominal bore	Nos.	443.00		
3.4.3	25 mm nominal bore	Nos.	12.00		
3.4.4	32 mm dia (Brass)	Nos.	22.00		
3.4.5	32 mm dia (UPVC)	Nos.	266.00		
3.4.6	40 mm dia	Nos.	38.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
3.5	Cast iron lever operated slim seal type Butterfly Valves of CI body and spheroidal graphite iron disc (SG iron),with nitrile rubber seal, tested to 10 kg / sq.cm Confirming to BS 5155 / MF6 standards and including a set of GI flanges as per BS-10 table 1 including bolt nuts, and Neoprene rubber askets etc., Complete Rate Quoted shall be inclusive of cost of other consumables like hacksaw blade, oil, cotton thread etc.				
3.5.1	50 mm dia	Nos.	48.00		
3.5.2	65 mm dia	Nos.	8.00		
3.5.3	80 mm dia	Nos.	2.00		
3.5.4	100 mm dia	Nos.	5.00		
3.6	PRV Station (pressure reducing valve station) in supply pipeline with two nos control valves with union before and after the PRV, bypass piping with ball valve with reduced side mounted with pressure gauge.				
3.6.1	20 mm dia (Domestic water down-takes)(Garbage chute)	Nos.	1.00		
3.6.2	25 mm dia (Domestic water down-takes)	Nos.	40.00		
3.6.3	32 mm dia (Domestic water down-takes)	Nos.	53.00		
3.6.4	40 mm dia (Domestic water down-takes)	Nos.	62.00		
3.6.5	50 mm dia (Domestic water down-takes)	Nos.	20.00		
3.6.6	65 mm dia (Flushing water down-takes)	Nos.	2.00		
3.7	Digital Water flow meter BMS compatible with MODBUS protocol, digital screen, with built-in battery with min 10 year slife, conforming to IS:779 and Approved by Gift Authorities complete with bolts, nuts, rubber insertions etc. (Tail pieces if required will be paid separately) :				
3.7.1	80 mm dia nominal bore	Nos.	2.00		
3.7.2	40 mm dia nominal bore	Nos.	2.00		
3.7.3	20 mm dia nominal bore	Nos.	786.00		
3.8	Closed Cell Thermoplastic Elastomer Nitrile Rubber Insulation sleeve of 6mm thick over pipes and securely wrapping and taping on all fittings. (for Hot water supply from gyeser to manifold)				
3.8.1	15mm	R mt	2,992.00		
3.8.2	25mm	R mt	10.00		
3.9	25mm dia. Automatic (RB make) Air release valve including providing and fixing cut off & drain valve, making necessary inlet/outlet connection and fixing with M.S. Brackets complete.	Nos.	8.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
3.10	Brass `Y' / Pot stainer / T strainers screw type with stainless steel fin wire mesh perforated sheet basket, transparent PVC casing for viewing clogged dirt, with necessary flange / unions nuts, bolts and washers complete as required tested for 20 bar pressure.				
3.10.1	65mm dia (OHT)	Nos.	11.00		
3.10.2	80mm dia (OHT)	Nos.	8.00		
3.10.3	80mm dia (water meter, FL OHT)	Nos.	2.00		
3.11	Puddle Flanges, with 6mm thick MS plate / HDPE of dimensions 2D, Flanges on both sides, Hot Dip Galvanized including fixing at correct level as per drawings and welded / secured on location with RCC reinforcement cage before casting of tanks				
3.11.1	200mm dia	Nos.	6.00		
3.11.2	150mm dia	Nos.	8.00		
3.11.3	100mm dia	Nos.	23.00		
3.11.4	80mm dia	Nos.	14.00		
3.11.5	50mm dia	Nos.	57.00		
3.12	**UV System**				
3.12.1	Capacity of 1 m3/hr (Top 4 floors)	Nos.	4.00		
3.12.2	Capacity of 6 m3/hr (Bottom floors)	Nos.	4.00		
3.13	Online Monitoring System to measure & indicate following parameters : Water flow, Turbidity, TDS, water temperature, pH, conductivity, and dissolved oxygen, etc. the system should give output on MODBUS protocol for BMS compatability. 4 + 4 OHT outlet	Nos.	8.00		
3.14	Solenoid / Motorized Valve including level sensor and control panel. Valve to turn off FULL level in tank and turn on at 1/3rd level. Sensor cables & cables between panel to valve to be included. Valve of following diameter:				
3.14.1	50mm dia (at OHT)	Nos.	4.00		
3.14.2	65mm dia (GIFT city inlet)	Nos.	3.00		
3.0	**SUB TOTAL-SECTION C**	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4	**SECTION D:- EXTERNAL SEWAGE & STORM WATER DRAINAGE WORK**				
4.1	PVC gully trap grade `A' complete with C.I. grating brick masonry chamber with first class bricks and water tight double seal FRP Heavy duty cover with frame of 300 x 300 mm internal size and 600X600 chamber with 230 X 160mm size PVC P trap of 50mm water seal (FRP Cover, heavy duty - 10T capacity)	Nos.	10.00		
4.2	Constructing brick masonry Inspection chamber with varying depth & of the following sizes in brick work with of class 75 in cement mortar 1:5 (1 cement:5 fine sand), RCC foundation slab. 1:2:4 mix (1 cement : 2 coarse sand:4 graded stone aggregate 40 mm nominal size) both inside and outside of plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) with a floating coat of neat cement on inside face, proper water proofing to ensure no ground water seepage in the manhole, PVC foot rests at 300 mm spacing, benching and making channels with 1:2:4 cement concrete neatly finished, including necessary centering and shuttering, reinforcement, excavation, in all kind of soil, dewatering, refilling, watering, ramming and removing the surplus excavated earth, making good the same, water tight double seal FRP Heavy duty cover (10T capacity) with frame as per BS EN 124:1994 and AASHTO H-20 and H-25. complete as required. (Contractor shall submit the structural design and drawings for the approval of Project Manager prior to execution) (FRP Cover heavy duty)				
4.2.1	450 x 600 mm	Nos.	5.00		
4.2.2	600 X 1000mm	Nos.	5.00		
4.3	Providing and laying RCC NP2 class pipes conforming to IS:458 - 2003 in prepared trenches in grade and level, including hoisting, making collar joints in cement mortar 1:1, including excavation, compaction, PCC haunching, dewatering, backfilling, cost of jointing material like cement, sand etc. and hydraulic testing of the pipes at factory as well as on site as per the stipulation in relevant IS code etc. complete.				
4.3.1	200 mm dia.	R mt	110.00		
4.3.2	250 mm dia.	R mt	110.00		
4.3.3	300 mm dia.	R mt	143.00		
4.3.4	450 mm dia.	R mt	27.50		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4.5	Constructing masonry Rainwater Chamber inside with 75 second class designation brick work in cement mortar 1:5 (1 cement : 5 fine sand) for Storm water, with FRP surface heavy duty Grating chamber cover with RCC top slab 1:2:4 mix (1 cement:2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:3:6 (1 cement :4 fine sand : 8 graded stone aggregate 40 mm nominal size) and inside and outside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12mm thick finished with a floating coat of neat cement complete including using waterproofing compound as per standard design. FRP foot rests including fixing in 20 x 20 x 10 cm cement concrete blocks 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size) with FRP perforated Heavy duty (10T capacity) cover with frame as per BS EN 124:1994 and AASHTO H-20 and H-25. (Rain water Drain Chamber)				
4.5.1	450 mm x 450 mm (Depth up to 450mm to 1.5 Mtr)	Nos.	25.00		
4.6	Providing PVC Foot rests / Rungs (C type) including fixing in manholes / tanks with 300x250x25 (LXWXH) mm including 50mm embedding in chamber brickwork / RCC during construction or tanks / chambers, reinforced with 25mm steel bar confirming to IS 1786	Nos.	200.00		
4.7	Making connection of sewage drain to GIFT Service Tunnel / Main Sewer and Storm Drainage / Nala 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 with waterproofing admixture and making necessary channels for the drain etc. complete :				
4.7.1	For pipes 200 to 300 mm diameter	Rmt	25.00		
4.8	Constructing circular brick masonry Sewer Trap Chamber with 1st class B.B. masonry in cement mortar 1:5 foundation concrete 1:3:6 mix inside and outside plastering 12 mm thick with cement mortar 1:3 finished with a floating coat of neat cement inside and rough plaster on outside and making channels in cement concrete 1:2:4 mix neatly finished complete as per standard tapering design including excavation refilling and disposal of surplus earth, providing and fixing CI bracketed steps, PVC sewer trap with cleaning eye, 90 cm dia FRP frame and cover (heavy duty 10 T Capacity) etc. complete.	Nos.	1.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4.9	Supply and Installation of Basement Drain Channel of polymer concrete channel with DI heavy duty grating and frame as below, fixed to level as per drawing in foundation concrete 1:3:6 mix, and cement grouting as per standard design with a floating coat of neat cement with waterproofing admixture including excavation refilling and disposal of surplus earth, providing and securely fixing in bed concrete. (150mm to 550mm depth to be mentioned.)				
4.9.1	300mm Wide	R mt	352.00		
4.9.2	100mm Wide	R mt	110.00		
4.10	Grooved Drain Channel, 150mm wide, 50mm deep groove channels including anchor fasteners in trimix / RCC slab laid at location and level as indicated in drawings	R mt	385.00		
4.11	Concrete Pedestals of size 600 X 300X 300mm with 1:2:4 concrete and finishing with 1:3 cement plaster etc complete for water supply pipe supports on terrace	Nos.	120.00		
4.12	FRP manhole cover 600X600mm with water tight double seal FRP Heavy duty cover with frame of load class as per BS EN 124:1994 and AASHTO H-20 and H-25, with lock and key arrangement, for fixing on all R.C.C. tanks at all heights and levels				
4.12.1	Medium duty (for OHT)	Nos.	12.00		
4.12.2	Heavy duty 10 T capacity	Nos.	5.00		
4.12.3	Medium duty (for side manhole) with hinged connection	Nos.	10.00		
4.0	**SUB TOTAL-SECTION D**	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
5.0	**SECTION E:- PUMP EQUIPMENTS**				
5.1	Supply, Installation, Testing And Commissioning of Compact Self Contained Skid Mounted Hydro-pneumatic System. Vertical In-Line, multistage, centrifugal pumps with SS-304 casing and impeller and SS-316 shaft, CI base & head TEFC motor (with mechanical seal). Pre-charged diaphragm pressure vessel with food grade membrane, charging connection, connected to outlet header with necessary flanges, gaskets, isolating valves, nuts/bolts etc complete. Accessories like NRVs, isolating ball/butterfly valves, SS-304 (non-Magnetic) suction and delivery header, pressure gauge, MS base frame (Synthetic enamel painted over a coat of primer) Vendor to submit performance curves and technical catalogue of the proposed model for review & approval by electrical & PHE consultants.				
	UGWT to OHT filling:				
5.1.1	HPS#1 - For distributing Domestic water from UGWT to Over Head Tank (Building A) from Main UGWT considering 4 hrs of filling time per day	Set	1.00		
	Pump = Vertical inline monoblock centrifugal				
	System Discharge (Q) = 120 LPM				
	Individual Pump Discharge = 120 LPM				
	Approximate Head in m (H) = 120 m				
	Pump Qty – 1 working + 1 Stand-by				
	Maximum starts & Stops per Hrs. - 30 nos				
	Approx. System Electrical Requirement = 5 HP				
	Approx. Individual Pump Electrical Requirement = 5 HP				
	Diaphragm type pressure tank Capacity in lit : 25 ltr.				
5.1.2	HPS#2 - For distributing Domestic water from UGWT to Over Head Tank (Building B) from Main UGWT considering 4 hrs of filling time per day	Set	1.00		
	Pump = Vertical inline monoblock centrifugal				
	System Discharge (Q) = 120 LPM				
	Individual Pump Discharge = 120 LPM				
	Approximate Head in m (H) = 125 m				
	Pump Qty – 1 working + 1 Stand-by				
	Maximum starts & Stops per Hrs. - 30 nos				
	Approx. System Electrical Requirement = 5 HP				
	Approx. Individual Pump Electrical Requirement = 5 HP				
	Diaphragm type pressure tank Capacity in lit : 25 ltr.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
5.1.3	HPS#3 - For distributing Flushing water from UGWT to Over Head Tank (Building A & B) from Main UGWT considering 4 hrs of filling time per day	Set	1.00		
	Pump = Vertical inline monoblock centrifugal				
	System Discharge (Q) = 185 LPM				
	Individual Pump Discharge = 93 LPM				
	Approximate Head in m (H) = 125 m				
	Pump Qty – 2 working + 1 Supporting				
	Maximum starts & Stops per Hrs. - 30 nos				
	Approx. System Electrical Requirement = 7.5 HP				
	Approx. Individual Pump Electrical Requirement = 3.75 HP				
	Diaphragm type pressure tank Capacity in lit : 25 ltr.				
	Booster Pumps				
5.1.3	HPS#4 - For distributing Domestic water from OHWT to Toilets by pumping (A Wing & B Wing)	Set	2.00		
	System Discharge (Q) = 250 LPM				
	Individual Pump Discharge = 125 LPM				
	Approximate Head in m (H) = 20 m				
	Pump Qty – 1 working + 1 Supporting				
	Working Pump set on VFD				
	Maximum starts & Stops per Hrs. - 30 nos				
	Approx. System Electrical Requirement = 4.0 HP				
	Approx. Individual Pump Electrical Requirement = 2.0 HP				
	Diaphragm type pressure tank Capacity in lit : 50 ltr.				
5.1.4	HPS#5 - For distributing Flushing water from OHWT to Toilets by pumping (A Wing & B Wing)	Set	2.00		
	System Discharge (Q) = 600 LPM				
	Individual Pump Discharge = 300 LPM				
	Approximate Head in m (H) = 20 m				
	Pump Qty – 1 working + 1 Supporting				
	Working Pump set on VFD				
	Maximum starts & Stops per Hrs. - 30 nos				
	Approx. System Electrical Requirement = 11 HP				
	Approx. Individual Pump Electrical Requirement = 5.5 HP				
	Diaphragm type pressure tank Capacity in lit : 50 ltr.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
5.1.5	Supplying & erecting Dewatering Submersible pump set for Irrigation water supply of 415V, 3 phase, 50C/s, A.C. supply of 1 KW/ 1 H.P., of 30 m head (1 working + 1 supporting) with 100 LPM discharge, non-clogging minimised abrasive wear, large impeler clearance & maintenance free pump set with water proof cable duly sealed with epoxy material built in protection to prevent the motor from burn out due to abnormal operation. specially designed high efficiency motor with F class insulation & the pump mechanically sealed in the oil chamber, etc. complete	Set	1.00		
5.1.6	Supplying & erecting Dewatering Submersible pump set for Basement 3 - Sump 1 & 2 of 415V, 3 phase, 50C/s, A.C. supply of 1.2 KW/ 1.5 H.P., of 20 m head (1 working + 1 supporting) with 235 LPM discharge, non-clogging minimised abrasive wear, large impeler clearance & maintenance free pump set with water proof cable duly sealed with epoxy material built in protection to prevent the motor from burn out due to abnormal operation. specially designed high efficiency motor with F class insulation & the pump mechanically sealed in the oil chamber, etc. complete	Set	2.00		
5.1.7	Supplying & erecting Dewatering Submersible pump set for Basement 3 - Car pit Sump 1, 2 & 3 of 415V, 3 phase, 50C/s, A.C. supply of 0.5 KW/ 0.5 H.P., of 25 m head (1 working + 1 supporting) with 50 LPM discharge, non-clogging minimised abrasive wear, large impeler clearance & maintenance free pump set with water proof cable duly sealed with epoxy material built in protection to prevent the motor from burn out due to abnormal operation. specially designed high efficiency motor with F class insulation & the pump mechanically sealed in the oil chamber, etc. complete	Set	6.00		
5.0	**SUB TOTAL- SECTION E**	**Rs.**			
	TOTAL COST OF INTERNAL & EXTERNAL PLUMBING WORKS (SECTION A+B+C+D+E)	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	B) FIRE FIGHTING WORK, FIRE ALARM, PA SYSTEM.				
	SECTION - A				
	FIRE PUMPS AND ACCESSORIES				
1	Supplying and installing Multi-stage Multi-outlet direct coupled centrifugal pump (Vertical) of make Kirloskar, Wilo, Grundfos or equivalent or mullti stage pump as per manufacturer's pump characteristics data, cast iron casing and bronze/phosphor bronze internal parts, make approved by Tariff Advisory Committee for fire duty, mechanical seal conforming to IS 1520, Squirrel cage induction motor, TEFC, synchronous speed 3000 RPM, suitable for operation as per Fire Brigade / Supply Co. regulations with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325, capable of discharging 2850 LPM, Low Zone outlet at 93m head and High Zone outlet at 153 metre head, against all losses, complete with TEFC motor (H.P of motor to be confirmed from the pump manufacturer to suit the pump characteristics) with base plate, foundation bolts, suitable cable entry gland box, pressure gauges etc. and wired for gauges etc. and wired for automatic start on drop of pressure in the wet riser system. (Main Hydrant + Main Sprinkler)	Set	2.00		
2	Providing and installing Multi-stage Multi-outlet direct coupled centrifugal pump (Horizontal) of make Kirloskar, Wilo, Grundfos or equivalent mullti-stage pump as per manufacturer's pump characteristics data, cast iron casing and bronze/phosphor bronze internal parts, make approved by Tariff Advisory Committee for fire duty, mechanical seal conforming to IS 1520, capable of discharging 2850 LPM, Low Zone outlet at 93m head and High Zone outlet at 153 metre head, coupled to approved make Diesel Engine mounted with 24 Volts DC starting motor, push button for manual starting, Tacho generator attachment for multiple kicks, electronic panel for automatic starting, fuel tank for eight hours full load run of the pump, set of 24 V required ampere- hour capacity, heavy duty lead cell, leak proof battery including inter-battery connectors and terminals complete, automatic, two rate circuit battery charger suitable for either quick or trickle rate, suitable for 200/250 V 50 Hz supply, single phase, fabricated base plate for pump and engine, suitable MB type pressure switches complete. All control units and instruments to be mounted on MC. (Stand-by Diesel pump)	Set	1.00		
3	Supplying and fixing wrought steel or MS fabricated air vessel in pump room 300 mm dia. and 1200 high on M.S stand with necessary arrangement and including the cut off, drain and air release and drain pipes to the channel in pump room.	Set	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4	Providing and installing Jockey Pump (Vertical) of Multi-stage Multi-outlet direct coupled centrifugal pump (Horizontal) of make Kirloskar, Wilo, Grundfos or equivalent pump as per manufacturer's pump characteristics data, cast iron casing and bronze/phosphor bronze internal parts, mechanical seal conforming to IS 1520, make approved by Tariff Advisory Committee for fire duty, capable of discharging 180 LPM, Low Zone outlet at 93m head and High Zone outlet at 153 metre head, against all losses complete. (Jockey Sprinkler + Jockey Hydrant)	Set	2.00		
5	Providing and installing Water Curtain Pump (Vertical) Direct coupled centrifugal pump of make Kirloskar, Wilo, Grundfos or equivalent as per manufacturer's pump characteristics data, cast iron casing and bronze/phosphor bronze internal parts, mechanical seal conforming to IS 1520, make approved by Tariff Advisory Committee for fire duty, capable of discharging 1850 LPM, at 45 metre head, against all losses complete. (Water Curtain Pump at Basement, 1 working + 1 stand-by)	Set	2.00		
6	Providing and installing Water Drencher System Pump (Vertical) Direct coupled centrifugal pump of make Kirloskar, Wilo, Grundfos or equivalent as per manufacturer's pump characteristics data, cast iron casing and bronze/phosphor bronze internal parts, mechanical seal conforming to IS 1520, make approved by Tariff Advisory Committee for fire duty, capable of discharging 3600 LPM, at 100 metre head, against all losses complete. (Water Drencher Pump at Basement, 1 working + 1 stand-by)	Set	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
7	Providing and fixing Electrical Panel with automatic motor control centre for Drencher System pumps to suit the HP of motor for the rated capacity and desired head of pumps. MCC shall be provided with suitable starters and controls for fire pumps comprising of automatic switch unit isolators, pressure switches to set operating pressure, switches rated 500 Volt AC 50 Hz supply for continuous maximum load and Supply Company's regulations, contacts of suitable size, internal isolating baffles, terminal boxes for cables suitably screwed, standard 250 Volts, 15 Watt bayonet cap, indicator lamps for the respective pumps behind ruby domes suitably protected against damage, interlocking arrangements as per Fire Brigade stipulations, auxilary switch/switches to provide warning by lighting of a lamp and hooters for audible alarm both at pump room and main fire console, tripping a circuit breaker connecting the electric supply to leave ample power for Fire Pump, if so required. Auxilary switch to be rated at 5 Amps. 250 Volts AC complete with C.T connected ammeters, volt meters and selector are to be provided on the panels for each starter and incoming switch fuse unit including necessary power & control cabling from panel to respective pumps complete as specified (Note: Contractor should submit necessary shop drawing for approval of consultants before fabricating the panel)	Set	1.00		
8	Providing and fixing Electrical Panel with automatic motor control centre for Water Curtain System pumps to suit the HP of motor for the rated capacity and desired head of pumps. MCC shall be provided with suitable starters and controls for fire pumps comprising of automatic switch unit isolators, pressure switches to set operating pressure, switches rated 500 Volt AC 50 Hz supply for continuous maximum load and Supply Company's regulations, contacts of suitable size, internal isolating baffles, terminal boxes for cables suitably screwed, standard 250 Volts, 15 Watt bayonet cap, indicator lamps for the respective pumps behind ruby domes suitably protected against damage, interlocking arrangements as per Fire Brigade stipulations, auxilary switch/switches to provide warning by lighting of a lamp and hooters for audible alarm both at pump room and main fire console, tripping a circuit breaker connecting the electric supply to leave ample power for Fire Pump, if so required. Auxilary switch to be rated at 5 Amps. 250 Volts AC complete with C.T connected ammeters, volt meters and selector are to be provided on the panels for each starter and incoming switch fuse unit including necessary power & control cabling from panel to respective pumps complete as specified (Note: Contractor should submit necessary shop drawing for approval of consultants before fabricating the panel)	Set	1.00		
9	Providing and installing Terrace Booster pump of 900 LPM at 35 Mt. head against all losses complete with suitable motor and base plate	Set	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
10	Providing and fixing Electrical Panel with automatic motor control centre for Hydrant, Sprinkler & Jockey pumps to suit the HP of motor for the rated capacity and desired head of pumps. MCC shall be provided with suitable starters and controls for fire hydrant pumps, Fire sprinkler pumps, jockey pumps to work as per logic/algorithum mentioned in Fire Design Basis Report of Consultant, comprising of automatic switch unit isolators, pressure switches to set operating pressure, switches rated 500 Volt AC 50 Hz supply for continuous maximum load and Supply Company's regulations, contacts of suitable size, internal isolating baffles, terminal boxes for cables suitably screwed, standard 250 Volts, 15 Watt bayonet cap, indicator lamps for the respective pumps behind ruby domes suitably protected against damage, interlocking arrangements as per Fire Brigade stipulations, auxilary switch/switches to provide warning by lighting of a lamp and hooters for audible alarm both at pump room and main fire console, tripping a circuit breaker connecting the electric supply to leave ample power for Fire Pump, if so required. Auxilary switch to be rated at 5 Amps. 250 Volts AC complete with C.T connected ammeters, volt meters and selector are to be provided on the panels for each starter and incoming switch fuse unit including necessary power & control cabling from panel to respective pumps complete as specified. (Note: Contractor should submit necessary shop drawing for approval of consultants before fabricating the panel)	Set	1.00		
11	Providing and fixing Electrical Panel with automatic motor control centre for Terrace Booster pumps to suit the HP of motor for the rated capacity and desired head of pumps. MCC shall be provided with suitable starters and controls for fire hydrant pumps, Fire sprinkler pumps, jockey pumps and booster pumps (2 each) comprising of automatic switch unit isolators, pressure switches to set operating pressure, switches rated 500 Volt AC 50 Hz supply for continuous maximum load and Supply Company's regulations, contacts of suitable size, internal isolating baffles, terminal boxes for cables suitably screwed, standard 250 Volts, 15 Watt bayonet cap, indicator lamps for the respective pumps behind ruby domes suitably protected against damage, interlocking arrangements as per Fire Brigade stipulations, auxilary switch/switches to provide warning by lighting of a lamp and hooters for audible alarm both at pump room and main fire console, tripping a circuit breaker connecting the electric supply to leave ample power for Fire Pump, if so required. Auxilary switch to be rated at 5 Amps. 250 Volts AC complete with C.T connected ammeters, volt meters and selector are to be provided on the panels for each starter and incoming switch fuse unit including necessary power & control cabling from panel to respective pumps complete as specified. (Note: Contractor should submit necessary shop drawing for approval of consultants before fabricating the panel)	Set	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
12	Supplying and fixing G.I. 'C' Class pipes confirming to IS 1239 (Heavy Grade) with welded fittings, flanged/welded as specified and with heavy clamps, hangers, brackets or pipe supports all with screwed/Flanged/bolted joints as required and standard specials as necessary,fixing supports into masonry walls or RCC with anchor fasteners and painting two finishing coats of enamel paint of approved colour over a coat of approved primer after hydraulic testing to 13.55 Kg/Sq.cm pressure, complete as specified.				
a	250 mm dia.	RM	25.00		
b	200 mm dia.	RM	80.00		
c	150 mm dia.	RM	40.00		
d	50 mm dia.	RM	25.00		
13	Supplying and installing C.I. Sluice valve of non rising Spindle type; approved make as per IS-780 (PN 16)				
a	250mm	No	2.00		
b	200mm	No	12.00		
14	Supplying and fixing SS Y-strainer PN16, 1.6mm thick grade 304 sheet with 3 mm holes,necessary SS flanges, rubber gasket etc complete as specified				
a	250 mm	No	2.00		
b	200mm	No	12.00		
15	Supplying and fixing flanged C.I. tested non- return valve , PN16, as per IS:5213 of approved make with necessary nuts,bolts,flanges, rubber gasket etc. complete as specified.				
a	200mm	No	2.00		
b	150mm	No	11.00		
16	Supplying and fixing C.I butterfly valve , PN16, as per IS 13095, with, nuts, bolts, gaskets, flanges, coupler etc. complete as specified.				
a	200mm	No	12.00		
b	150mm	No	24.00		
c	50mm	No	4.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
17	Supplying, installing ,testing and commissioning of 150mm dia. C.I. Foot valve with strainer as per IS:4038 (PN 16 rating , for FB 2-way Draw-off) with flanges, bolts, nuts washers, gaskets etc.	No	1.00		
18	Supply and installation of Pressure Switches, PN16, as per BS 6134, of suitable range for pump sets with Needle valves, fittings like unions / collars / reducers etc.	No	6.00		
19	Supply and installation of Pressure Gauges, PN16, as per EN 837, of suitable range for pump sets with Ball valves,siphon, fittings like unions / collars / reducers etc.	No	20.00		
20	Supplying and fixing approved make 25mm dia automatic air release valve, PN 16, with unions etc. complete.	No	3.00		
21	Supplying and fixing resilient rubber neoprene lined single arch vibration eliminators (water bellows) suitable for working pressure 16 kg/sq cm. and test pressure 20 kg/sq cm.				
a	200 mm	No	9.00		
b	150 mm	No	9.00		
22	Supply erection of emergency start / stop push button station weather proof type for Booster pump at terrace level & at Reception.	No	2.00		
	SECTION -A - TOTAL - FIRE PUMPS AND ACCESSORIES	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION - B				
	WET RISER & FIRE HYDRANTS				
1	Supplying and fixing GI 'C' Class pipe confirming to IS 1239 (Heavy Grade) with welded fittings including, if required ,necessary excavation in earth or murum,bailing or pumping out water from the trenches with shoring wherever necessary, refilling the trenches, removing away the surplus earth or dumping it on site as directed (depth upto 1000 mm) including short lengths and specials as required,fixing supports, painting two coats of approved enamel paint over a coat of approved primer after laying and testing to 13.5Kg/Sq.cm complete including necessary anti corrosive treatment with 4mm thick polymer corrosion resistant tape as per IS 10221, buried piping complete as specified. (Ring Main).				
a	150 mm dia.	RM	340.00		
2	Supplying and fixing GI 'C' Class pipe confirming to IS 1239 (Heavy Grade) with welded fittings including, if required ,necessary excavation in earth or murum, bailing or pumping out water from the trenches with shoring wherever necessary, refilling the trenches, removing away the surplus earth or dumping it on site as directed (depth upto 1000 mm) including short lengths and specials as required,fixing supports, painting two coats of approved enamel paint over a coat of approved primer after laying and testing to 13.5Kg/Sq.cm complete				
a	200 mm dia.	RM	30.00		
b	150 mm dia.	RM	180.00		
c	100 mm dia.	RM	20.00		
d	80 mm dia. (yard hydrant stand pipe)	RM	15.00		
3	Supplying and fixing G.I. 'C' Class pipes confirming to IS 1239 (Heavy Grade) with welded fittings, flanged/welded as specified and with heavy clamps, hangers, brackets or pipe supports all with screwed/Flanged/bolted joints as required and standard specials as necessary,fixing supports into masonry walls or RCC with anchor fasteners and painting two finishing coats of enamel paint of approved colour over a coat of approved primer after hydraulic testing to 13.55 Kg/Sq.cm pressure, complete as specified. (above ground piping in shafts and risers)				
a	150 mm dia.	RM	660.00		
b	100 mm dia. (Drain Pipe)	RM	460.00		
b	100 mm dia. (OHT to Lower Zone)	RM	160.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4	Providing and fixing SS single headed / oblique type hydrant valve with SS construction as per IS-5290 with 80 mm dia X 2 mt M.S. stand post as a courtyard hydrant, painting/ underground protection, complete as specified (External Hydrants)	No.	11.00		
5	Supplying and fixing C.I. double-flanged Sluice Valve with non rising spindle & as per IS:780-PN-1.6 of approved make with necessary nuts, bolts,flanges, rubber gasket etc. complete as specified.				
a	150 mm Nominal Bore	No.	10.00		
b	100 mm Nominal Bore	No.	9.00		
6	Supplying and fixing Flanged C.I. tested non- return valve as per IS:5213 of approved make with necessary nuts,bolts,flanges, rubber gasket etc. complete as specified.				
a	100 mm dia.	No.	10.00		
b	150 mm dia.	No.	5.00		
7	Supplying and fixing SS Y-strainer PN16, 1.6mm thick grade 304 sheet with 3 mm holes, necessary SS flanges, rubber gasket etc complete as specified				
a	100 mm dia. (OHT Booster Pump)	No.	4.00		
8	Supplying and fixing specially designed SS Orifice plates on hydrant outlets including distance pieces of suitable size for adjustment of delivery pressure complete with necessary companion flanges, nuts, bolts, gaskets etc. complete as specified.	No.	57.00		
9	Supplying and fixing 63mm dia Single Headed hydrant landing valve in SS with C.I hand wheel & tested to 21 kg/cm2 pressure (conforming to IS- 5290) with companion flanges,nuts, bolts, washers, gaskets, gun-metal cap & chain, etc. complete as specified. (should be ISI Marked)	No.	57.00		
10	Supplying and fixing weather proof courtyard fire hydrant M.S. Hose Cabinet of about 750 mm x 600 mm x 250 mm size made of 3mm M.S. plate capable of accommodating two lengths of 63 mm dia. RRL hose of 15 Mtr. length with locking arrangement, and lever for opening the door after breaking glass. Hose box to be fitted with glass door in front, painted 'FIRE' in red luminous paint. Hinges should be sturdy to bear the weight of fully open door without sagging. Cabinet should be painted two coats of red enamel paint over a primer suitable for fixing to wall / floor with all necessary supports etc. complete as specified.	No.	57.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
11	Supplying and fixing swinging type wall mounted Fire Hose Reel to IS 884 with fire hose of braided rubber to IS 12585 suitably reinforced Dunlop / Fire Stone make 20 mm size and 40 Mtrs. Length, with 10 mm tapering branch nozzle in SS chromium plate, male and female coupling with cut off valve attachment including fixing with approved anchor fasteners and bolts,complete as specified.	Set	57.00		
12	Supplying and erecting M.S. / CRCA cabinet for housing Floor Hydrant valve, hose pipe, hose reel and branch pipe (size 2100 x 900) made from 16 SWG sheet and angle iron 25 x 25 x 4 mm. having front doors with viewing glass (1000x800) and locking arrangement with necessary fixing material such as rubber bidding etc. duly painted in post box red colour.	Set	57.00		
13	Providing, Fixing, testing & commissioning of 25mm dia spring actuated air release valve suitable for pressure 1.5 times the working pressure of system, with forged brass ball valve of PN 16 rating,threaded type complete as per standard, specifications as complete in all respect.	No.	8.00		
14	Providing and fixing 65 x 20 mm SS adaptor coupling IS 903 for connection from landing valve to hose reel with heavy quality braided flexible rubber pipe of about 600 mm length with hose clips etc, complete as specified.	No.	57.00		
15	Supplying and fixing 2 lengths of 63 mm dia RRL hose each 15 m long as per IS:636 (A), 2 nos with SS instantaneous couplings duly bound to the hose as per IS:903 and 1 no. 65 mm dia SS short branch pipe with nozzle as per IS 903,complete as specified.	Set	57.00		
16	Supplying and fixing C.I butterfly valve , PN16, as per IS 13095, with, nuts, bolts, gaskets, flanges, coupler etc. complete as specified.				
a	80 mm dia	No.	2.00		
b	100 mm dia (at terrace & External hydrant)	No.	23.00		
c	150 mm dia (at 4 way)	No.	2.00		
	SECTION B TOTAL - WET RISER & FIRE HYDRANTS	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION - C				
	SPRINKLER SYSTEM				
1	Supplying and fixing GI 'C' Class pipe confirming to IS 1239 (Heavy Grade) with welded fittings including, if required ,necessary excavation in earth or murum, bailing or pumping out water from the trenches with shoring wherever necessary, refilling the trenches, removing away the surplus earth or dumping it on site as directed (depth upto 1000 mm) including short lengths and specials as required,fixing supports, painting two coats of approved enamel paint over a coat of approved primer after laying and testing to 13.5Kg/Sq.cm complete. (piping upto sprinkler shafts)				
a	150 mm dia. -do- to IS:1239	RM	180.00		
2	Supplying and fixing GI 'C' Class pipe confirming to IS 1239 (Heavy Grade) with welded fittings including, if required ,necessary excavation in earth or murum, bailing or pumping out water from the trenches with shoring wherever necessary, refilling the trenches, removing away the surplus earth or dumping it on site as directed (depth upto 1000 mm) including short lengths and specials as required,fixing supports, painting two coats of approved enamel paint over a coat of approved primer after laying and testing to 13.5Kg/Sq.cm complete. (vertical piping for Sprinkler riser in shafts)				
a	200 mm dia. -do- to IS:1239	RM	0.00		
b	150 mm dia. -do- to IS:1239	RM	340.00		
3	Supplying and fixing GI 'C' Class pipe confirming to IS 1239 (Heavy Grade) with welded fittings including, if required ,necessary excavation in earth or murum, bailing or pumping out water from the trenches with shoring wherever necessary, refilling the trenches, removing away the surplus earth or dumping it on site as directed (depth upto 1000 mm) including short lengths and specials as required,fixing supports, painting two coats of approved enamel paint over a coat of approved primer after laying and testing to 13.5Kg/Sq.cm complete. (Water Curtain Header)				
a	150 mm dia. -do- to IS:1239	RM	330.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4	Providing and fixing G.I 'C' Class pipes as per IS- 1239 with screwed - or welded joints with specials as necessary clamped to wall, beams or ceilings as per specifications with approved anchor fasteners; MS brackets testing to 13.5 Kg/Sq.cm hydraulic pressure after installation, and painting two coats of enamel paint of approved colour over two coats of primer. Necessary excavation in earth for under ground pipes etc.(horizontal piping at floor level)				
a	150 mm dia. welded joints	RM	1,072.50		
b	100 mm dia. welded joints	RM	0.00		
c	80 mm dia. welded joints	RM	1,345.30		
d	65 mm dia. welded joints	RM	286.00		
e	50 mm dia. screwed joints	RM	2,110.90		
f	40 mm dia. screwed joints	RM	1,273.80		
g	32 mm dia. screwed joints	RM	1,685.30		
h	25 mm dia. screwed joints	RM	6,932.00		
5	Supplying and fixing C.I butterfly valve , PN16, as per IS 13095, with, nuts, bolts, gaskets, flanges, coupler etc. complete as specified.				
a	100 mm dia	No.	58.00		
6	Supplying, installing, testing and commissioning conventional/ standard fast response Sprinkler quartzoid bulb brass type with 15mm screwed end connection of 68 deg. C. temperature rating,K 80 and orifice shall not be less than 6mm.Sprinklers shall be UL Listed/ FM approved with Chrome finished. Pendent type.				
a	Pendent Type / Upright	Nos	2,326.80		
b	Side wall Type,(3m Throw)	Nos	469.70		
	Side wall Type,(4.5m Throw)	Nos	470.80		
	Side wall Type,(3m Throw) 78*C in Kitchens	Nos	191.40		
7	Supply & fixing of approved type rosette plates (Recessed type, in two piece) for Sprinklers below false ceiling area. The Rosette shall be fabricated by M.S. plate of 2mm thick and the finish shall be powder coated and color shall be as approved by architects / clients.	Nos	242.00		
8	Stainless steel corrugated flexible braided pipe connector , UL Listed, for connecting sprinklers to branch pipe, pipe shall be 16 bar pressure rating and 1500 mm long 25 mm dia with union / reducer collar, clamps (including barrel nipple, flange) etc. as required.	Nos	242.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
9	Supplying and fixing 150 mm Mechanical Gong Control Valve with 24 V hooter, bronze seat clapper, clapper arm, hydraulically driven mechanical gong bell to sound continuous alarm when wet riser / sprinkler system activates, clock valve, pressure gauge, emergency release, strainer, with drain pipe leading to drain, bypass, test control box, ball valves, orifice plate, gaskets, cabling, pressure & flow switches, Bell etc. Complete. (For sprinkler system)	Set	6.00		
10	Supplying, installing, testing, and commissioning of Deluge valve, as per IS 15325, of 100mm dia comprising of a main gate valve, in and pressure gauge, water motor gong, test connection of adequate size with valve and other accessories complete as per NFPA standard including relevent trim kits and solenoid valve with mating flanges suitable to be activated by the Flow Switches including power and control wiring up to panel & ON/OFF arrangement and associated works.	Nos	7.00		
11	Providing, installation, testing & commissioning of Water curtain and Drencher Nozzle, UL Listed, 15mm dia at connection, PN16 nickel chrome plated brass, BSPT, K-32 or K-factor as per design consideration complete as required and coverage of 2.5 meter either side.	Nos	330.00		
12	Supplying, installing, testing, and commissioning of flow switch, UL Listed, on sprinkler distribution header on each floor, inlcuding sight glass assembly PN16, Pressure gauge, Ball valve & by pass testing valve 50mm dia, connected to fire alarm panel through cable. Cable shall be measured separately in FAS BOQ	Set	57.00		
	SECTION -C -TOTAL- SPRINKLER SYSTEM	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION - D				
	SIAMESE INLET & BREACH CONNECTIONS				
1	Supplying and fixing Fire Brigade 150 mm size breach inlet connection built in SS NRV with four connecting points 63 mm size fixed over 150 mm dia G.I. Pipe necessary companion flanges, nuts, bolts,gasket, washers,outlets, necessary bronze coupling connection : B215 etc. as specified. (2 Way – Draw-OUT)	Set	1.00		
2	Supplying and fixing 150mm GI 'C' Class pipe confirming to IS 1239 (Heavy Grade) with welded fittings including, if required ,necessary excavation in earth or murum,bailing or pumping out water from the trenches with shoring wherever necessary, refilling the trenches, removing away the surplus earth or dumping it on site as directed (depth upto 1000 mm) including short lengths and specials as required,fixing supports, painting two coats of approved enamel paint over a coat of approved primer after laying and testing to 13.5Kg/Sq.cm complete including necessary anticorrosive treatment with 4mm thick polymer corrosion resistant tape as per IS 10221, buried piping complete as specified.	RM	100.00		
3	Supplying and fixing Fire Brigade 150 mm size breach inlet connection built in SS NRV with four connecting points 63 mm size fixed over 150 mm dia G.I. Pipe necessary companion flanges, nuts, bolts,gasket, washers,outlets, necessary bronze coupling connection : B215 etc. as specified. (3 Way – Draw IN)	Set	1.00		
4	Supplying and fixing Fire Brigade 150 mm size breach inlet connection built in SS NRV with Two connecting points 63 mm size fixed over 150 mm dia G.I. Pipe necessary companion flanges, nuts, bolts,gasket, washers,outlets, necessary bronze coupling connection : B215 etc. as specified. (4 Way – Breaching Interceptor)	Set	2.00		
	SECTION- D - TOTAL -SIAMESE INLET & BREACH CONNECTIONS	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION - E				
	FIRE EXTINGUISHER & SIGNAGE				
1	Supplying and erecting ABC powder type fire extinguisher as per IS : 13849 of 6 kg capacity with necessary clamp for erection on Wall.	No.	85.00		
2	Supplying & erecting Carbon Dioxide (CO 2) fire extinguisher of 4.5 kg. capacity cartridge type conform to IS 2878 complete erected with necessary clamp made from 50 x 6 mm. M. S.flat with nut & bolts grouted in wall complete.	No.	85.00		
3	Supplying & erecting Carbon Dioxide (CO 2) Trolly mounted Fire Extinguisher with 22.5 kg capacity, cartridge type conform to IS 2878, gas confirming to 15222, cylinder cinfirming to IS 7285, PESO approved complete.		3.00		
4	Supplying and fixing ISI grade approved 9 Ltrs. capacity galvanised round bottomed Fire Buckets, as per IS 2546, fully filled with dry yellow sand, painted Red and lettered 'FIRE' each with one stand with brackets to hang three buckets on each MS post as directed. (at meter rooms, substation, panel room)	Set	5.00		
5	Supply Installation testing and commissioning of Clean Agent Fire suppression system of 2 KG cylinder FK-5-1-12 (UL Listed) with Valve, Tube Color Red RAL300, High grade quality, Inner diameter 4mm, Outer Diameter 6 MM, Melting Point approx. 222 degrees Celsius when heating up with 10 K/minute, Burst at 80°C with Pressure 100 bar at 20°C, length 50M for automatic fire detection and suppression system, Line adapter with Pressure gauge, Pressure Switch, Master control Unit for alarm as per NFPA guidelines.	No.	15.00		
6	Supplying, Applying, Curing of Fire Retardant Concrete with fire rating of 2 hrs (Hilti CP 636 Mortar) for sealing cutouts in Fire Shafts, Electrical Shafts, HVAC / chiller piping shafts, internal plumbing shafts etc. motor of 65mm thickness, including related rebar, mesh, accessories etc complete as per Hilti specifications and NFPA guidelines.	Sq.mtr	312.00		
7	Providing & Fixing Fire signage as per BS 5499-1, Printed on 1 mm Rigid PVC Photo-luminescent Flaming resistant Sheet with 5-6 Hour Glow period in Total Darkness, Silk Screen Printed by impoted ink : high quality paint with UV resistance on direct Photo-luminescent Sheet (Not vinyl pasted type) Non Radioactive ,Self Extinguishing ,Containing No lead or Phosphorus, No health or Environmental Problem, with support of Self adhesive back for installing complete.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	24" X 18" (at Emergency Escape Route)	nos.	64.00		
	6" X 16" (at Fire Exit)	nos.	64.00		
	6" X 16" (Push-Pull for Fire Door) - Bilingual	nos.	64.00		
	6" X 12" (at Fire Stair case)	nos.	54.00		
	6" X 12" (at Fire Shaft)	nos.	54.00		
	12" X 12" (at Fire Lift)	nos.	54.00		
	4' X 12" (Prohibition signage)	nos.	64.00		
	6" X 16" (Refuge Area)	nos.	6.00		
	6" X 16" (Assembly Area)	nos.	2.00		
	SECTION -E- TOTAL -FIRE EXTINGUISHER & BUCKETS	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – F				
	FIRE DOORS				
1	Providing & fixing Fire door MS iron sheet heavy duty 16SGW, Size 1200 X 2100mm, Single leaf shutter, sight glass of 300mmX600mm with built-in wire mesh, with calcium silicate sand-witched panels, iron angle frame 35X35mm, all exposed surfaces powder coated and internal cross support to sheet, interlocking together their entire length & joint together at ends lock, SS Handle, SS heavy duty Hinges with panic bar etc complete (2 hours Fire Rated approved by CBRI Roorkee)	Sq.m.	1,179.36		
	SECTION -F- TOTAL -FIRE DOORS	**Rs.**			
	SECTION – G				
	FIRE ALARM & PA SYSTEM				
a	**FIRE PANEL & ANNUNCIATORS**				
1	Supply & Installation of Microprocessor based Multi-loop, True Peer-to-Peer Networkable Addressable Fire Alarm Control Panel with minimum 600 characters LCD display, 4000 event plus 1000 alarm log history events, QWERTY keypad for programming. The panel should be equipped with sufficient numbers of loops considering 20% spare capacity in each loop. Each loop shall have a capacity of minimum 300 analog addressable devices. The panel shall work in degrade mode in case of CPU failure. Four access levels, flash EPROM, 240 volts AC power supply, automatic battery charger, 24 volts sealed lead acid batteries sufficient for 24 hours normal working and 30 mins in alarm condition. The panel shall be Integrate with seperate 8 channel Digital Voice Evacuation System Controller capable of broadcasting Evacuation Messages on same peer-to-peer Network and 2 ways Communication Fire Fighters System capable of supervising all the speaker circuits with adequate zone control and accessories. The system shall be integrate with necessary Digital Audio Amplifier capable of processing one of below mentionaed channels and amplifiers as per the speakers requirement with necessary enclosures. The DAA shall be fully monitored for fault and alarm reporting. Fire alarm Panel shall interface with Building BMS system and GIFT BMS system with bacnet card.				
a	10-loop - With Digital Voice Command Center	Nos	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
2	Supply,insatalling,Testing & Commissioning of Active Repeater Panel UL listed Network Repeater Panel with DVC & announcement station ,6 inch or 320-characters; The LCD shall Display all events / detectors, devices status of complete systems in the networked, The NRP shall be equipped with QWERTY Keypad. Mounting options include an annunciator box, and blank modules are required for mounting.	Nos	2.00		
b	**DETECTORS**				
1	Addressable Photoelectric Smoke Detector with sensitivity range of 0.5 to 4.0% obs/ft. The detector shall have multi co-operative sensing technology for faster response & avoid false alarms. The detector shall have twin bi-colour LED for 360 deg viewing. Addressing shall be with user friendly rotary decimal switches.	Nos	666.00		
2	Supply, installing, testing and commissioning of UL listed addressable intelligent rate of rise thermistor type resettable Heat detector with mounting base, dual LED, complete with base ,,Junction box/metal box as required.Addressable RoR cum Fixed temp Heat Detector.	Nos	174.00		
3	Supply, Installation, testing, Commissioning of Beam Detector with Maximum detection range of 150 m, Status LEDs for Fire, Trouble and Power, Easy alignment with large adjustment and viewing angles, Dual wavelength LED-based smoke detection, Three selectable alarm thresholds and Power supply for Beam Detector	Nos	32.00		
c	**MODULES**				
1	Supply, installing, testing and commissioning of Addressable Manual Call Point (Pull down / Break Glass Type). The device shall have an LED which shall blink in normal state & get steady on activation to monitor the heath status of the device. The MCP shall have operating temperature range from 0°C to 50°C.	Nos	93.00		
2	Supply, installing, testing and commissioning of Addressable Control modules for Sounders / Strobes /Strobes. The control module shall provide supervised NAC output rated at 24v DC, 2A. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the heath status of the device. The control module shall have operating temperature range from 0°C to 49°C. The module shall have Electronic addressing.The module shall have Electronic addressing and shall be supplied with mounting plate from OEM for ease of installation & maintenance.	Nos	67.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
3	Supply, installing, testing and commissioning of Addressable Control Relay modules for AHU, Access Control, Lifts, Staircase Pressurization, Fire Suppression & other Third Party Outputs.. The control module shall provide supervised NAC output rated at 24v DC, 2A. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the heath status of the device. The control module shall have operating temperature range from 0°C to 49°C. The module shall have Electronic addressing and shall be supplied with mounting plate from OEM for ease of installation & maintenance.	Nos	12.00		
4	A Supply, installing, testing and commissioning of addressable Monitor Module for Sprinkler Flow Switch, Panic Bars & other Third Party Inputs. The monitor module shall monitor potential free contacts. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the heath status of the device. The Monitor Module shall have operating temperature range from 0°C to 70°C. The module shall have Electronic addressing. Module shall be supplied with mounting plate from OEM for ease of installation & maintenance.	Nos	67.00		
5	Supply, installing, testing and commissioning of Isolator Module for Isolating short / dewired / loose circuits with automatic resetting arrangement. Isolator Base can also be proposed, however in that case needs to be considered with each detector & module. The device shall have an LED which shall blink in normal state & get steady on activation to monitor the heath status of the device. The Isolator Monitor Module shall have operating temperature range from 0°C to 49°C. Module shall be supplied with mounting plate from OEM for ease of installation & maintenance.	Nos	53.00		
d	**NOTIFICATION DEVICES**				
1	Supply, installing, testing and commissioning of Strobe rated at 80 dBA and a multi tone facility for Audible annunciation and 110cd flashintg at 1 Hz for visual indication. UL Listed	Nos	93.00		
e	**TELEPHONE TALKBACK**				
1	Supply, installing, testing and commissioning of Addressable Fire Fighter's Telephone Jack for two way communication between Remote Fire Fighter & Fire Command Center. UL Listed	Nos	67.00		
2	Supply, installing, testing and commissioning of Fire Fighter's Telephone Handset for two way communication between Remote Fire Fighter & Fire Command Center	Nos	67.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
f	**CABLE & CONDUITS**				
1	Supply, installing, testing and commissioning of 1.5 Sqmm. x 2C, Copper Flexible Shielded, FRLS Cable	Mtr	15,700.00		
2	Supply & Laying of 25 mm MMS grade PVC Conduit with other accessories such as bends, junction boxes, saddles, spacers zarri making and Semi finishing for various services through slab,wall,groung etc	Mtr	15,700.00		
3	Supply & Laying of 25 mm GI Grade conduit with accessories such as GI Circuler Box, GI Bend, Coupler and other as required to complete this point for various services through Wall/Slab Surface etc.(Electrical Conduit From Meter Panel to Each Floor Shaft)	Mtr	500.00		
4	PV Supply, installing, testing and commissioning of Cable Trunking, 200x100mm	Mtr	100.00		
g	**PUBLIC ADDRESS SYSTEM**				
1	Supplying, Installation, Testing and Commissioning of UL listed Addressable Digital 75 W, total output power at 70.7 Vrms Amplifier with inbuilt 6 Addressable zone circuits and There shall be provision to connect the 2-Way Talk Back System riser The amplifier shall have inbuilt battery charger. The speaker circuits (zones) shall originate directly from the amplifier terminals.The amplifiers shall be placed in the field on different designated floors with all acessories like cabinet etc required to complete the installation.The Amplifiers shall be Digital Audio Amplifiers. Power / Analog amplifiers shall not be permitted. Failure of Fire Alarm Panel CPU shall not result in failure of operation of Amplifier. Hence if the Digital Audio Amplifiers are CPU Rail Mounted, consider 1 No. CPU dedicated for every 150 Watt Digital Audio Amplifier Bank. this PA panel shall integrate with Fire alarm panel.	Nos	8.00		
2	SITC of IP based Networkable touch screen paging station for selection of zones, supervision of system status, setting of scheduled broadcasts with the following functions: . Built-in monitoring loudspeaker . Detachable goose-neck microphone . LCD touchscreen display . Audio input . Zonewise Volume controller	Nos	2.00		
3	Supply, installing, testing and commissioning of 6W Multi-Tap (1.5W; 2.0W; 4.0W; 6.0W), Ceiling Mount Speakers. The speakers shall be of same make as that of the Control Panel & Amplifiers. They shall be compatible with supplied Amplifiers and shall work on 70.7Vrms. UL Listed	Nos	113.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4	Supply, installing, testing and commissioning of 1.5 Sqmm. x 2C, Copper Flexible Twisted, FRLS Cable For Speakers	Mtr	3,030.00		
5	Supply & Laying of 25 mm MMS grade PVC Conduit with other accessories such as bends, junction boxes, saddles, spacers zarri making and Semi finishing for various services through slab,wall,groung etc	Mtr	3,030.00		
6	Supply & Laying of 25 mm GI Grade conduit with accessories such as GI Circuler Box, GI Bend, Coupler and other as required to complete this point for various services through Wall/Slab Surface etc.(Electrical Conduit From Meter Panel to Each Floor Shaft)	Mtr	300.00		
h	**SOFTWARE**				
1	Supplying, Installation, Testing and Commissioning of Graphics User Interface for Monitoring & Control of complete Fire, Voice Evacuation & Telephone Talkback System. The GUI based main network software shall network with other panels on True Peer-to-Peer network. It shall be capable of graphically representing each facility being monitored with floor plans and icons depicting the actual locations of the various systems, and / or sensors' locations. The software shall be capable to Monitor & Control all the Digital Voice Evactuation as well as 2 way communication from main control room using voice signals over Fire Network along with the Fire detection signal. The Graphic workstation shall act as an independent node communicating on the peer to peer network and shall not be dependant on the Fire Panel CPU for operation. Failure of Fire Panel CPU shall not result in failure of GUI.	Nos	1.00		
	SECTION -G- TOTAL COST OF FIRE ALARM, PA SYSTEM	**Rs**			
	TOTAL COST OF FIRE FIGHTING WORK, FIRE ALARM, PA SYSTEM. (SECTION- A+B+C+D+E+F+G)	**Rs**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	C) ELECTRICAL INTERNAL, EXTERNAL, LIFT , DATA & TELEPHONE WORKS				
	SECTION – A				
	INTERNAL ELECTRICAL WORKS				
a	**POINT WIRING**				
1	Supply, Installation, Testing and Commissioning of Primary ceiling light point wiring from switchboard to light point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of 6 A single way modular switch, 1.1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, angle holders, ceiling roses etc. as required to complete the wiring.(Average length of conduit & wire is 5.0 MTR)	Nos	2,418.00		
2	Supply, Installation, Testing and Commissioning of Secondary ceiling light point wiring from 1st Light point to next light point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSHwires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of Wire,Conduit and other accessories such as bends, junction boxses, saddles, spacers, angle holders, ceiling roses, Round Plat etc. as required to complete the wiring.(Average length of conduit & wire is 3.0 MTR)	Nos	1,550.00		
3	Supply, Installation, Testing and Commissioning of One Way Wall light point wiring from switchboard to light point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of 6 A single way modular switch, 1.1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, angle holders, ceiling roses etc. as required to complete the wiring.(Average length of conduit & wire is 5.5 MTR)	Nos	2,594.00		
4	Supply, Installation,Testing of Two Way Wall light point wiring from switchboard to light point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of 6 A Two way modular switches, 1.1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, angle holders, ceiling roses etc. as required to complete the wiring.(Average length of conduit & wire is 7.0 MTR)	Nos	428.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
5	Supply, Installation,Testing of One Way Ceiling fan point wiring from switchboard to ceiling fan point with 3R X 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls. with 5 step electronic type regulator.This shall include installation of 6 A single way modular switch, 1.1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, etc. as required to complete the wiring.(Average length of conduit & wire is 5.0 MTR)	Nos	522.00		
6	Supply, Installation,Testing of Two Way Ceiling fan point wiring from switchboard to ceiling fan point with 3R X 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls. with 5 step electronic type regulator.This shall include installation of 6 A Two way modular switchs, 1.1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, etc. as required to complete the wiring.(Average length of conduit & wire is 7.0 MTR)	Nos	428.00		
7	Supply, Installation and testing of Exhaust fan point wiring from switchboard to exhaust fan point with 3R x 1.5 sq.mm PVC insulated copper conductor 1100 volts grade stranded flexible FR wires in 25 mm FRLSH MMS concealed PVC conduits. These points shall be controlled by 6 amps single pole modular flush mounted switch on the switchboard. This shall include 1.1.2 mm thick GI concealed box and other accessories such as modular switches, sockets & switch boards, holders, ceiling rose, etc. as required to complete the wiring.(Average length of conduit & wire is 5.0 MTR)	Nos	602.00		
8	Supply, Installation and testing of 6 Amps Plug Points on main lighting or power switchboards.This shall include a 6 Amp modular type switch and socket. This shall include wiring & termination of switch socket as required.(Half Point)	Nos	1,819.00		
9	Supply, Installation and testing of switch sockets which are Includes installation 6 A Socket & 6 A single pole switch at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Individual/full Points)	Nos	173.00		
10	Supply, Installation and testing of switch boared For Set up Boxs which are Includes installation 2 nos of 6 A Socket & 2 nos 6 A single pole switch at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Set up Box Switch boared)	Nos	602.00		
11	Supply, Installation and testing of sockets for TV which are Includes installation 6 A Socket at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(TV socket Point)	Nos	602.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
12	Supply, Installation and testing of Wifi Socket which are Includes installation 6 A Socket at Switchboared & 6 A single pole switch at Seperate switchboard, 1.1.2 mm thick GI concealed boxs for Switch & Socket and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Wifi Points)	Nos	174.00		
13	Supply, Installation and testing of Fridge Point which are Includes installation 6 A Socket & 6 A single pole switch at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Fridge Points)	Nos	173.00		
14	Supply, Installation and testing of Mixer/Oven Point which are Includes installation 2 nos of 6/16 Amp Socket & 2 nos of 16 A single pole switch at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Mixer Points)	Nos	173.00		
15	Supply, Installation and testing of Aqua point and chimany point which are Includes installation 6 A Socket(2 M) & 6 A single pole switch(1 M-On seprate SB) at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Aqua Points)	Nos	346.00		
16	Supply, Installation and testing of Washing Machine Point which are Includes installation 1 nos of 6/16 Amp Socket & 1 nos of 16 A single pole switch at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Washing Machine Points)	Nos	173.00		
17	Supply, Installation & Testing of Inverter Point.This Includes installation 2 Nos. 16 A, 5 Pin Socket & 16 A single pole switch with indicator at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Inverter Point)	Nos	173.00		
18	Supply, Installation and testing of General Perpose Point which are Includes installation 1 nos of 6/16 Amp Socket & 1 nos of 16 A single pole switch at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Washing Machine Points)	Nos	346.00		
19	Supply, Installation & Testing of Gyser Point.This Includes installation 16 A, 5 Pin Socket(2 M) & 16 A single pole switch(1M-On seperate Switch boared) with indicator at switchboard, 1.1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Geyser Point)	Nos	428.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
20	Supply, Installation of AC Point .This Includes installation Electrical Connector & Controlled From Db MCB Which Includes Junction Box amd other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost. (AC Point)	Nos	602.00		
21	Supply, Installation,Testing of Bell point wiring from Bell Point to Dig Dog Bell through Main Switch boared point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FR wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of accessories such as bends, junction boxses, saddles, spacers, switch plates, angle holders, ceiling roses etc. as required to complete the wiring.(Average length of conduit & wire is 3.0 MTR)	Nos	1.00		
b	**SUB MAIN WIRING**				
1	Supply, Laying,Testing and commissioning of wiring from Flat DB to SB/PP and SB to SB with 2R x 4.0 Sq.mm + 1R x 2.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSHwires in 25 mm FRLSH MMS PVC conduit concealed /Casing caping on walls/slab/Floor.(Excluding OF PVC Conduit).	Mtr	13,228.00		
2	Supply, Laying,Testing and commissioning of wiring from Flat DB to SB/PP and SB to SB with 2R x 2.5 Sq.mm + 1R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSHwires in 25 mm FRLSH MMS PVC conduit concealed /Casing caping on walls/slab/Floor.(Excluding OF PVC Conduit).	Mtr	30,604.00		
c	**MAIN WIRING**				
1	Supply, Laying,Testing and commissioning of wiring from Energy Meter to flat DB with 4R x 6 Sq.mm + 1R x4.0 Sq.mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in Provided 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slab/Floor.(Cost Excluding of PVC Conduit)	Mtr	23,205.00		
2	Supply, Laying,Testing and commissioning of wiring from Energy Meter to flat DB with 4R x 10 Sq.mm + 1R x6.0 Sq.mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in Provided 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slab/Floor.(Cost Excluding of PVC Conduit)	Mtr	109.00		
d	**PVC & GI CONDUTING**				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1	Supply & Laying of 25 mm FRLSH MMS grade PVC conduit with accessories as required to complete this point for various services through slab,wall,groung etc.(Electrical Conduit From Flat DB to SB/PP and SB to SB)	Mtr	31,602.00		
2	Supply & Laying of 25 mm FRLSH MMS grade PVC conduit with accessories as required to complete this point for various services through slab,wall,groung etc.(Electrical Conduit From Electrical Shaft to Flat DB)	Mtr	4,091.00		
3	Supply & Laying of 32 mm FRLSH MMS grade PVC conduit with accessories as required to complete this point for various services through slab,wall,groung etc.(Electrical Conduit From Electrical Shaft to Flat DB)	Mtr	50.00		
4	Supply & Laying of 25 mm GI Grade conduit with accessories such as GI Circuler Box, GI Bend, Coupler and other as required to complete this point for various services through Wall/Slab Surface etc.(Electrical Conduit From Meter Panel to Each Floor Shaft)	Mtr	18,106.00		
5	Supply & Laying of 32 mm GI Grade conduit with accessories such as GI Circuler Box, GI Bend, Coupler and other as required to complete this point for various services through Wall/Slab Surface etc.(Electrical Conduit From Meter Panel to Each Floor Shaft)	Mtr	160.00		
6	Supply, Installation,Laying and commissioning of 25 mm GI Flexible Conduit Pipe(1 Mtr) from GI Conduit on surface of wall at Electrical Shaft to PVC Conduit Concealed in slab at Electrical Shaft with GI Gland for both side and other accessories such as to complete this job.	Nos	172.00		
7	Supply, Installation,Laying and commissioning of 32 mm GI Flexible Conduit Pipe(1 Mtr) from GI Conduit on surface of wall at Electrical Shaft to PVC Conduit Concealed in slab at Electrical Shaft with GI Gland for both side and other accessories such as to complete this job.	Nos	1.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
e	**TV , LAN & TELEPHONE WIRING**				
1	Supply, Installation,Testing of VDP Point wiring from VDP Camera to VDP Screen through through 2 mm GI Back box with Cat-6 wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of accessories such as bends, junction boxses, saddles, spacers, switch plates, angle holders, ceiling roses and Cat-6 Cable & Conduit etc. as required to complete the wiring.(Average length of conduit & Cat-6 Cable is 5.0 MTR)	Nos	173.00		
2	Supply,Installation of telephone Point. with 2 pair (0.5 mm) telephone wire and 25 mm FRLSH MMS PVC Conduit. The plastic shall be high impact, flame retardant, UL rated thermoplastic. Dust cover / blank shall be provided to protect unused faceplate openings. Termination caps and plastic cover shall be provided to protect jack wiring. The price shall include 2 mm thick GI boxes, inner plates, outer plates, termination etc. (The point shall be considered from DB to Point for all lengths). Single outlet faceplate with RJ-11 jack(Avg Lenght of wire & Conduit is 7 Mtr)	Nos	172.00		
3	Supply,Installation of Data point with Cat-6 Cable and Conduit. The plastic shall be high impact, flame retardant, UL rated thermoplastic. Dust cover / blank shall be provided to protect unused faceplate openings. Termination caps and plastic cover shall be provided to protect jack wiring. The price shall include 2 mm thick GI boxes, inner plates, outer plates, termination etc. (The point shall be considered from DB to Point for all lengths). Single outlet faceplate with RJ-45 jack(Avg Lenght of Cat-6 cable & conduit is 3 Mtr)	Nos	174.00		
4	Supply,Installation, testing and commissioning of Set up Box outlet Point which includes one nos. of RG11 point for set up box and One Nos. of Blank Plat for HDMI using RG11-U type Co-axial cable with 25 mm dia PVC FRLSH MMS conduits from DB to TV point.The plastic shall be high impact, flame-retardant, and UL rate thermoplastic. Dust cover / blank shall be provided to protect unused faceplate openings. Termination caps and plastic cover shall be provided to protect jack wiring. The price shall include 2 mm thick GI boxes, inner plates, outer plates etc.(Avg Length of wire & Conduit is 7 Meter)	Nos	601.00		
5	Supply,Installation, testing and commissioning of TV outlet Point which includes One Nos. of Blank Plat for HDMI from set up box cable with 25 mm dia PVC FRLSH MMS conduits from Set up Box to TV point.The plastic shall be high impact, flame-retardant, and UL rate thermoplastic. The price shall include 2 mm thick GI boxes, inner plates, outer plates and conduit etc.(Avg Length of Conduit is 1 Meter)	Nos	601.00		
6	Supply & Laying of 25 mm FRLSH MMS grade PVC conduit with accessories as required to complete this point for various services through slab,wall,groung etc.(Electrical Conduit From ELV Shaft to LV DB)	Mtr	4,091.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
7	Supply, Installation,Laying and commissioning of 25 mm GI Flexible Conduit Pipe from GI Conduit on surface of wall at ELV Shaft to PVC Conduit Concealed in slab at ELV Shaft with GI Gland for both side and other accessories such as to complete this job.	Nos	173.00		
f	**COMMON POINT WIRING**				
1	supply, installation & testing of primary light points in parking (Basement Floor-1 to Basement Flooor-3) controlled by MCB using concealed FRLSH MMS PVC piping and flexible FRLSH house wiring wires 2.5 sq. mm. size for phase, neutral and 1.5 sq. mm. wire for earth and 25 mm GI pipe and connectors at the end. which includes wires, GI conduit and accessories like GI bends, GI Circuler Box, couplers, connectors, ferruling, chiselling, round plat and semi finishing etc and others to complete the point wiring.(Excluding of MCB)(Avg lenght of wire and conduit is=27 mtr)	Nos	90.00		
2	supply, installation & testing of Secondary light points in parking (Basement Floor-1 to Basement Floor-3) wiring From primary Light point to next light point with FRLSH 2.5 sq. mm. size wire for phase, neutral and FRLSH 1.5 sq. mm. wire for earth and 25 GI pipe and connectors at the end. which includes wires, GI conduit and accessories like Gi Circuler Box, GI bends, couplers, connectors, ferruling, chiselling, round plat and semi finishing etc and others to complete the point wiring.(Avg lenght of wire and conduit is=7.0 mtr)	Nos	438.00		
3	supply, installation & testing of primary light points in common passage,lift lobby (Ground to Terrace floor) controlled by MCB using concealed FRLSH MMS PVC piping and flexible FRLSH house wiring wires 2.5 sq. mm. size for phase, neutral and 1.5 sq. mm. wire for earth and 25 mm pvc FRLSH MMS pipe and connectors at the end. which includes wires, pvc conduit and accessories like bends, couplers, connectors, ferruling, junction boxes, chiselling, round plat and semi finishing etc and others to complete the point wiring.(Excluding of MCB)(Avg lenght of wire and conduit is=75 mtr)	Nos	36.00		
4	supply, installation & testing of Secondary light points in common passage,lift lobby (Grond to Terrace floor) wiring From primary Light point to next light point with FRLSH 2.5 sq. mm. size wire for phase, neutral and FRLSH 1.5 sq. mm. wire for earth and FRLSH MMS 25 mm pvc FRLSH MMS pipe and connectors at the end. which includes wires, pvc conduit and accessories like bends, couplers, connectors, ferruling, junction boxes, chiselling, round plat and semi finishing etc and others to complete the point wiring.(Avg lenght of wire and conduit is=6 mtr)	Nos	239.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
5	supply, installation & testing of primary light points in staircase main & mid landing controlled by MCB using concealed FRLSH MMS PVC piping and flexible FRLSH house wiring wires 2.5 sq. mm. size for phase, neutral and 1.5 sq. mm. wire for earth and 25 mm pvc FRLSH MMS pipe and connectors at the end. which includes wires, pvc conduit and accessories like bends, couplers, connectors, ferruling, junction boxes, chiselling, round plat and semi finishing etc and others to complete the point wiring.(Excluding of MCB)(Avg lenght of wire and conduit is=130 mtr)	Nos	48.00		
6	supply, installation & testing of Secondary light points in staircase main & mid landing wiring From primary Light point to next light point with FRLSH 1.5 sq. mm. size wire for phase, neutral and FRLSH 1 sq. mm. wire for earth and FRLSH PVC 25 mm pvc FRLSH MMS pipe and connectors at the end. which includes wires, pvc conduit and accessories like bends, couplers, connectors, ferruling, junction boxes, chiselling, round plat and semi finishing etc and others to complete the point wiring.(Avg lenght of wire and conduit is=4.2 mtr)	Nos	416.00		
7	Supply, Installation, Testing and Commissioning of Primary ceiling light point wiring from switchboard to light point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of 6 A single way modular switch, 1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, angle holders, ceiling roses etc. as required to complete the wiring.(Average length of conduit & wire is 5.0 MTR)	Nos	58.00		
8	Supply, Installation, Testing and Commissioning of Secondary ceiling light point wiring from 1st Light point to next light point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSHwires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of Wire,Conduit and other accessories such as bends, junction boxses, saddles, spacers, angle holders, ceiling roses, Round Plat etc. as required to complete the wiring.(Average length of conduit & wire is 3.0 MTR)	Nos	58.00		
9	Supply, Installation, Testing and Commissioning of One Way Wall light point wiring from switchboard to light point with 3R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls/slabs. This shall include installation of 6 A single way modular switch, 1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, angle holders, ceiling roses etc. as required to complete the wiring.(Average length of conduit & wire is 5.5 MTR)	Nos	232.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
10	Supply, Installation,Testing of One Way Ceiling fan point wiring from switchboard to ceiling fan point with 3R X 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC conduit concealed / embeded in walls. with 5 step electronic type regulator.This shall include installation of 6 A single way modular switch, 1.2 mm thick GI concealed box and other accessories such as bends, junction boxses, saddles, spacers, switch plates, etc. as required to complete the wiring.(Average length of conduit & wire is 5.0 MTR)	Nos	10.00		
11	Supply, Installation and testing of 6 Amps Plug Points on main lighting or power switchboards.This shall include a 6 Amp modular type switch and socket. This shall include wiring & termination of switch socket as required.(Half Point)	Nos	16.00		
12	Supply, Installation and testing of switch sockets which are Includes installation 6/16 A Socket & 6 A single pole switch at switchboard, 1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.(Individual/full Points)	Nos	294.00		
13	Supply, Installation, Testing and Commissioning of Power Point.(for general purpose)This Includes installation 16 A, 5 Pin Socket & 16 A single pole switch with indicator at switchboard, 1.2 mm thick GI concealed box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.	Nos	16.00		
14	Supply, Installation, Testing and Commissioning of Power Point with Switch For Bulkhead Fitting For Lift Shaft. This Includes installation 16 A, 5 Pin Socket & TWo Nos of 16 A single pole switch with indicator at switchboard, 1.2 mm GI Box and other accessories such as saddles, spacers, sockets, bend etc. as required to complete the wiring which excludes wire & Conduit cost.	Nos	159.00		
15	Supply, Laying,Testing and commissioning of wiring from DB to SB/PP and SB to SB with 2R x 2.5 Sq.mm + 1R x 1.5 sq mm insulated copper conductor 1100 volts grade stranded flexible FRLSH wires in 25 mm FRLSH MMS PVC/GI conduit concealed /Casing caping on walls/slab/Floor.(Excluding OF PVC Conduit)	Mtr	3,295.20		
16	Supply & Laying of 25 mm FRLSH MMS grade PVC conduit with accessories as required to complete this point for various services through slab,wall,groung etc.(Electrical Conduit From DB to SB)	Mtr	267.00		
17	Supply & Laying of 25 mm GI Grade conduit with accessories such as GI Circuler Box, GI Bend, Coupler and other as required to complete this point for various services through Wall/Slab Surface etc.(Electrical Conduit From DB to SB and SB to SB)	Mtr	2,851.52		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
g	**DISTRIBUTION BOARDS**				
	Supply, Installation, Testing and Commissioning of the following Distribution Boards fabricated in sheet steel with phase copper bus bars, neutral and earth bar with tapped holes, cutouts for operating the MCB knobs in the inner cover, bakelite phase barriers, double door construction, powder coated with approved shade and partitions to segregate phases etc. DB's shall be suitable for single phase/3 phase operation. DB's shall be flush mounted to brick wall or surface mounted as required.				
1	Distribution Board(6 Way TPN DB) -for Flats	Nos	182.00		
	Incomer -				
	40A, TPN ,RCBO, 30mA - 1 no.				
	Outgoing-				
	20 Amps, 10 KA, SP MCBs - 1 nos.				
	16 Amps, 10 KA, SP MCBs - 5 nos.				
	10 Amps, 10 KA, SP MCBs - 2 nos.				
	6 Amps, 10 KA, SP MCBs - 10 nos.				
2	Distribution Board(12 Way SPN DB) -for Servant Room	Nos	1.00		
	Incomer -				
	25A, DP,MCB, 10 kA - 1 no.				
	25A, 30mA, DP ,RCCB - 1 no.				
	Outgoing-				
	6-16 Amps, 10 KA, SP MCBs - 8 nos.				
3	Supply, Installation, Testing and Commissioning of the following Distribution Boards fabricated in sheet steel For LV(TV, Tel, Data). DB's shall be flush mounted to brick wall or surface mounted as required.				
	LV Distribution Board- 450 mm x 100 mm -for Flats(TV,TEL,Data)	Nos	174.00		
h	**LIGHT FIXTURE (FOR COMMON AREA)**				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1	Supplying and erecting led lamps with 16 to 20 wattage capacity of 220 to 240 voltage, minimum 15000 burning hours life, 500 V in built-surge protection,Polycarbonate diffuser, mounting suitable for E14 / E27 / B22 lamp holders, pf >= 0.5	Nos	232.00		
2	Supplying and erecting LED indoor fittings with LEDs of wattage Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.9, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings. The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Square/ Circular shaped Surface/Recessed Mount Downlight with provision for spring loaded mounting clips complete.IP20 (iv) 22-24 watts, Surge-2 KV	Nos	365.00		
3	Supplying and erecting LED indoor fittings with LEDs of wattage Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.9, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings. The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Square/ Circular shaped Surface/Recessed Mount Downlight with provision for spring loaded mounting clips complete.IP20 (iv) 16-20 watts, Surge-2 KV	Nos	464.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/ aluminium die cast powder coated and high U.V. & corrosion resistance with diffuser with company mark/name 160V to 270V, Power Factor more than 0.9, THD < 15%, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt ,LED LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (v) 36-40 Watts, Surge-2 KV, IP-20, conventional 4 feet	Nos	757.00		
5	Providing and erecting wall bracket fittings complete with LED lamp and rust free fittings components mounted in chrome finish housing with holder ,clear/opaque glass diffuser complete erected with lead wires with minimum 15 wattage capacity as per instruction engineer incharge/architect/authority .cat-III	Nos	159.00		
6	Supplying & erecting Aviation obstruction light consisting of yellow painted diecast aluminium alloy housing with Integral LED aviation light comprising of aluminium housing with polycarbonate enclosure complete.	Nos	2.00		
7	Supplying and erecting energy saving ceiling fan 230 V A.C. 50 cycles 1200 mm complete erected in position with all required accessories.	Nos	10.00		
8	Supplying and erecting fresh air cum exhaust fan of light duty 250 V A.C. 50 cycles 225mm. 1400 RPM rust proof body & blades, wire mesh, duly erected, complete.	Nos	0.00		
	SECTION A - INTERNAL ELECTRICAL WORKS	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – B				
	EXTERNAL ELECTRICAL WORKS				
a	**SAFETY WORK**				
1	Supplying and fixing PVC synthetic elastomer electrically insulating mat with class B insulation conforming to IS: 15652 – 2006 having 4.0 mm thickness up to 415V	sqmt	108.00		
2	Providing pair of duly tested rubber hand gloves as per IS :47705 suitable for working up to 415V supply complete	Nos	1.00		
3	Supplying shock proof leather safety shoes of electrical grade of standard size as IS :11226, 14544 duly tested, with necessary test certificate from manufacturer.	Nos	2.00		
4	Providing and fixing printed instruction chart both in English and Gujarati and duly framed with front glasses, for treatment of person suffering from Electric shock with minimum 50" diagonally size.	Nos	2.00		
5	Supplying standard first aid box with necessary antiseptic cream, medicine for use on wounds due burn, crepe bandage, gauge bandage, medicated ready to use bandage (Band-Aid) adhesive tape for medicinal use, scissors, anti-septic solution,etc. (All above contents shall be of standard makes)	Nos	3.00		
b	**LT Cables & End Termination**				
1	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of FRLSH cables				
1.1	(J) 3 1/2 core 300 Sq.mm (150 Sq. mm 1/2 core)	Mtr	2,997.00		
1.2	(I) 3 1/2 core 240 Sq. mm(120 Sq. mm 1/2 core)	Mtr	90.00		
1.3	(H) 3 1/2 core 185 Sq. mm (95 Sq. mm 1/2 core)	Mtr	150.00		
1.4	(D) 3 1/2 core 70 Sq. mm (35 Sq. mm 1/2 core)	Mtr	288.20		
1.5	(B) 3 1/2 core 35 Sq. mm (16 Sq. mm 1/2 core)	Mtr	195.00		
1.6	(A) 3 1/2 core 25 Sq. mm (16 Sq. mm 1/2 core)	Mtr	1,709.60		
2	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of FRLSH cables.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
2.1	(B) 4 core 16 Sq. mm	Mtr	50.00		
2.2	(A) 4 core 10 Sq. mm	Mtr	2,000.00		
2.3	(C) 4 core 6 Sq. mm	Mtr	177.00		
3	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of FRLSH cable.				
3.1	(C) 3 core 6 Sq. mm	Mtr	408.20		
3.2	(B) 3 core 4 Sq. mm	Mtr	50.00		
4	Providing and, fixing heavy duty brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of FRLSH cables.				
4.1	(I) 3 & 1/2 core 300 Sq. mm	Nos	48.00		
4.2	(H) 3 & 1/2 core 240 Sq. mm	Nos	12.00		
4.3	(G) 3 & 1/2 core 185 Sq. mm	Nos	12.00		
	(C) 3 & 1/2 core 70 Sq. mm	Nos	4.00		
	(B) 3 & 1/2 core 35/50 Sq. mm	Nos	18.00		
	(A) 3 & 1/2 / 4 core 25 Sq. mm	Nos	38.00		
5	Providing and, fixing heavy duty brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of FRLSH cables.				
5.1	(D) 2 to 4 core 16 Sq. mm	Nos	2.00		
5.2	(C) 2 to 4 core 10 Sq. mm	Nos	54.00		
5.3	(B) 2 to 4 core 6 Sq. mm	Nos	40.00		
	(A) 2 to 4 core 2.5 / 4 Sq. mm	Nos	2.00		
6	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner.				
6.1	(K) 300 Sq.mm.	Nos	192.00		
6.2	(J) 225 Sq.mm.	Nos	48.00		
6.3	(I) 185 Sq.mm.	Nos	48.00		
	(E) 70 Sq.mm.	Nos	16.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	(D) 35/50 Sq.mm.	Nos	72.00		
	(C) 16/25 Sq.mm.	Nos	152.00		
7	Solder less crimping type Copper lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner.				
7.1	(C) 16 Sq.mm.	Nos	8.00		
7.2	(B) 10 Sq.mm	Nos	216.00		
7.3	(A) 1.5/2.5 to 6 Sq.mm	Nos	168.00		
8	Providing and erecting Epoxy Outdoor / Indoor end termination Kit suitable for LT PVC insulated armoured cable1.1 KV grade complete with ferrule bushing and accessories and suitable clamps duly erected and connected to the supply for all cores cables of following size.				
8.1	(E) 240 / 300 Sq. mm	Nos	60.00		
8.2	(D) 150 / 185 Sq. mm	Nos	12.00		
8.3	(C) 70 to 120 Sq. mm	Nos	4.00		
8.4	(B) 25 to 50 Sq. mm	Nos	56.00		
8.5	(A) 2.5 to 16 Sq. mm	Nos	96.00		
9	Disconnecting the cable connection and Providing straight joint with PVC mould using heat shrink /cast resin type epoxy compound Insulating material and making the joint complete using necessary in line connectors, hardener, earth continuity connection, spacers etc. and reconnecting the same & ensure the joint resistance within the limits as per IS.				
9.1	(C) 120 to 300 Sq. mm cable.	Nos	15.00		
9.2	(B) 35 to 95 Sq. mm cable.	Nos	15.00		
9.3	(A) up to 25 Sq mm Cable	Nos	15.00		
c	**Street Light Work**				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1	Supplying and erecting approved make Octagonal pole made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/2633/4759, suitable suspend local wind speed with integral Junction box consist of terminal plate of min 6mm Hylam sheet, standard profile 35mmX7.5mm Din-Rail for MCB Mounting, stud type terminal and arrangement for cable termination to be erected With Suitable foundation (Included) as per details given by manufacturer considering site requirement. (E) 7 Mtr. Long 70 mm Top X 135 mm bottom dia, 3 mm thickness with 225mmX225mmX16mm base plate, 4-M20 Bolts and 600mm long J-Bolt.Approx Pole weight 67 kg	Nos	18.00		
2	Supplying and erecting Pole base suitable for following size of pole fabricated from 4 mm. Thick M.S. sheet with M.S.door having two hinges welded on M.S. flat 25 x 3 mm which is fitted on M.S..base by bolts welded inside the pole base erected with one coat of Red oxide and two coats of Aluminium paint. Outside dimension as per SOR. drawing. (C) Suitable for 140 mm. dia.base of pole	Nos	18.00		
3	Providing and erecting C.I./M.S. flange type base plate of 300mm x 300mm x 6mm	Nos	18.00		
4	Supplying & erecting approved make SMC press moulded composite FRP. loop-in, loop-out approx. 2mm thick box complete with Bakelite connector strip 5way(3P+N+E),DIN rail for mounting mob & hinged doors as per requirement having locking arrangements with mounting clamp with nuts, bolts & washers suitable for erection on pole with cable clamps& earth bolt of following size of box. (A) 300mm x 200mm x 100mm [deep]	Nos	18.00		
5	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.(fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Street Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection. (iii) Above 60 to 90 watts -Cat-iii	Nos	18.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
6	Providing and erecting decorative wall bracket fittings complete with LED lamp and rust free fittings components mounted in chrome finish housing with holder ,clear/opaque glass diffuser complete erected with lead wires with minimum 15 wattage capacity as per instruction engineer incharge/architect/authority .cat-III	Nos	32.00		
	Supplying and laying (including excavation of suitable width & depth up to 90 cm) 75 mm outside dia. double wall corrugated pipes (DWC) of HDPE for enclosing cable below ground/road surface, to required depth complete.	MTR	300.00		
d	**Earthing Work**				
1	SITC of Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required and other accessories to complete this job.	Nos	2.00		
2	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required and other accessories to complete this job..	Nos	33.00		
3	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Mtr	50.00		
4	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Mtr	5,748.00		
5	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface for connections etc. as required.	Mtr	11.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
e	**Solar Work**				
1	Supply, Installation, Testing & Commissioning of following size of Grid Tied Solar Power Plant with Solar Panels (ALMM approved): Frame Material : Anodized Aluminum alloy Frame With Twin Wall Profile, Front Cover : High Transmission Low-Iron Tempered Glass (AR Coated), High efficency and positive power tolerance Pmax: 0/+5, Module Efficiency should be approx. 18%-21%, Normal operating temperature 45'C, Junction Box with Waterproof IP67 & MC4 Compatible and Enclosed with Bypass diodes, 100% Electroluminescence test to ensure error free Modules, Thep. temp. co-efficient of the PV module shall equal or better than -0.45%/degree C. Solar PV modules of minimum fill factor 75% to be used. Unit Production:- 4 to 5 Unit /kw /day (Actual)(1Year Avg) With 10 year Product warranty and 25 year Linear Power Warranty., Solar Inverter: MPPT Range: 80-1000 V, Max efficiency: 97.5% - 98.9%, O/p Frequency: 50/60Hz, Operating Altitude (m) ≤4000, O/p Power Factor: ~1, O/P THDi: <3%, Operating Tempreture Range: -25~60°C, Anti-islanding Protection: Integrated, Input Reverse Polarity Protection Integrated, Insulation Resistor Detection Integrated, Residual Current Monitoring Unit Integrated, Output Over Current Protection Integrated, Output Short Circuit Protection Integrated, Output Over Voltage Protection Integrated, Protection Degree: IP65, User Interface LCD & APP,Datalogger & Communication: GPRS / Wi-Fi, Module Mounting Structure: Seamless Box Pipe / 'C' Channel of suitable size for rooftop solar installations with good stability agaist wind & weight load., Hot Dipped Galvanized steel coils. suitable arrangement for base plate for foundation , solar panel mounting, the structure should be suitable for carry the load of solar panel,wiring, sprinkler system etc. with necessary foundation work/wall mount, j bolt, anchor fastner etc. the nut bolt used for installation of structure should be (SS 304) quality. and Balane of System with necessary Switch gears (Suitabel size and protection of ACDB & DCDB), inter connecting wiring, earthing system, lightning arrester system, all liasoning work with various gov. Department like state nodal agency, DISCOM & CEIG is included in agency scope	kw	50		
	(C) Grid Tied Solar Power System: 25 kW (3 - phase) X 02 Nos				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
f	**Meter Panel**				
1	Supply, Installation, testing & commissioning of ENERGY METER PANEL which includes Incoming & outgoing feeder, Indication lamps, Busbar, Termination, Fabrication, wiring & Space provision of Energy Meter and other to complete this job. (Note- Which Excludes a Supply & liasoning of following Single Phase/three phase/CT operated kWH Meters of appropriate Class & accuracy as per GIFT POWER CORPORATION/SEB. Only includes Provision , Fabrication and Required Wiring For Installation KWH Meter). Note: Actual meter sizes/capacities shall be cross checked as per GIFT POWER CORPORATION/SEB guidelines & finalized prior to Meter panel commercial offer.(IP 43, fabricated out of CRCA sheet)	Nos	2.00		
	Meter panel-1,3				
	Incomer-				
	315 A, FP ,25KA ,MCCB - 1 nos				
	R-Y-B- indication				
	Busbar-				
	400A, 25 kA Alu. Busbar				
	Space Provision, fabrication & Required Wiring For Following Energy Meter				
	40A Three Phase, SEB kWH Meter - 24 Nos-FOR Apartment Metering				
	Outgoing MCB				
	40A, C-CURVE, 10 KA, FP, MCB- 24- NOS				
	Note- Supply of Energy Meter consider is liosoning part				
2	Supply, Installation, testing & commissioning of ENERGY METER PANEL which includes Incoming & outgoing feeder, Indication lamps, Busbar, Termination, Fabrication, wiring & Space provision of Energy Meter and other to complete this job. (Note- Which Excludes a Supply & liasoning of following Single Phase/three phase/CT operated kWH Meters of appropriate Class & accuracy as per GIFT POWER CORPORATION/SEB. Only includes Provision , Fabrication and Required Wiring For Installation KWH Meter). Note: Actual meter sizes/capacities shall be crosschecked as per GIFT POWER CORPORATION/SEB guidelines & finalized prior to Meter panel commercial offer.(IP 43, fabricated out	Nos	1.00		
	Meter panel-1,3				
	Incomer-				
	315 A, FP ,25KA ,MCCB - 1 nos				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	R-Y-B- indication				
	Busbar-				
	400A, 25 kA Alu. Busbar				
	Space Provision, fabrication & Required Wiring For Following Energy Meter				
	40A Three Phase, SEB kWH Meter - 28 Nos-FOR Apartment Metering				
	Outgoing MCB				
	40A, C-CURVE, 10 KA, FP, MCB- 28- NOS				
	Note- Supply of Energy Meter consider is liosoning part				
3	Supply, Installation, testing & commissioning of ENERGY METER PANEL which includes Incoming & outgoing feeder, Indication lamps, Busbar, Termination, Fabrication, wiring & Space provision of Energy Meter and other to complete this job. (Note- Which Excludes a Supply & liasoning of following Single Phase/three phase/CT operated kWH Meters of appropriate Class & accuracy as per GIFT POWER CORPORATION/SEB. Only includes Provision , Fabrication and Required Wiring For Installation KWH Meter). Note: Actual meter sizes/capacities shall be crosschecked as per GIFT POWER CORPORATION/SEB guidelines & finalized prior to Meter panel commercial offer.(IP 43, fabricated out of CRCA sheet)	Nos	4.00		
	Meter panel-1,3				
	Incomer-				
	250 A, FP ,25KA ,MCCB - 1 nos				
	R-Y-B- indication				
	Busbar-				
	300A, 25 kA Alu. Busbar				
	Space Provision, fabrication & Required Wiring For Following Energy Meter				
	40A Three Phase, SEB kWH Meter - 24 Nos-FOR Apartment Metering				
	Outgoing MCB				
	40A, C-CURVE, 10 KA, FP, MCB- 24- NOS				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	Note- Supply of Energy Meter consider is liosoning part				
g	**LT Panels**				
1	**SITC OF MAIN ELECTRICAL LT PANEL-**	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	EB INCOMER-1				
	415V , 1600A, 4P, ACB (EDO) of 36KA with MICRO PROCESSOR BASED RELEASES having O/C+E/F+S/C PROTECTIONS(WITH RS 485 COM.PORT) - 1No				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	630/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V ,315A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -3 No's - FOR METER PANEL				
	415V ,250 A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -4 No's - FOR METER PANEL				
	415V ,630A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -1 No's - FOR APFC PANEL				
	415V ,315A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -4 No's - SPARE				
	415V ,250A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -3 No's - SPARE				
	415V ,630A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -1 No's - SPARE				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	BUSBAR RATING				
	415V, 2000A, 3Ph, 4wire 50Hz, Aluminium busbars (91E electrical grade) having withstand ability symmetrical fault level of 25 KA for 1 Sec.				
2	Supply, installation, testing & commissioning of APFC PANEL-1. (Location- Electrical Room)	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE& BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	Incomer:				
	415V ,630A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	LED Type R-Y-B Phase Indication Lamps. - (1 set)				
	Voltmeter of range (0-500V) with selector switch - 1 set				
	Ammeter of range (0-1600A) with selector switch - 1 set				
	630/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	13 channels Power factor controller relay for monitoring the capacitor bank. STAGES SHALL BE AS BELOW OR AS DIRECTED BY ENGINEER INCHARGE				
	Outgoings :				
	25 KVAR Capacitor Bank - each bank consisting of 63A, 16KA, MCCB with 7% Detuned Reactor-1No ; 63 A Power Contactor-1No; ON / OFF Push buttons - 1set; ON / OFF Indicating lamps - 10set				
	50 KVAR Capacitor Bank - each bank consisting of 100A, 16KA, MCCB with 7% Detuned Reactor-1No ; 100 A Power Contactor-1No; ON / OFF Push buttons - 1set; ON / OFF Indicating lamps - 2 set				
	Note - All Capacitors Should be with DETUNED FILTERS.				
	Bus Bar :				
	415V, 700A, 3Ph, 4wire 50Hz, Aluminium busbars (91E electrical grade) having withstand ability symmetrical fault level of 25 KA for 1 Sec.(WITH 100% NEUTRAL).				
3	**SITC OF LIFT PANEL**	Nos	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER-1				
	415V ,160 A, 4P,MCCB of 16KA having O/C+S/C PROTECTIONS -1 No's - FOR EMDB,				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	160/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V ,63 A, TPN,MCCB of 16 KA - 5 No's - FOR LIFT				
	BUSBAR RATING				
	415V, 125A, 3Ph, 4wire 50Hz, Aluminium busbars				
4	**SITC OF PUMP PANEL**	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER-1				
	415V ,125 A, 4P,MCCB of 16KA having O/C+S/C PROTECTIONS -1 No's - FOR EMDB,				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	125/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V ,25 A, TPN,MCB of 10KA -8 No's				
	415V ,25 A, DP, MCB of 10KA -6 No's				
	BUSBAR RATING				
	415V, 160 A, 3Ph, 4wire 50Hz, Aluminium busbars				
5	**LIFT DB (TPN)**	Nos	6.00		
	Supplying & erecting triple pole and neutral distribution board (TPNDB) with double door surface/ flush Incommer - 1 set 40/63A FP MCB D-series Outgoings - 1 nos 63A., 300mA ELCB, Incommer - 1 set 32A DP MCB C-series Outgoings - 1 nos 16A., DP, 100mA RCCB,- 6 Nos 1 nos 16A , DP, MCB, D-Curve- 6 Nos				
6	**Lighting DB (TPN)**	Nos	10.00		
	FABRICATED IP-43 ELECTRICAL LIGHTING VTPN DB with suitable modules to accomodate followings. Incomer : 25A 4P RCBO 30mA , Sub Incomer-1 : 25A TP Contactor+ Real time Timer with MCB, Outgoings : 10-20A SP MCBs-24 no. complete as per SLD.& with necessary wiring interconnections, blanking plates etc.as required.				
7	**POWER DB (TPN)**	Nos	10.00		
	1 No – 40A, 30MA, FP RCBO as Incomer. 6-20 amps, 10 KA 18 NOS, SP MCBs outgoings enclosed in 6 way TPN Double Door. - For Power Points				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
8	SITC of 63 amps TPN MCB in enclosure for Booster Pump, Lift p, Staircase P. & Other	Nos	10.00		
9	**SITC OF MAIN ELECTRICAL LT PANEL-**	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER				
	415V , 2500A, 4P, ACB (EDO) of 36KA with MICRO PROCESSOR BASED RELEASES having O/C+E/F+S/C PROTECTIONS(WITH RS 485 COM.PORT) - 1No				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	2500/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V , 1600A, 4P, ACB (EDO) of 36KA with MICRO PROCESSOR BASED RELEASES having O/C+E/F+S/C PROTECTIONS(WITH RS 485 COM.PORT) - 1No				
	415V , 1250A, 4P, ACB (EDO) of 36KA with MICRO PROCESSOR BASED RELEASES having O/C+E/F+S/C PROTECTIONS(WITH RS 485 COM.PORT) - 1No				
	BUSBAR RATING				
	415V, 2500A, 3Ph, 4wire 50Hz, Aluminium busbars (91E electrical grade) having withstand ability symmetrical fault level of 25 KA for 1 Sec.				
10	**SITC OF COMMON SERVICES METER PANEL-**	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER-1				
	415V , 1250A, 4P, ACB (EDO) of 36KA with MICRO PROCESSOR BASED RELEASES having O/C+E/F+S/C PROTECTIONS(WITH RS 485 COM.PORT) - 1No				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	1250/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS				
	415V ,200A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -1 No's - FOR AC Plant Room				
	415V ,400A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -2 No's - FOR Ventilation Panel				
	415V ,400A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -2 No's - FOR Ventilation Panel				
	415V ,200A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -1 No - FOR TOWER A LIGHTING+POWER+LIFT				
	415V ,400A, 4P,MCCB of 25KA with Microprocessor based having O/C+S/C PROTECTIONS -1 No - FOR TOWER A LIGHTING+POWER+LIFT+PUMP RANEL				
	BUSBAR RATING				
	415V, 1250A, 3Ph, 4wire 50Hz, Aluminium busbars (91E electrical grade) having withstand ability symmetrical fault level of 25 KA for 1 Sec.				
11	**SITC OF EMERGENCY PANEL (TOWER1, TOWER 2)**	Nos	2.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER-1				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	415V ,63 A, 4P,MCCB of 16KA having O/C+S/C PROTECTIONS -1 No's - FOR EMDB,				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	63/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V ,16 A, DP,MCB of 10KA h-5 No's - FOR DB's,				
	415V ,25 A, FP,MCB of 10KA h-5 No's - FOR DB's,				
	BUSBAR RATING				
	415V, 100A, 3Ph, 4wire 50Hz, Aluminium busbars				
12	**SITC OF LIGHTING+ POWER+LIFT PANEL (TOWER A)**	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER-1				
	415V ,400 A, 4P,MCCB of 16KA having O/C+S/C PROTECTIONS -1 No's - FOR EMDB,				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	400/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V ,160 A, TPN,MCCB of 10KA -1 No				
	415V ,125 A, TPN,MCCB of 10KA -1 No				
	415V ,100 A, TPN,MCCB of 10KA -2 Nos				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	415V ,40 A, TPN,MCB of 10KA -02 No				
	415V ,40 A, TPN,MCB of 10KA -1 No				
	BUSBAR RATING				
	415V, 400A, 3Ph, 4wire 50Hz, Aluminium busbars				
13	**SITC OF LIGHTING+ POWER+LIFT PANEL (TOWER B)**	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER-1				
	415V ,200 A, 4P,MCCB of 16KA having O/C+S/C PROTECTIONS -1 No's - FOR EMDB,				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	200/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V ,160 A, TPN,MCCB of 10KA -1 No				
	415V ,100 A, TPN,MCCB of 10KA -2 Nos				
	415V ,40 A, TPN,MCB of 10KA -02 No				
	415V ,40 A, TPN,MCB of 10KA -1 No				
	BUSBAR RATING				
	415V, 200A, 3Ph, 4wire 50Hz, Aluminium busbars				
14	**SITC OF AC PLANT ROOM PANEL**	Nos	1.00		
	The panel shall be fabricated type with IP 43 protection(With Metal Door).				
	The panel shall be compartmental type with Aluminium busbar and separate cable and busbar chambers. The cable chambers shall be free from any live open connections.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	The panel shall be comprising of following & IEC 61439 OEM DESIGN & BMS COMPATIBLE				
	This panel should include Bus bar mounting Surge Protection Device Type 1 Tested as per IEC 61643-11:2011 & UL 1449 4th edition. : 3 NOS				
	INCOMER-1				
	415V ,200 A, 4P,MCCB of 16KA having O/C+S/C PROTECTIONS -1 No's - FOR EMDB,				
	ON,OFF & TRIP Indication Lamps - 1 No				
	6A, 6KA, C CURVE MCB - 3 EACH.				
	200/5A, CL-1, 10VA CT's with tape wound - 3 EACH.				
	LED Type R - Y - B Phase Indicating Lamps -3 No's (1 set)				
	MULTI FUNCTION METER (MFM) WITH RS 485 COM.PORT				
	OUTGOING FEEDERS FROM EMERGENCY ELE. SERVICES BUSBAR				
	415V ,160 A, TPN,MCCB of 16KA -1 No				
	415V , 100A, TPN,MCCB of 16KA -1 No				
	415V ,125A, TPN,MCCB of 16KA -1 No				
	415V ,63A, TPN,MCCB of 16KA -1 No				
	BUSBAR RATING				
	415V, 200A, 3Ph, 4wire 50Hz, Aluminium busbars				
	Outgoing as per HVAC vendor				
h	**CABLE TRAYS**				
1	Providing & erecting Hot deeped Galvanised Perforated type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 750 mm width & 75 mm height complete with necessary coupler plates & hardware and other supports & accessoeries to complete this job in approved manner.	mtr	250.00		
2	Providing & erecting Hot deeped Galvanised Perforated type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 300 mm width & 75 mm height complete with necessary coupler plates & hardware and other supports & accessoeries to complete this job in approved manner.	mtr	200.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1	Providing & erecting Hot deeped Galvanised Ladder type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 750 mm width & 75 mm height complete with necessary coupler plates & hardware and other supports & accessoeries to complete this job in approved manner.	mtr	747.50		
2	Providing & erecting Hot deeped Galvanised Ladder type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 300 mm width & 75 mm height complete with necessary coupler plates & hardware and other supports & accessoeries to complete this job in approved manner.	mtr	460.00		
i	**EXTERNAL LIGHTNING PROTECTION SYSTEM**				
1	SITC of 8mm dia Aluminium alloy Solid Round Conductor of material AlMgSi used in air termination and down conductor system . Cross sectional area of conductor should be 50 mm². Test Parameter: a.Lightning impulse current of 100kA for 10/350 µs b.Electrical resistivity - 0.036 µΩm, Tensile strength - 120 to 240 MPa or N/mm², Salt spray - No Sign of Corrosion. Tested as per IEC 62561-2.	Mtr	345.00		
2	SITC of UV resistance Nylon/PU Conductor Holder for Parapet wall for holding 8 mm dia Aluminium alloy round Conductor .	Nos	337.50		
3	SITC of UV resistance Nylon/PU roof conductor holder for flat roof with concrete block for fixing 8 mm dia Aluminium alloy Solid Round Conductor in the terrace flat surface at every 1 mtr	Nos	97.50		
4	SITC of Stainless steel Cross Connector for 8 mm dia Aluminium alloy round conductor & 10 mm Copper bonded conductor at cross junction.Test Parameter Salt Spray Test (IEC 62561-1) - No sign of Corrosion	Nos	31.50		
5	SITC of Rust resistant non corossive 10 mm dia Copper bonded round conductor used for Earth termination inside the concrete and soil.Test parameter: Short circuit current test for copper bonded conductor:Test 6 kA ratings, as per cross sectional area for 1 sec(IS3043/IEEE80); Electrical Resistivity before & after salt mist spray test: 0.25µΩm max. Tensile Test 290 to 510 N/mm². Adhesion no peel or crack & Bend test no seperation of Cu, Cu Coating thickness min. 70µm. Tested as per IEC 62561-2	Nos	16.50		
6	SITC of Aluminium Straight conductor connector for interconnecting 8mm Aluminium conductor to meets the requirement of IS/IEC 62305.Tested for Electrical , Mechanical and chemical as per IEC 62561.	Nos	10.50		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
7	SITC of air termination rod of 2 mtr length of material AlMgSi of diametre ø 16/10 mm crimped on both the ends(Tappered Type). The rod shall be mounted with Stainless steel clamp and fixing accessories . Test Parameter: Mechanical Load Test for individual aluminium alloy rods - 120 to 280 N/mm² Salt Spray Test-No sign of corrosion Tested as per IEC 62561-1&2	Nos	3.00		
8	SITC of air termination rod of 3 mtr length of material AlMgSi of diametre ø 16/10 mm crimped on both the ends(Tappered Type). The rod shall be mounted with Stainless steel clamp and fixing accessories . Test Parameter: Mechanical Load Test for individual aluminium alloy rods - 120 to 280 N/mm² Salt Spray Test-No sign of corrosion Tested as per IEC 62561-1&2	Nos	3.00		
9	SITC of Vertical airterminal with corner protecting measure along with suitable mounting arrangements to protect the corners and edges of terrace area to avoid direct strikes and side flashes.	Nos	7.50		
10	SITC of 8mm dia Aluminium alloy Solid Round Conductor of material AlMgSi used in air termination and down conductor system . Cross sectional area of conductor should be 50 mm². Test Parameter: a.Lightning impulse current of 100kA for 10/350 µs b.Electrical resistivity - 0.036 µΩm, Tensile strength - 120 to 240 MPa or N/mm², Salt spray - No Sign of Corrosion. Tested as per IEC 62561-2.	Mtr	1,147.50		
11	SITC of Stainless steel Conductor Holding clip for fixing the 8 mm dia round conductor on the side wall . Test Parameter: Salt Spray Test - No Sign of Corrosion Tested as per IEC 62561-1	Nos	1,147.50		
12	SITC of Aluminium Straight conductor connector for interconnecting 8mm Aluminium conductor to meets the requirement of IS/IEC 62305.Tested for Electrical , Mechanical and chemical as per IEC 62561.	Nos	76.50		
13	SITC of Lightning counter - LCD screen shows the number of lightning strikes, hour and date of lightning events Buttons enable TIME/DATE setting and log viewing. Replaceable battery, working life minimum five years, Complies with IEC/EN 62561-6.	Nos	1.50		
14	Supply of Stainless Steel Test Joint with enclosure to interconnect between 8 mm Al. round conductor to 10 mm copper bonded round conductor Test Parameter: Salt Spray Test for test joint plate -No sign of Corrosion Tested as per IEC 62561-1	Nos	10.50		
15	SITC of 8mm dia Aluminium alloy Solid Round Conductor of material AlMgSi used in air termination and down conductor system . Cross sectional area of conductor should be 50 mm². Test Parameter: a.Lightning impulse current of 100kA for 10/350 µs b.Electrical resistivity - 0.036 µΩm, Tensile strength - 120 to 240 MPa or N/mm², Salt spray - No Sign of Corrosion. Tested as per IEC 62561-2.	Mtr	547.50		
16	SITCof Stainless steel Conductor Holding clip for fixing the 8 mm dia round conductor on the side wall . Test Parameter: Salt Spray Test - No Sign of Corrosion Tested as per IEC 62561-1	Nos	558.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
17	SITC of Stainless steel Cross Connector for 8 mm dia Aluminium alloy round conductor & 10 mm Copper bonded conductor at cross junction. Test Parameter: Salt Spray Test (IEC 62561-1) - No sign of Corrosion	Nos	22.50		
18	SITC of Aluminium Straight conductor connector for interconnecting 8mm Aluminium conductor to meets the requirement of IS/IEC 62305.Tested for Electrical , Mechanical and chemical as per IEC 62561.	Nos	36.00		
19	SITC of Rust resistant non corossive 10 mm dia Copper bonded round conductor used for Earth termination inside the concrete and soil. Test parameter: Short circuit current test for copper bonded conductor:Test 6 kA ratings, as per cross sectional area for 1 sec(IS3043/IEEE80); Electrical Resistivity before & after salt mist spray test: 0.25µΩm max. Tensile Test 290 to 510 N/mm². Adhesion no peel or crack & Bend test no seperation of Cu, Cu Coating thickness min. 70µm. Tested as per IEC 62561-2.	Nos	345.00		
20	SITC of Stainless Steel conductor holder for fixing the 10 mm conductor on the wall to meet the requirement of IS/IEC - 62305 and IEC 62561-1&2.	Nos	10.50		
21	SITC of Stainless steel Cross Connector for 8 mm dia Aluminium alloy round conductor & 10 mm Copper bonded conductor at cross junction. Test Parameter: Salt Spray Test (IEC 62561-1) - No sign of Corrosion	Mtr	13.50		
22	SITC of Aluminium Straight conductor connector for interconnecting 8mm Aluminium conductor to meets the requirement of IS/IEC 62305.Tested for Electrical , Mechanical and chemical as per IEC 62561.	Nos	9.00		
23	SITC of Maintenance Free Copper bonded Earth rod of 3048mm length having the dia of 14.2 mm with copper coating thickness of 254 microns. The rod has been tested for Dimension, Marking, Tensile Strength, Salt mist, coating thickness, Electrical resistivity test before and after corrosion test as per IEC 62561-2 & UL 467.	Nos	3.00		
	SECTION B - EXTERNAL ELECTRICAL WORKS	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION – C				
	LIFT WORKS				
a	**LIFT WORK-FIRE LIFT-1-TOWER-A**				
1	SITC of Electric Traction Fire Lift with · Rated capacity :- 12 Passenger/884Kg · Floors :- G+26 floors (27 Stops/27 Landings) · Travel :- 1 to 100 mtrs · Location of Lift Machine:- MR/MRLS · Rated speed :- 2.5 mps VS · Car/Landing door clear opening of 1000 mm wide x 2250mm high · Clear Car size of 1600 mm wide x 1600 mm deep x 2450 mm high · Lift shaft available having clear size of 1950 mm wide x 3100 mm deep, 3000 mm Pit depth, 5200mm Overhead(From Terrace Level).	JOB	1.00		
	"Doors type :- COPO/TOPO Doors with frame made from SS 304 grade solid(non-cladded) sheet of 1.5mm thick in hairline finish for car and all landing doors with SS door architraves/frames The lift doors shall have minimum 1 hour fire rating (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory). · Lift car enclosure made from SS 304 grade solid (non-cladded) sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc. The lift car interior design shall be done as per the directions of engineer in charge. · COP with SS face plate having metallic push buttons with Braille code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with / without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor. · LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings."				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port. The controller shall have necessary protections such as overcurrent, overvoltage, over speed, overheat for all devices including lift motor and travel direction protection, protection for phase loss at input or output etc. various operation modes such as maintenance, change direction by attendant, full load bypass, VIP call operation, self levelling operation, call cancel facility, auto return to home landing, fireman evacuation operation, earthquake operation, door open/close operation from COP etc. The system can record information for minimum 30 latest faults, with real-time clock management and handheld keypad with LCD screen for view and setting of parameters. The control panel duly wired with proper size & strength, copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class."				
	"· ARD complete with necessary SMF VRLA batteries. · Fireman controller having fireman switch at fire Landing. · CCTV surveillance system comprises of 2 nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for min. 90 days with min. 20"" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge. · Lift Machine of Gearless PMSM of suitable kW with duty cycle of minimum 120 starts/hr (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory), with Traction pulley, OSG,electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves,suspension wire ropes/belts of adequate size & strength. · Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work."				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"· Minor civil work such as alteration work if any necessary for erection of landing door frames and it's accessories e.g. sill, header, hole pass etc complete with plaster finish, civil work for erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails, providing and fixing steel girders/RCC work having adequate strength for mounting and hoisting lift machine etc. complete as per specification no. LFT. · General: - Job includes entire procedure of obtaining all necessary erection permissions & ""License to Work the Lift"" from Electrical Inspector(Lifts) with submission to the Engineer In Charge. · The above rate includes Fully Comprehensive AMC for one year from the date of commissioning."				
	SITC of Duplex Lift control system for two nos. microprocessor/PLC based simplex lift controllers along with necessary software with programming and hardware e.g. logic board, necessary communication/control/data cabling laying in rigid PVC conduits/trunking etc. complete.				
	This item includes TFT panel.				
b	**LIFT WORK-NORMAL LIFT-1 & 2 - TOWER-A**				
1	SITC of Electric Traction Passenger Lift with · Rated capacity :- 14 Passenger/952Kg · Floors :- B1+B2+B3+G+26 floors (30 Stops/30 Landings) · Travel :- 1 to 107 mtrs · Location of Lift Machine:- MR/MRLS · Rated speed :- 2.5 mps VS · Car/Landing door clear opening of 1000 mm wide x 2250mm high · Clear Car size of 1600 mm wide x 1400 mm deep x 2450 mm high · Lift shaft available having clear size of 1950 mm wide x 3100 mm deep, 3000 mm Pit depth, 5200mm Overhead(From Terrace Level).	JOB	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"Doors type :- COPO/TOPO Doors with frame made from SS 304 grade solid(non-cladded) sheet of 1.5mm thick in hairline finish for car and all landing doors with SS door architraves/frames The lift doors shall have minimum 1 hour fire rating (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory). · Lift car enclosure made from SS 304 grade solid (non-cladded) sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc. The lift car interior design shall be done as per the directions of engineer in charge. · COP with SS face plate having metallic push buttons with Braille code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with / without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor. · LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings."				
	"Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port. The controller shall have necessary protections such as overcurrent, overvoltage, over speed, overheat for all devices including lift motor and travel direction protection, protection for phase loss at input or output etc. various operation modes such as maintenance, change direction by attendant, full load bypass, VIP call operation, self levelling operation, call cancel facility, auto return to home landing, fireman evacuation operation, earthquake operation, door open/close operation from COP etc. The system can record information for minimum 30 latest faults, with real-time clock management and handheld keypad with LCD screen for view and setting of parameters. The control panel duly wired with proper size & strength, copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class."				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"· ARD complete with necessary SMF VRLA batteries. · Fireman controller having fireman switch at fire Landing. · CCTV surveillance system comprises of 2 nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for min. 90 days with min. 20"" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge. · Lift Machine of Gearless PMSM of suitable kW with duty cycle of minimum 120 starts/hr (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory), with Traction pulley, OSG,electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves,suspension wire ropes/belts of adequate size & strength. · Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work."				
	"· Minor civil work such as alteration work if any necessary for erection of landing door frames and it's accessories e.g. sill, header, hole pass etc complete with plaster finish, civil work for erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails, providing and fixing steel girders/RCC work having adequate strength for mounting and hoisting lift machine etc. complete as per specification no. LFT. · General: - Job includes entire procedure of obtaining all necessary erection permissions & ""License to Work the Lift"" from Electrical Inspector(Lifts) with submission to the Engineer In Charge. · The above rate includes Fully Comprehensive AMC for one year from the date of commissioning."				
	SITC of Duplex Lift control system for two nos. microprocessor/PLC based simplex lift controllers along with necessary software with programming and hardware e.g. logic board, necessary communication/control/data cabling laying in rigid PVC conduits/trunking etc. complete.				
	This item includes TFT panel.				
c	**LIFT WORK-FIRE LIFT-1-TOWER-B**				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1	SITC of Electric Traction Fire Lift with · Rated capacity :- 12 Passenger/884Kg · Floors :- G+27 floors (28 Stops/28 Landings) · Travel :- 1 to 100 mtrs · Location of Lift Machine:- MR/MRLS · Rated speed :- 2.5 mps VS · Car/Landing door clear opening of 1000 mm wide x 2250mm high · Clear Car size of 1600 mm wide x 1600 mm deep x 2450 mm high · Lift shaft available having clear size of 1950 mm wide x 3100 mm deep, 3000 mm Pit depth, 5200mm Overhead(From Terrace Level).	JOB	1.00		
	"Doors type :- COPO/TOPO Doors with frame made from SS 304 grade solid(non-cladded) sheet of 1.5mm thick in hairline finish for car and all landing doors with SS door architraves/frames The lift doors shall have minimum 1 hour fire rating (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory). · Lift car enclosure made from SS 304 grade solid (non-cladded) sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc. The lift car interior design shall be done as per the directions of engineer in charge. · COP with SS face plate having metallic push buttons with Braille code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with / without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor. · LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings."				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port. The controller shall have necessary protections such as overcurrent, overvoltage, over speed, overheat for all devices including lift motor and travel direction protection, protection for phase loss at input or output etc. various operation modes such as maintenance, change direction by attendant, full load bypass, VIP call operation, self levelling operation, call cancel facility, auto return to home landing, fireman evacuation operation, earthquake operation, door open/close operation from COP etc. The system can record information for minimum 30 latest faults, with real-time clock management and handheld keypad with LCD screen for view and setting of parameters. The control panel duly wired with proper size & strength, copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class."				
	"· ARD complete with necessary SMF VRLA batteries. · Fireman controller having fireman switch at fire Landing. · CCTV surveillance system comprises of 2 nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for min. 90 days with min. 20"" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge. · Lift Machine of Gearless PMSM of suitable kW with duty cycle of minimum 120 starts/hr (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory), with Traction pulley, OSG,electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves,suspension wire ropes/belts of adequate size & strength. · Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work."				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"· Minor civil work such as alteration work if any necessary for erection of landing door frames and it's accessories e.g. sill, header, hole pass etc complete with plaster finish, civil work for erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails, providing and fixing steel girders/RCC work having adequate strength for mounting and hoisting lift machine etc. complete as per specification no. LFT. · General: - Job includes entire procedure of obtaining all necessary erection permissions & ""License to Work the Lift"" from Electrical Inspector(Lifts) with submission to the Engineer In Charge. · The above rate includes Fully Comprehensive AMC for one year from the date of commissioning."				
	SITC of Duplex Lift control system for two nos. microprocessor/PLC based simplex lift controllers along with necessary software with programming and hardware e.g. logic board, necessary communication / control /data cabling laying in rigid PVC conduits/trunking etc. complete.				
	This item includes TFT panel.				
d	**LIFT WORK-NORMAL LIFT-1 & 2 - TOWER-B**				
1	SITC of Electric Traction Passenger Lift with · Rated capacity :- 14 Passenger/952Kg · Floors :- B1+B2+B3+G+27 floors (31 Stops/31 Landings) · Travel :- 1 to 107 mtrs · Location of Lift Machine:- MR/MRLS · Rated speed :- 2.5 mps VS · Car/Landing door clear opening of 1000 mm wide x 2250mm high · Clear Car size of 1600 mm wide x 1400 mm deep x 2450 mm high · Lift shaft available having clear size of 1950 mm wide x 3100 mm deep, 3000 mm Pit depth, 5200mm Overhead(From Terrace Level).	JOB	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"Doors type :- COPO/TOPO Doors with frame made from SS 304 grade solid(non-cladded) sheet of 1.5mm thick in hairline finish for car and all landing doors with SS door architraves/frames The lift doors shall have minimum 1 hour fire rating (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory). · Lift car enclosure made from SS 304 grade solid (non-cladded) sheet of 1.5mm, thick with hairline finish with frame made from MS girders, bracing of adequate size with minimum safety factor of 5, with Toe Guard Apron, with necessary false ceiling with adequate LED lights, blower/fan for ventilation & SS chequered plate flooring, handrails, mirror, emergency light etc. The lift car interior design shall be done as per the directions of engineer in charge. · COP with SS face plate having metallic push buttons with Braille code & luminous indicator around button with FPI, scrolling UP/DN LED indicator & with / without attendant key switch, OWD with audio-visual alarm, VAS in Marathi, Hindi & English with intercom system with telephone instrument in Lift car, LMR & FCC/ground floor. · LOP with SS face plate having recess/surface push button box for all landings with scrolling UP/DN LED indicator having metallic push buttons with Braille code & luminous indicator around button with CPI, Lift car arrival & next travel direction audio-visual indication at all landings."				
	"Lift controller based on microprocessor/ PLC with VVVF Drive having closed loop control system, with IBMS compatible having necessary port. The controller shall have necessary protections such as overcurrent, overvoltage, over speed, overheat for all devices including lift motor and travel direction protection, protection for phase loss at input or output etc. various operation modes such as maintenance, change direction by attendant, full load bypass, VIP call operation, self levelling operation, call cancel facility, auto return to home landing, fireman evacuation operation, earthquake operation, door open/close operation from COP etc. The system can record information for minimum 30 latest faults, with real-time clock management and handheld keypad with LCD screen for view and setting of parameters. The control panel duly wired with proper size & strength, copper wire for power & control circuit, with provision for addition of floor/control card & allied accessories control panel having enclosure of 1.5mm CRCA sheet with powder coating with IP54 Protection class."				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	"· ARD complete with necessary SMF VRLA batteries. · Fireman controller having fireman switch at fire Landing. · CCTV surveillance system comprises of 2 nos minimum 2.0MP FHD IP based vandal proof Dome camera in lift car & in LMR/inside lift shaft top aimed on Lift machinery & controller with NVR kept in LMR/FCC with HDR data backup for min. 90 days with min. 20"" FHD TV monitor, to be kept in FCC/LMR as directed by Engineer In Charge. · Lift Machine of Gearless PMSM of suitable kW with duty cycle of minimum 120 starts/hr (with submission of necessary valid test certificate issued by NABL accredited or Independent test laboratory), with Traction pulley, OSG,electromagnetic brakes, entire assembly mounted on adequate size girders duly fixed on LMR floor/ shaft walls complete with main/diverter traction sheaves,suspension wire ropes/belts of adequate size & strength. · Other mechanical parts such as 'T' section adequate size guide rails for car & counter weight with brackets fasteners, counter weight frame with necessary blocks, buffers with necessary support arrangement, MS pit ladder etc. erected with necessary steel work."				
	"· Minor civil work such as alteration work if any necessary for erection of landing door frames and it's accessories e.g. sill, header, hole pass etc complete with plaster finish, civil work for erection buffers, erection of lift machinery, adequate size core cuts if required & scaffolding for erecting guide rails, providing and fixing steel girders/RCC work having adequate strength for mounting and hoisting lift machine etc. complete as per specification no. LFT. · General: - Job includes entire procedure of obtaining all necessary erection permissions & ""License to Work the Lift"" from Electrical Inspector(Lifts) with submission to the Engineer In Charge. · The above rate includes Fully Comprehensive AMC for one year from the date of commissioning."				
	SITC of Duplex Lift control system for two nos. microprocessor/PLC based simplex lift controllers along with necessary software with programming and hardware e.g. logic board, necessary communication/control/data cabling laying in rigid PVC conduits/trunking etc. complete.				
	This item includes TFT panel.				
	SECTION – C – LIFT WORKS	**Rs.**			
	SECTION D				
	DATA & TELEPHONE				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
a	**EPABX system**				
1	SITC of Digital / PCM / TDM EPABX System having SMT design, system with flexible universal slots. Inbuilt Auto attendant facility, Minimum 15 Nos. conference, Analog extension line, Calling GSM, E&M line, PRI / EI & VOIP program me through Analog telephone digital key from Ethernet, public address cord, shall have unrestricted simultaneous dialing facility, QSIG protocol on PRI, 95 / STD / ISD / Local-Locking, Class of Service, Quick Dial-Single Digit dialing of any two external number, Once only ring device, Boss/Secretary-Do not disturb Facility, Power Down Mode, Hot Line, Hot Outward Dialing, Day Night Mode, Auto Call Back, Barge-in, Call Pick Up & Call Transfer, Call transfer while Ringing with Voice Guide System, (DISA), Caller ID (CLI), CLI Base ECF, CLI Base routing Internet Ready Port, External Music Port, Call Budgeting, Call Most Calculation (ASMDR), DID Direct Inverse Dialing, External Music Input, Fax Homing, Global Directory Printing with following capacities. [E] No of Extension 180, No of Junctions 24, No of expandable ports : 512, Operators Console - 01 Compatible : ISDN and Networking.	JOB	1.00		
1	Supplying & erecting push button type telephone instrument having speaker phone Caller ID & speaker phone with one touch memory (min.6 nos.)& 99 memories with display system (a) Single line BEETEL/panasonic or equivalent make	JOB	176.00		
2	Supplying, erecting & commissioning MDF Box with 300 pairs made from min. 1.5mm thick MS sheet	Nos	1.00		
3	Supplying, erecting & commissioning MDF Box with 150 pairs made from min. 1.5mm thick MS sheet	Nos	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
4	Supplying, erecting & commissioning Krone Box with 10 pairs made from min. 1.5mm thick MS sheet	Nos	49.00		
5	Supplying, erecting & commissioning Krone Box with 4 pairs made from min. 1.5mm thick MS sheet	Nos	176.00		
6	Supplying & erecting 100 pair, 0.5mm dia, jelly filled unarmoured telephone copper cable with poly-al laminate moisture barrier, laid in provided PVC casing capping/conduit as per specification No. WG-TW	Mtr	150.00		
7	Supplying & erecting 10 pair, 0.5 mm dia. jelly filled armoured telephone copper cable with poly-al laminate moisture barrier, polythene sheathed, G.S.Tape armoured polythene jacketed having laid in provided trench as per specification No. WG-TW	Mtr	3332.00		
8	Supplying & erecting 4 pair telephone copper cable 0.5 mm dia. with high density polyethylene insulation, polyester taped, Nylon Rip Cord & grey colour sheathed with FR PVC, conforming to ITD specification S/WS 113C laid in provided PVC casing capping/conduit as per specification No. WG-TW	Mtr	1672.00		
9	Supply, Installation,Laying and commissioning of 25 mm GI Flexible Conduit Pipe(1 Mtr) from GI Conduit on surface of wall at Electrical Shaft to PVC Conduit Concealed in slab at Electrical Shaft with GI Gland for both side and other accessories such as to complete this job.	NOS	176.00		
b	**NETWORKING**				
1	Providing & erecting 6 core Dark Optical Fiber cable should be ISO/IEC- 11801 , Outer sheath FRLSZH Shall be 9µ, Single mode OS2 steel armoured cable as per ISO/IEC- 11801 Shall be able to meet Gigabit & 10 Gigabit Ethernet performance requirement specified by IEEE 802.3z (1000 Base-X) & IEEE 802.3ae (10GBase-X) Shall have water blocked construction to prevent water absorption and consequent damages. Water blocking with flooding Gel and water blocking yarn shall comply for IEC 60332-3 for flame retardant, IEC 61034- 2 for low smoke & IEC 60754-2 for toxicity & acidity. Tensile load should be 2700 Newton or higher Optical Parameters – SM, (a) Attenuation @ 1310nm(max) ≤ 0.34 dB/Km, (b) Attenuation @ 1550nm(max) ≤ 0.22 dB/Km with neccessory connections	Mtr	20178.00		
2	Supplying and fixing 6U Wall Mount Rack with standard accessories , PDU etc .suitable for 1nos NVR mounting with trays if required .	Nos	2.00		
3	Supplying and fixing 42U Floor Mount Rack with standard accessories , PDU etc .suitable for 1nos NVR mounting with trays if required .	Nos	2.00		
4	Supply & Laying of 32 mm PVC HMS Conduit with accessories such as PVC Circuler Box, PVC Bend, Coupler and other as required to complete this point for various services through Wall/Slab Surface etc.(Conduit From ELV Shaft to Each Flat ELV DB)	Mtr	3718.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
5	Supply, Installation,Laying and commissioning of 32 mm GI Flexible Conduit Pipe(1 Mtr) from GI Conduit on surface of wall at Electrical Shaft to PVC Conduit Concealed in slab at Electrical Shaft with GI Gland for both side and other accessories such as to complete this job.	Nos	173.00		
c	**VDP SYSTEM**				
1	Supply, Installation, testing and commissioning of Apartment Entrance Video Door Camera and Video Door phone screen of Colour Hands free 7" with built in intercom and security system. SOS emergency alarm. 12 tones. Access to 1 cameras (door camera attached to Porter Switchboard)	Nos	173.00		
	SECTION D – DATA & TELEPHONE WORKS	**Rs.**			
	TOTAL COST OF ELECTRICAL INTERNAL, EXTERNAL, LIFT , DATA & TELEPHONE WORKS (SECTION-A+B+C+D)	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	D) SECURITY SYSTEM WORKS – BMS, CCTV, BOOM BARRIER WORKS				
	SECTION A- IBMS SYSTEM				
a	**HT SIDE WORK AND LIASONING WORK**				
	COMPUTING HARDWARE				
1	SITC of BMS Server cum Client PC with Specifications as below; Intel Xenon Processor, 16GB RAM, 4GB Nvidia Graphics Card, 256 GB SSD & 2TB HDD with RAID-5 Configuration, Wired Key Board, Mouse 43" Inch LED Monitor Windows 10 OS, Antivirus, Microsoft Office A4 Colour Laser Printer.	Lot	1.00		
	Make: Dell/Samsung/HP				
b	**IBMS SYSTEM-BMS SOFTWARE**				
	SITC of BMS Software along with respective modules as below;				
1	BMS Software With latest Version capable of Control & Monitoring all BMS Data having a Multi-Protocol Compatible Front End which can support Bacnet ONLY Natively. The BMS Software should be Web Enabled and must be Capable of Integrating to all Third Party Applications as mentioned below. All Licenses and Points to be Considered as per IO Summary and as per the requirement of Third Party Application Integration	No	1.00		
	BMS Software shall have all the features as listed below; It should be based upon NIAGARA-4 platform, no proprietary software will be accepted. Unlimited Web Clients and shall be vivewable from any computing or mobile device. Tamper Proof Inbuilt Data Base. Industry standard open communication protocols such as BACnet, MODBUS,SNMP,KNX, etc. shall be accepted. Software shall also have only one programming software for all the type of controllers and programming shall be possible without any dongle or any kind of accessories. The web-based interface must conform to the B-OWS BACnet device profile. Real Time Trending 3D Graphics Software Capacity 10,000 Points and expandale upto 1 Lakh Points				
	Enegry Monitoring Module - 1 No				
	Tenant Billing Module-1 No				
	Email & SMS Alert Notification Module with suitable hardware gateway-1 No				
	Reporting Module-1 No				
	Control Module-1 No				
	Make: Distech Controls/Siemens/JCI				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
c	**IBMS SYSTEM-DDC PANEL**				
1	SITC of Building Automation BACNET IP Controllers in accordance with required input/output as mentioned in IO Summary				
2	DDC Controllers shall have all the features as listed below; True IP based, Open protocol based Building Automation Controllers with 32 Bit Processor, Onboard Two RJ-45 Ports acting as switch and One RS-485 Port for MODBUS/BACnet MS/TP Integration. The controller should have in-built RTC. The Controller shall be capable of peer to peer communication without help of system interface controller or PC. The Controller shall be able to perform stand alone operation with inbuilt memory of min. 4GB, Controller to have Wireless enable facility, USB port for controller backup and firmware upgardation,16 bit input resolution and 10 bit output resolution minimum, Hot swappable IO modules, Expandable up to 320 IO points on single controller CPU. The Control Panel with lockable MS mounting cabinets duly powder coated connector strip, internal wiring and space to house controller & relays, connector strip current transformer, MCB, internal wiring. Controller to be equipped with Web Server with HTML-5 Graphic Pages for Viewing on any Smart Device without graphic resizing. NO LONWork or BACnet MS/TP or MODBUS based DDC controller to be considered. ALL CONTROLLERS SHALL BE BTL LISTED WITH B-BC PROFILE. All the DDC Panels within the building shall be IP-55 and Outside the building and on the roof shall be IP-67				
	Total Number of DDC Panels shall not be less than 19 Nos	Lot	1.00		
	Make: Distech Controls/Siemens/JCI				
d	**IBMS SYSTEM-BMS NETWORK**				
1	Active BMS Networking as per the project requirement (Consist of Network Switches, Racks, Patch Cords, Patch Panels etc.)	Lot	1.00		
	Make: DLINK/Netgear/Cisco				
e	**IBMS SYSTEM-FIELD DEVICES**				
1	Carbon Monooxide (CO) Transmitters with range of 0-200 PPM, +/- 2% accuarcy, UV Resistant and Rugged Housing, 4-20 mA Output Signal, CE Approved	Nos	36.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
2	Differentail Pressure Transmitter for Air, +/- 1% accuracy,4-20 mA Output Signal, NEMA 4X Housing, CE Approved	Nos	13.00		
3	Differentail Pressure Switch for Filters	Nos	20.00		
4	Duct Type Temperature Transmitter with PT1000 RTD, +/- 0.5 Deg Accuracy, 304 SS Probe, NEMA 4X Housing, CE Approved	Nos	4.00		
5	Duct Type Temp+RH Transmitter with Capacitance Polymer Sensing element with 3% Accuaracy for RH and 0.5 Deg for Temp., NEMA 4X Housing and CE Approved	Nos	4.00		
6	Water Level Switch for Tank Height Upto 5 Meters	Nos	10.00		
7	Diesel Level Transmitter for Diesel Tank Height Upto 3 Meters	Nos	8.00		
	Make: Distech Controls/Siemens/Dwyer/Greystone/Flipro/Techtrol				
f	**IBMS SYSTEM-MISCELLANEOUS**				
	Cabels				
1	2 Core, 1 Sq. mm Multistarnded Annealed Copper Conductor, PVC Insulation, PVC Sheath,Shielded Drain Wire, FRLS, Armoured Signal Cable Make: Caliplast/Varsha/Polycab	RM	25000.00		
2	3 Core, 1.5 Sq. mm Multistarnded Annealed Copper Conductor, PVC Insulation, PVC Sheath,Shielded Drain Wire, FRLS, Armoured Cable Power Cable Make: Caliplast/Varsha/Polycab	RM	500.00		
3	CAT-6 Communication FRLS Armoured Cables Make: Caliplast/Varsha/Polycab/DLINK	RM	915.00		
4	GI Hot Dip Galvanised Perforated Cable Tray as below with all the necessary hardware and accessories to complete the installtion works as per site requirement. Make: Shruti/Elcon/Profab				
5	300 x 75 x 1.6 mm	RM	625.00		
6	200 x 75 x 1.6 mm	RM	1250.00		
7	100 x 75 x 1.6 mm	RM	2500.00		
g	**IBMS SYSTEM-ENGINEERING & DOCUMENTATION**				
1	Design, Drawing, Engineering, Testing, Commissioning, Documentation, Training and Handover	Lot	1		
	SECTION A- TOTAL COST OF IBMS SYSTEM	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	SECTION B- BOOM BARRIER SYSTEM				
	BOOM BARRIER SYSTEM				
	Supply,Installation,Testing & Commissioning following Automatic RFID based Boom Barrier Straight - of Long Vehicle Barrier for cars(6mtr) and Short Vehicle Barrier for two-wheeler (2 MTR), Casing is made up of GI & Boom of Al with CE certified as per European Standards EN 61000-6-1 -2007 /2008 having protection Grade of IP 55. Which inlucdes Photo cell Sensor, Boom Stand, Manual Push Button, Rmote Control, Vehical Loop detector, Traffic Light, LED in Arm, UHF long Reader, UHF windsheild Tag, UHF Hard Card, Two Door Controller, RFID Reader softerware and other accessories such as to complete this JOB.				
1	Boom Barrier With upto 6mtrs Boom With LED Strip and Remote	Nos	2.00		
2	Boom Barrier With upto 2mtrs Boom With LED Strip and Remote	Nos	2.00		
3	Loop Detector	Nos	4.00		
4	Photo Cell	Nos	4.00		
5	Manual Push Button	Nos	4.00		
6	UHF Long Range Reader	Nos	4.00		
7	UHF Windshield Tag	Nos	175.00		
8	Two Door Controller	Nos	4.00		
9	RFID Reader Software	Nos	4.00		
10	Traffic Light	Nos	4.00		
	SECTION B- TOTAL COST OF BOOM BARRIER SYSTEM	**Rs.**			
	SECTION C- C.C.T.V. SYSTEM				
a	**S.I.T.C of IP CCTV system as under :(Honeywell/Bosch/Axis-(The equipment installed should be license free.)**				
1	Supply, installation, testing and commissioning of indoor type, 5 MP & above Smart IR, Progressive scan CMOS Dome Camera with 1920(H) x 1080(v) Effective pixels, Auto/Manual Electronic Shutter, 1/3(4)~1/10000s, 25fps@2 MP, 0.01 Lux/F2.1(Color), 0 Lux/F1.4(IR on), IR LED length - 30 m , CMOS sensor provide wide range,IR LEDs provide up to 30 of illumination depending on scene reflectance onvif protocal and other required accessories to complete this job.(The equipment installed should be license free.)	Nos	77.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
2	Supply, installation , testing and commissioning of outdoor type , 5 MP & above Smart IR, Progressive Scan CMOS Bullet Camera with 1920(H)*1080(V) Effective Pixels, 0.01 Lux @(F2.1, AGC ON), 0 Lux With IR-30 MTR, cmos sencer provide wide range,IR LEDs provide up to 100 ft (30 m) of illumination depending on scene reflectance,Waterproof (IP66) and and other required accessories to complete this job(The equipment installed should be license free).	Nos	76.00		
3	Supply, Installation, Testing and Commissioninng of 6 MP IP PTZ camera,10 X Optical Zoom,1/1.8" CMOS Image sensor,Aperture / focal length-F1.6~F4.8, f=6~180mm,Angle of view(H)-60.34° (W) ~ 2.2° (T),Min work distance-0.01m (W ide) ~ 1.5m (Tele),S/N Ratio->62dB,Shutter-Auto, Manual (adjustment range: 1/1s-1/32000s),Day/Night Switch-Auto/Manual,Sensitivity -Color mode: 0.01 lux @ F1.5 (AGC ON);(The equipment installed should be license free.)	Nos	3.00		
4	Supply, installation , testing and commissioning of 64CH NVR, Realtime Recording Resolution (200 Channels),Realtime Local Playback,H.264 High profile support 18 kinds of PTZ protocols,ONVIF 2.0,1 channel Audio Input and Output,Video/Audio compression - Minimum H.265 or better /G.711 respectively Image resolution - 1080 P (2 MP) or higher, Real time recording @ 25 fps per channel in all channels with selectable fps simultaneously Compatibility - Onvif registered for relevant profiles Power supply - AC 100 ~ 240 V, 50/60 Hz Playback Options - Play, Digital Zoom (any size), Pause, Rewind, Slow Motion, shift to next file, shift to previous file, one click previous camera, one click next camera, Full Screen Mode, Replay, Backup selection, Fast forward, Shuffling. (The equipment installed should be license free.)	Nos	4.00		
5	SITC of 16 TB WD surveillance Hard Disk Drive (SATA III) - Video Surveillance Series (Rated for 24/7 operation) 32 ~ 64 MB cache, 3 Mb – 6 Mb per second data transfer rate, Spindle speed 7200 RPM or more	Nos	30.00		
6	Supply, installation , testing and commissioning of 16 Port(24 x 10/100/1000BASE-T PoE ports) Manageable POE Network GIGA Switch with 4 x Gigabit RJ45/SFP Combo ports, Up link OFC swichting ,Transceiver,LIU's Advanced L2 switching and security features L2+ Static Routing Optional “standard mode” or “surveillance mode” management user interface 193 W PoE budget	Nos	8.00		
7	Supply, installation , testing and commissioning of 24 Port(24 x 10/100/1000BASE-T PoE ports) Manageable POE Network GIGA Switch with 4 x Gigabit RJ45/SFP Combo ports, Up link OFC swichting ,Transceiver,LIU's Advanced L2 switching and security features L2+ Static Routing Optional “standard mode” or “surveillance mode” management user interface 193 W PoE budget	Nos	4.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
8	Supply, installation , testing and commissioning of Patch Panel, fully loaded with 16 nos. UTP ports for PCB based IO Jacks (RJ45, TIA-568C Category-6, Installation and Termination of all 16 nos. Catergory-6 UTP , unloaded with individually replaceable 24 nos. Category-6 I/O Jacks complying with TIA-568.C.2, as	Nos	8.00		
9	Supply, installation , testing and commissioning of Patch Panel, fully loaded with 24 nos. UTP ports for PCB based IO Jacks (RJ45, TIA-568C Category-6, Installation and Termination of all 24 nos. Catergory-6 UTP , unloaded with individually replaceable 24 nos. Category-6 I/O Jacks complying with TIA-568.C.2, as	Nos	4.00		
10	Supply, installation , testing and commissioning of RJ 45 CONNECTORS	Nos	224.00		
11	Supply, installation , testing and commissioning of 1mtrs Cat6 Patch Cords	Nos	224.00		
12	Supply, installation , testing and commissioning of 3 mtrs Cat6 Patch Cords	Nos	40.00		
13	Supply & laying of of CAT 6 cable in Provided PVC/GI conduits with Mutual Capacitance @ 300 MHz - 5.60nF/100 mtrs max. DC resistance @ 300MHz - 9.38 ohm/100 mtrs max at 20 deg C Impedance at 300 MHz - 100+/- 15 ohm Insulation - High density Polyethylene Sheath - Fire Retardant PVC compound (FRPVC) Standards - TIA/EIA 568 B.2-1 and all accessories	Mtr	6525.00		
14	Providing & erecting 6 core Single mode Optical Fiber cable should be ISO/IEC- 11801 , Outer sheath FRLSZH Shall be 9µ, Single mode OS2 steel armoured cable as per ISO/IEC- 11801 Shall be able to meet Gigabit & 10 Gigabit Ethernet performance requirement specified by IEEE 802.3z (1000 Base-X) & IEEE 802.3ae (10GBase-X) Shall have water blocked construction to prevent water absorption and consequent damages. Water blocking with flooding Gel and water blocking yarn shall comply for IEC 60332-3 for flame retardant, IEC 61034- 2 for low smoke & IEC 60754-2 for toxicity & acidity. Tensile load should be 2700 Newton or higher Optical Parameters – SM, (a) Attenuation @ 1310nm(max) ≤ 0.34 dB/Km, (b) Attenuation @ 1550nm(max) ≤ 0.22 dB/Km with neccessory connections	Mtr	430.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
15	Providing & erecting 12 core Single mode Optical Fiber cable should be ISO/IEC- 11801 , Outer sheath FRLSZH Shall be 9µ, Single mode OS2 steel armoured cable as per ISO/IEC- 11801 Shall be able to meet Gigabit & 10 Gigabit Ethernet performance requirement specified by IEEE 802.3z (1000 Base-X) & IEEE 802.3ae (10GBase-X) Shall have water blocked construction to prevent water absorption and consequent damages. Water blocking with flooding Gel and water blocking yarn shall comply for IEC 60332-3 for flame retardant, IEC 61034- 2 for low smoke & IEC 60754-2 for toxicity & acidity. Tensile load should be 2700 Newton or higher Optical Parameters – SM, (a) Attenuation @ 1310nm(max) ≤ 0.34 dB/Km, (b) Attenuation @ 1550nm(max) ≤ 0.22 dB/Km with neccessory connections	Mtr	200.00		
16	Supply, installation , testing and commissioning of 55" FHD LED TV/Monitor designed for continous duty with Anti-glare Surveillance grade 24X7 working LED with TCO 03 or higher certification. Prefreably UHD Viewing angle - 140 degree H.,130 degree V Warranty - 05 years.	Nos	6.00		
17	Supplying and fixing 4U Wall Mount Rack with standard accessories , PDU etc .suitable for 1nos NVR mounting with trays if required .	Nos	2.00		
18	Supplying and fixing 6U Wall Mount Rack with standard accessories , PDU etc .suitable for 1nos NVR mounting with trays if required with Wall mount Dimension: 630 mm X 500 mm depth Power strip: 6 socket power supply: 1 no. Equipment Mounting Tray: 1 No Mounting screws & studs: 1 pack Transparent front door with Lock, Fan tray with 2 Fans, Provision for cable routing at the bottom of the rack.	Nos	12.00		
19	Supplying and fixing 9U Wall Mount Rack with standard accessories , PDU etc .suitable for 1nos NVR mounting with trays if required .	Nos	2.00		
20	Supplying, Layiing & fixing of 25 MM PVC MMS Conduit For Cat-6 Cable	Nos	247.00		
21	Supplying, Layiing & fixing of 25 MM GI Conduit For Cat-6 Cable	Nos	6278.00		
	SECTION C- TOTAL COST OF C.C.T.V. SYSTEM				
	TOTAL COST OF SECURITY SYSTEM WORKS – BMS, CCTV, BOOM BARRIER WORKS , (SECTION A+B+C)	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	E) GARBAGE CHUTE WORK				
	GARBAGE CHUTE WORK:				
	Note-The work shall be done as per the approved shop drawing (to be prepared by contractor), specifications, sample approved and as directed by the Architect/Client.However for general guidance purpose the attached drawing prepared by PMC shall be followed. The rate shall be for execution of complete item inclusive of all material, labour, wastages, necessary tools & tackles, adhesives consumable hardware & required SS 304 grade hardware/accessories of approved thickness make for all floors, all heights, all levels and all places within campus. Contractor shall do all the needful and shall fulfill Architect's design intent. No additional claims will be entertained for this. The unit shall be manufactured in parts and these parts shall be assembled at site. Agency has to comply 3rd Party Inspection, report & approval of Shop Drawings, etc. 2) The Gauge of Garbage Chute SS Pieces shall be Min. 1.5 mm thick as per the design & Instruction of Architect/Engineer Incharge.				
	Design, Supply, Fabrication, Installation, Testing & Commisioning of Garbage Chute with centralised interlocking garbage collection system as per specification and schematic diagram.				
1	SITC of SS Throat piece of 500 mm dia and 1200 mm high having Grade SS304 for wet chute & dry chute	No	102.00		
2	SITC of SS Intake Hopper, Interlocking- 500 x 500 mm with adequate opening. Fire rating 90 minutes. (i.e.-Max. temperature rise in 30 minutes shall be 250 Faranhit). Controllers and indicators all as per IS Approved for wet & dry chute	No	102.00		
3	SITC of SS Intermediate piece 500 mm dia having Grade SS304 for wet & dry chute	Mtr	256.00		
4	SITC of SS Piece at Discharge End of 500 mm dia having Grade SS304 for wet & dry chutes	Mtr	5.00		
5	SITC of SS Discharge Piece 500 mm dia and required height having Grade SS304 for Wet & Dry Chute	No	4.00		
6	Providing & fixing Garbage Chute Door MS iron sheet heavy duty 16SGW, Size 600 X600mm (2 hours Fire Rated)	No	4.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
7	SITC of Santation Unit of 1.5" Nominal Bore GI Pipe as per design for Dry & Wet Chute	No	4.00		
8	SITC of SS Exhaust piece having Grade SS304 of adequate dia /size as per design for Dry and Wet Chute	No	4.00		
9	ISITC of Interlocking control panel of adequate pattern, as per drawing and design etc. for dry and wet chute complete	No	4.00		
10	SITC of Odour control unit of adequate pattern, as per drawing and design etc. for dry and wet chute complete	No	4.00		
11	SITC of Fire sprinkler 1/2" BSP as per approved design for dry and wet chute	No	54.00		
12	SITC of Brush cleaning system of adequate pattem, as per drawing and design etc. for dry and wet chute complete.	No	4.00		
13	Installation/Fixing of Wet & Dry Chute using MS Channels/Angles including epoxy paint etc complete of approved shade using HILTI Anchor Fasteners of adequete size in the Garbage Shaft from Basement 1 to Terrace Floor as approved by Engineer Incharge.	No	114.00		
	TOTAL COST OF GARBAGE CHUTE WORK	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	F) PUZZLE CAR PARKING 96 NO. CAR				
	Preamble:				
1	The tender rates shall hold good for all works of every section at all levels ,leads and heights including multiple staging/H Type scaffolding wherever required, equipment's and machinery, etc. complete. Nothing extra shall be payable unless or otherwise specified				
2	Contractor shall ensure for safety norms, housekeeping, confirming all directions/norms as per Municipal guidelines , NGT & DIAL which shall be carried out as directed by Engineer -in Charge at no additional cost. Contractor needs to submit Police verification report of all their workers prior to executing the work at site.				
3	Prior to submission of the bid the Contractor must visit site and acquaint with prevailing site conditions, nothing shall be paid extra on this account. If any cost arises due to non understanding the site conditions will not be entertained for extra payment on this regard.				
4	Water and power required to complete the assigned scope of work shall be the responsibility of Contractor and nothing extra shall be paid in this regard.				
5	The primary responsibility of assuring quality, safety of manpower and machinery and quality of works, taking up of Work front in coordination with other work packages lies with the contractor. Engineer -in Charge at his sole discretion may direct change the stages/location of execution as and when required in the overall interest of the project and in coordination with other work packages.				
6	The quantities in this BOQ are provisional. They do not purport to or represent the final quantities, classes or kinds of work eventually required to be done. Quantities can vary up to any limit during actual execution of work as per GFC drawings.				
7	Rates shall include cost of materials, labour, supervision, plants & equipment’s taxes, duties and all necessary apparent services required for complete execution, and commissioning in accordance with relevant drawings and specification. The Client decision on interpretation of bill of quantities and its preamble shall be final and binding on the contractor.				
8	Rates quoted shall be firm and shall not be subject to any price variations except as specifically provided in the contract.				
9	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.				
10	The bidders shall take into account all leads and lifts involved in transport of materials to site, erection and hire of Tools & Plants, Sheds for protection of materials including proper stacking , wastage, breakage, sundries etc. required to complete the works in all respect while quoting the rates for various sub heads of the work. Similarly all taxes including Octroi, Toll or GST, 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 bids. Any claim in these matters whatsoever in this respect shall not be entertained				
11	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				
12	The Rates shall include for cleaning of all fixtures, equipments and piping including the flushing of all pipe works to remove any foreign matter. This shall be carried out in phases as the work progress.				
13	All drilling, cutting of walls or other elements of building for completion and proper installation . Manual drilling and cutting shall not be permitted. Beams, colounm and other principal structural members shall not drilled or cut unless prior written permission has been granted and signed by the owner/Owners representative. If such drilling and cutting are made on finished surfaces, any marring of the surfaces shall be made good by the contractor at his own cost.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1.00	Supply, installation, testing and commissioning of 3 Level Pit Type Puzzle Car Parking System with Hydraulic based Technology accommodating 8 Cars per module with car carrying capacity of minimum 2000 kg on platform and Car Dimension of 5000 mm length x 2000 mm height (SUV) at Ground, First & Pit Floor level, with average retrieval/parking time not more than 90 seconds. Power pack motor capacity of required capacity with 3- phase system, platform thickness 1.5MM, Entry plate and Side Member thickness 3MM. Manufacturing standard; all welding should be TUV certified. One power Pack connected to 1 Module of Pit Puzzle Parking System.Cost shall be including SITC of GI race way with covers of 1.5 mm thickness to cover all hydraulic pipes distribution on floors and wall.	Car Space	96.00		
	Having following safety features as				
	1. Electro-magnet (Solenoid) with mechanical locking arrangement on Rear side for 1F & Pit pallet				
	2. Platform arrangement with support structure.				
	3. Sensor at the Entry				
	4. All Hydraulic/Electrical pipe will be covered with GI Channel pipe cover.				
	5. Hydraulic NRV value should be placed at ground level for easy manual rescue of cars.				
	6.Syncronised lifting through Roller Chain				
	7. Tyre stopper				
	8. Various Platform Width as per site condition i.e. 1900MM to 2200MM				
	10. Pre galvanized item: Platform Side Member, Platform,Pipe cover				
	11. Key operation station with emergency stop button and supporting stand.				
	TOTAL COST OF PUZZLE CAR PARKING 96 NO. CAR	**Rs.**			

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	G) HVAC WORKS				
1	Plate Heat Exchanger 440TR Heat exchanger shall be SS 316 plate type (PHE) designed with factory fitted insulation jacket on PHE, built, and marked in full compliance to AHRI-400 Liquid to liquid plate type heat exchangers. The plate and frame heat exchanger shall be ASME stamped. Adequate numbers of heat exchangers shall be installed in ETS depending on the maximum designed cooling capacity by the developer. The PHE shall withstand the maximum test pressure of 1.5 times the design pressure or as per schedule on either hot or cold side of PHE. PHE Units to be factory tested in accordance with applicable testing code. A S.S/ BRASS Y-strainer 0.6 mm to 0.8 mm perforated shall be provided at the inlet of heat exchanger to keep the heat exchanger clean and clear. WATER FLOW - 660 usgpm. Primary side (In /Out) - 5 / 14 Deg. Secondary side (In /Out) - 15 / 6 Deg.	Nos.	3.00		
2	The chilled water pumps shall be of centrifugal back pull-out type with VFD drive, split casing. Design water flow rates is 330 USGPM each pump. Motor shall be energy efficient, totally enclosed, and fan-cooled, with IP 55 protection class- F insulation. Motor shall be specially designed for quiet operation and its speed shall not exceed 1440/2900 rpm. The motor rating shall be such as to ensure none overloading of the motor throughout its capacity range. Motor shall be suitable for 415±10% volts, 3 phases, 50 cycles AC, power supply. FLOW - 330 USGPM HEAD - 45 Mtrs. RPM - 1400/2900 rpm	Nos.	5.00		
3	Differential pressure sensor for chilled water Pumps	Nos.	1.00		
4	Differential Pressure Transmitter (1 Nos to the farthest AHU/FCU)	Nos.	1.00		
5	EXPANSION TANK with pressurization unit pumps (1W +1S) & Air separator . 300 Liter capacity tank with insulation, drain valve, Isolation valve and Pressure Guage & control panel completely on skids with all necessary valves & manifolds. For Air separator -200 mm dia with complete accessories.	Nos.	1.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
6	INSULATED CHILLED WATER PIPING (Nitrile rubber insulation) :- Supply& fixing in position PN16 rated (HDPE) EN ISO 15494 of Outer Diameter.Pipes cut to required length and installed with all Electrofusion joints. PreInsulated with nitrile rubber wih Nylonn Cloth. 0.026 W/m.K. Thickness of 25m for dia110 and below, 32mm for above dia110mm. The quote shall include necesseary supporting arrangement and Electrofusion fittings like elbow, 'T', reducer, flanges, GI bolts, flanges, gasket etc. including fixing the pipe with GI clamps at 1.00m spacing where ceiling-hung. This includes the cost of cutting, chases making holes and making good the same including testing of joints complete as per direction of Engineer in charge.				
a	Pipe PE100 black SDR11 d315x28.6x5000mm	RMT	225.00		
b	Pipe PE100 black SDR11 d280x28.6x5000mm	RMT	33.00		
c	Pipe PE100 black SDR11 d225x22.7x5000mm	RMT	116.00		
d	Pipe PE100 black SDR11 d160x16.4x5000mm	RMT	218.00		
e	Pipe PE100 black SDR11 d140x14.6x5000mm	RMT	56.00		
f	Pipe PE100 black SDR11 d110x11.4x5000mm	RMT	32.00		
g	Pipe PE100 black SDR11 d90x8.2x5000mm	RMT	17.00		
h	Pipe PE100 black SDR11 d75x6.8/5000mm	RMT	24.00		
i	Pipe PE100 black SDR11 d63x5.8/5000mm	RMT	110.00		
j	Pipe PE100 black SDR11 d50x4.6x5000mm	RMT	138.00		
k	Pipe PE100 black SDR11 d40x3.7x5000mm	RMT	8666.00		
l	Pipe PE100 black SDR11 d32x3.0/5000mm	RMT	3207.00		
	VALVES AND FITTINGS : Supply, Installation, Testing & Commissioning of Chilled Water Circuit Valves & Gauges with insulation insulated with insulation of 20 mm thick closed cell nitrile rubber class O. Thermal Conductivity of insulation shall be less than 0.036 W/(mK) The insulation shall be covered with 1 mm thick polythene sheets double wrapped and held with PVC tape and then covered with 26 Gauge Aluminum cladding.				
	Fittings				
7	**Coupler**				
a	Coupler ELGEF Plus PE100 SDR11 d280	Nos	150.00		
b	Coupler ELGEF Plus PE100 SDR11 d225	Nos	166.00		
c	Coupler E+ PE100 SDR11 PN16 d160	Nos	128.00		
d	Coupler ELGEF Plus PE100 SDR11 d140	Nos	4.00		
e	Coupler E+ PE100 SDR11 PN16 d110	Nos	4.00		
f	Coupler E+ PE100 SDR11 PN16 d90	Nos	8.00		
g	Coupler ELGEF Plus PE100 SDR11 d75	Nos	8.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
h	Coupler E+ PE100 SDR11 d63	Nos	1062.00		
i	Coupler E+ PE100 SDR11 d50	Nos	2.00		
j	Coupler E+ PE100 SDR11 PN16 d40	Nos	3467.00		
k	Coupler E+ PE100 SDR11 d32	Nos	1283.00		
8	**Elbow**				
a	Elbow 90° E+ PE100 SDR11 PN16 d280	Nos	12.00		
b	Elbow 90° E+ PE100 SDR11 PN16 d225	Nos	16.00		
c	Elbow 90° E+ PE100 SDR11 PN16 d160	Nos	8.00		
d	Elbow 90° E+ PE100 SDR11 PN16 d63	Nos	746.00		
e	Elbow 90° E+ PE100 SDR11 PN16 d32	Nos	600.00		
9	**Equal Tee**				
a	T 90° Equal E+ PE100 SDR11 PN16 d200	Nos	23.00		
b	T 90° Equal E+ PE100 SDR11 PN16 d160	Nos	15.00		
c	T 90° Equal E+ PE100 SDR11 PN16 d63	Nos	432.00		
10	**Branch Saddle**				
a	Spig Saddle E+ PE100 SDR11 PN16 d280-d63	Nos	8.00		
b	Spig Saddle E+ PE100 SDR11 PN16 d225-d63	Nos	12.00		
c	Spig Saddle E+ PE100 SDR11 PN16 d160-d32	Nos	10.00		
d	Spig Saddle E+ PE100 SDR11 PN16 d140-d63	Nos	4.00		
e	Spig Saddle E+ PE100 SDR11 PN16 d110-d63	Nos	6.00		
f	Spig Saddle E+ PE100 SDR11 PN16 d90-d63	Nos	10.00		
g	Spig Saddle E+ PE100 SDR11 PN16 d75-d63	Nos	10.00		
h	Spig Saddle E+ PE100 SDR11 PN16 d75-d32	Nos	2.00		
i	ML Transition Saddle d225X½" SS Top Load	Nos	24.00		
j	ML Transition Saddle d160X½" SS Top Load	Nos	16.00		
k	ML Transition Saddle d63X½" SS Top Load	Nos	92.00		
11	**Reducers**				
a	Reducer LS PE100 SDR11 PN16 d225-d160	Nos	8.00		
b	Reducer LS PE100 SDR11 PN16 d63-d40	Nos	8.00		
c	Reducer LS PE100 SDR11 PN16 d63-d50	Nos	2.00		
d	Reducer LS PE100 SDR11 PN16 d40-d32	Nos	602.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
12	**Transition Coupler**				
	Female Threaded Adaptor with socket in PE100 and SS304 Female thread end of size d32 x 1/2"	Nos	686.00		
13	**Flange Adaptor**				
a	Fl Adapter LS PE100 SDR11 PN16 d280	Nos	40.00		
b	Fl Adapter LS PE100 SDR11 PN16 d225	Nos	72.00		
c	Fl Adapter LS PE100 SDR11 PN16 d160	Nos	72.00		
14	**Backing Flanges**				
	Supplying, fixing, testing and commissioning of following Backing flanges shall be designed according to EN ISO 15494, in a thermo plastic-oriented design, consisting of 100% glass fibre reinforced polypropylene, PP-GF30, graphite black and UV stabilized.				
a	Back Flange PP-V PPGF PN16 d225DN200	Nos	72.00		
b	Back Flange PP-V PPGF PN16 d160DN150	Nos	72.00		
	Valves				
15	Butterfly Valves with extended neck/spindle, matching flanges, hot dipped galvanized bolts and nuts including insulation. Valves should be rated for PN 16 - pressure rating.				
a	Motorised Butterfly Valve				
	250mm dia (Gear Type)	Nos.	6.00		
b	250 mm dia (Gear Type)	Nos.	12.00		
c	200 mm dia (Gear Type) DSR-16.7.1.1	Nos.	9.00		
d	150 mm dia DSR-16.7.1.2	Nos.	14.00		
e	50 mm dia DSR-16.7.1.7	Nos.	5.00		
16	**Ball Valve**				
a	50 mm dia DSR-16.7.1.7	Nos.	36.00		
b	40 mm dia DSR-16.7.1.8	Nos.	50.00		
c	32 mm dia	Nos.	362.00		
d	25 mm dia	Nos.	11.00		
17	**Y Strainers**				
a	250 mm dia	Nos.	3.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
b	150 mm dia DSR-16.7.4.2	Nos.	5.00		
18	**Non Return Valve (Dual Plate)**				
a	250mm dia	Nos.	3.00		
b	150mm dia DSR-16.7.3.2	Nos.	5.00		
19	**Supply of Manual Balancing Valve with pressure measuring ports as per specification**				
a	250 mm dia	Nos.	6.00		
b	200 mm dia DSR-16.7.2.1	Nos.	1.00		
c	80mm dia DSR-16.7.2.5	Nos.	1.00		
d	50mm dia DSR-16.7.2.7	Nos.	18.00		
e	40mm dia DSR-16.7.2.8	Nos.	25.00		
f	32 mm dia	Nos.	7.00		
g	25mm dia	Nos.	4.00		
20	**Anti Vibration Bellow**				
a	250mm	Nos.	12.00		
b	150mm	Nos.	10.00		
21	**Isolation Valves**				
	300mm dia	Nos.	2.00		
22	Pressure Gauges: Pressure gauges with syphon in brass with cr plating & niddle valve with nitrile rubber insulation tubing as per specification. (DSR-16.8)	Nos.	130.00		
23	**Temperature Gauges : Temperature Guage with thermowell (DSR-16.9)**	Nos.	130.00		
24	Auto purge Air Release valve -				
	25mm dia	Nos.	6.00		
25	Supply, Installation, Testing and Commissioning of Ceiling Suspended Air Handling Units, 25 mm Thick Double skin type, suitable for Outdoor installation, Pre EU-4 Filter, CHW Coil, UV Lamps, Backward curved centrifugal fans blow through type Blower, VFD compatible IE3 efficient Motors, Post EU-8 Filter, Vibration Isolators, Opposed blade type Dampers at Supply / Return /Fresh / Relief Air, Fire rated flexible connections etc. (Fan Motor should be Flame Proof and Fan to be Spark resistant construction.) AHU ESP: 20 mm				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	suitable as per specifications and for following capacities:				
a	**AHU : Ceiling Suspended - 5.5 TR**	Nos.	1.00		
	: Dehumidified CFM - 2000, FA CFM - 300 / Flow - 8.25 USGPM				
	: Coil In 17.4 deg.C DB / 14.07 deg.C WB				
	: Coil Out 8.4 deg.C DB / 7.9 deg.C WB				
b	**AHU : Ceiling Suspended - 6 TR**	Nos.	3.00		
	: Dehumidified CFM - 2400, FA CFM - 360 / Flow -9 USGPM				
	: Coil In 17.4 deg.C DB / 14.07 deg.C WB				
	: Coil Out 8.4 deg.C DB / 7.9 deg.C WB				
26	Supply Installation, Testing and Commissioning of High Wall type Fan Coil Unit, Factory Made at 1.5GPM/TR and 9deg. C Delta T				
a	1.25 TR	Nos.	166.00		
b	1.5 TR	Nos.	218.00		
c	1.8 TR	Nos.	86.00		
d	2.0 TR	Nos.	132.00		
27	SITC of 50 CFM Propeller wall mounted toilet exhaust air fans with Back Draft damper	Nos.	384.00		
28	SITC of 200 CFM wall mounted Propeller exhaust air fans	Nos.	174.00		
29	SITC of 500 CFM wall mounted Propeller exhaust air fans	Nos.	3.00		
30	SITC of 800 CFM wall mounted Propeller exhaust air fans	Nos.	2.00		
31	SITC of 1000 CFM wall mounted Propeller exhaust air fans	Nos.	2.00		
32	SITC of 1200 CFM wall mounted Propeller exhaust air fans	Nos.	4.00		
33	SITC of 1600 CFM wall mounted Propeller exhaust air fans	Nos.	1.00		
34	SITC of 200 CFM wall mounted Propeller Fresh air fans	Nos.	2.00		
35	SITC of 500 CFM wall mounted Propeller Fresh air fans	Nos.	3.00		
36	SITC of 800 CFM wall mounted Propeller Fresh air fans	Nos.	2.00		
37	SITC of 1000 CFM wall mounted Propeller Fresh air fans	Nos.	2.00		
38	SITC of 1600 CFM wall mounted Propeller Fresh air fans	Nos.	1.00		
39	SITC of 2000 CFM wall mounted Propeller Fresh air fans	Nos.	1.00		
40	SITC of 2400 CFM Ceiling Suspended Inline Exhaust air fans	Nos.	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
41	SITC of 500 CFM Ceiling Mounted Inline Fresh air fans	Nos.	2.00		
42	Drain Piping - 25 NB PVC hard pipe having minimum 3 mm wall thickness, insulated with with 9 mm thick cross linked Polyethylene tube sections laminated with aluminium foil, joints to be sealed with solvent based adhesive & 2" aluminium adhesive tape.	Rmt.	3240.00		
43	Drain Piping - 32 NB PVC hard pipe having minimum 3 mm wall thickness, insulated with with 9 mm thick cross linked Polyethylene tube sections laminated with aluminium foil, joints to be sealed with solvent based adhesive & 2" aluminium adhesive tape.	Rmt.	24.00		
44	Supply, Installation, Balancing and Commisioning of fabricated at site GSS sheet metal rectangular / round ducting complete with neoprene rubber gaskets,elbows,splitter dampers,vanes, hangers, supports etc. as per approved drwaings and specifications of following sheet thickness complete as required.				
a	24 Guage DSR-16.12.2.1	Sqm	76.00		
b	22 Guage DSR-16.12.2.2	Sqm	32.00		
45	Supply, Installation of Extruded Aluminium powder coated Volume control Damper with opposed blades and Aerofoil profile in Supply duct.(DSR-16.13)	Sqm	15.00		
46	Supplying & fixing of powder coated extruded aluminium Supply/Return Air Diffusers with aluminium volume control dampers as per specifications (DSR-16.18)	Sqm	300.00		
47	Flexible Canvas Connection	Sqm	20.00		
48	Supply,Installation, testing & commissioning of Acoustic insulation of duct with 10mm thick Armasound (Nitrile Rubber) Insulation Material stuck to the duct using Adhesive and then mechanically fixing to the duct using GI Nuts & Bolts and sealant to seal the leakages.	Sqm	20.00		
49	Supply, Installation of Room Temperature/RH Sensor	Nos.	4.00		
50	Supply, Installation of Room Temp/RH Transmitter	Nos.	4.00		
51	Supply, installation of Differential pressure transmitters,integrated with blower VFD, Range 0-150mm	Nos.	4.00		
52	Pressure test points along with necessary fitting and accessories	Nos.	56.00		
53	Temperature test points along with necessary fitting and accessories	Nos.	56.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
54	Installation, testing and commissioning of Individual Electrical panel for each AHU The Panel should consist of Incomer MCCB, Contactors, DOL / Star - Delta starters, Relays, Push button (On/Off/Reset), Indicating Lamps (Start / Stop / Trip) etc. By- pass DOL starter to be included in case of VFD. The panel should have VFD with necessary instrument for cooling fan, inlet louvers & Filters for VFD , view panel, necessary relays & contactor, Potential free contacts for BMS application & Fire Signals, interlocks etc. as per specification. Panel to monitor and control process parameters like Temperature,RH, Set points, Switchin ON and OFF of machines, feedback from sensors,Heater Thyristors, etc. Panel should have spare I/Os for future requirements.				
	As per following AHU capacities				
a	5.5 TR AHU	Nos.	1.00		
b	6 TR AHU	Nos.	3.00		
55	Local push button station in FRP construction with Start push button and emergency mushroom type stop button.	Nos.	1.00		
56	Civil structural supports for PHE , Pumps & etc	kg	1.00		
57	Makeup Water Tank 250ltr Capacity plastic material.	Nos.	2.00		
	EXHAUST AXIAL FANS				
58	Supply, installation, testing and commissioning of ceiling /Floor mounted Smoke Spill Tube Axial Flow Fan with adjustable pitch blade, MS / GI long casing (2mm thick up to 800 mm dia fan, 3 mm thick from 900 to 1250 mm dia & 4 mm thick above 1300 mm dia) , cast aluminium alloy impeller complete with TEFC Sq. Cage Induction motor suitable for 415 volts ± 10%, 50Hz ± 3 %, three phase A.C supply with support, mountings, vibration isolators, fire retardant flexible canvass connector 150 mm deep (Inlet & Outlet as required), bird screen (Inlet & Outlet as required) etc. & of following capacity. The complete fan along with motor shall be high efficient(IE -3 or EQUIVALENT) with fire rated (class H) suitable for with standing 250 °C temperature rated for 2 hours.Exhaust fan shall be connected using circuit integrity cable. Fan outlet velocity shall be limited to maximum of 16 m/sec. Fan & Fan motor KW given below are for guideline & actual Dia / KW shall be as per manufacturer selection based on maximum 16 m/sec outlet velocity. Axial Fan shall be AMCA certified for Air and Sound performance in accordance to AMCA 210 and AMCA 300. Complete Fan shall be tested and approved by UL in accordance with "Power Ventilators for Smoke Control Systems" for min 250 °C for 2 hours. Manufacturer shall furnish AMCA Test Certificate for air & sound performance along with UL fire test certificate (Latest) for No. fan sourced from that particular factory. The noise level of axial fan shall be less than 80 dB at a distance of 3.0 mt from the fan.				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
a	Air Quantity : 30000 CFM Static Pressure : 25 mm wg	Nos.	4.00		
b	Air Quantity : 32000 CFM Static Pressure : 25 mm wg	Nos.	4.00		
c	Air Quantity : 40000 CFM Static Pressure : 25 mm wg	Nos.	4.00		
	Fresh Air Axial FAN				
59	Supply, installation, testing and commissioning of ceiling /Floor mounted Fresh Air Single Speed Tube Axial flow fans with adjustable pitch blade, MS / GI long casing (2mm thick up to 800 mm dia fan, 3 mm thick from 900 to 1250 mm dia & 4 mm thick above 1300 mm dia) , cast aluminium alloy impeller complete with TEFC Sq. Cage Induction motor suitable for 415 volts ± 10%, 50Hz ± 3 %, three phase A.C supply with support, mountings, vibration isolators, fire retardant flexible canvass connector 150 mm deep (Inlet & Outlet as required), bird screen (Inlet & Outlet as required) etc. & of following capacity. The complete fan along with motor shall be high efficient(IE -3 or EQUIVALENT) with fire rated (class H) suitable for with standing 250 °C temperature rated for 2 hours.Supply fan shall be connected using circuit integrity cable. Fan outlet velocity shall be limited to maximum of 16 m/sec. Fan & Fan motor KW given below are for guideline & actual Dia / KW shall be as per manufacturer selection based on maximum 16 m/sec outlet velocity. Axial Fan shall be AMCA certified for Air and Sound performance in accordance to AMCA 210 and AMCA 300. Manufacturer shall furnish AMCA Test Certificate for air & sound performance along with UL fire test certificate (Latest) for No. fan sourced from that particular factory. The noise level of axial fan shall be less than 80 dB at a distance of 3.0 mt from the fan.The fan shall be low RPM (less than or equal to 1450 RPM) and capacities shall be as follows				
a	Air Quantity : 30000 CFM Static Pressure : 25 mm wg	Nos.	2.00		
b	Air Quantity : 32000 CFM Static Pressure : 25 mm wg	Nos.	2.00		
c	Air Quantity : 40000 CFM Static Pressure : 25 mm wg	Nos.	2.00		
	Jet FAN				

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
60	Supply, installing, testing and commissioning of Ductless Ventilation / Jet fans as per specifications for normal ventilation and Smoke Extraction application. The complete fan assembly with its Casing, impeller & motor (not only the motor) shall be imported from manufacturer and certified as tested for 250 Deg C for 2 hours operation. The Jet fans casing shall be made of Hot Dipped Galvanized Steel. The unit shall be complete with silencers and guard. The length of silencer should be 2D+2D mm. The Motor shall be dual speed and run on the electrical power suitable for415V/3 Ph/50Hz. The Jet fans shall be of 2000 / 1000 CFM capacity. The Jet fan diameter shall be 500 mm. The Jet fan shall be as per technical specification and VFD compatible.	Nos.	102.00		
	CO SENSORS				
61	Supply, installing, testing and commissioning of CO Sensors, Vac 50/60Hz, 24Vdc, +/- 20%, operating range temp- 0 to 50 Deg Cel. shall be designed to detect CO gas in the air with sensing range between 0-250 ppm.	Nos.	27.00		
	Pressurisation Fan				
62	Supply, installation, testing and commissioning of Floor mounted Single Speed Tube Axial flow fans with adjustable pitch blade, MS / GI long casing (2mm thick up to 800 mm dia fan, 3 mm thick from 900 to 1250 mm dia & 4 mm thick above 1300 mm dia) , cast aluminium alloy impeller complete with TEFC Sq. Cage Induction motor suitable for 415 volts ± 10%, 50Hz ± 3 %, three phase A.C supply with support, mountings, vibration isolators, Cowl Piece, Support Stand, bird screen (Inlet & Outlet as required) etc. & of following capacity. The complete fan along with motor shall be high efficient(IE -3 or EQUIVALENT) with IP65 Rated Casing .Pressurisatioin fan shall be connected using circuit integrity cable. Fan outlet velocity shall be limited to maximum of 16 m/sec. Fan & Fan motor KW given below are for guideline & actual Dia / KW shall be as per manufacturer selection based on maximum 16 m/sec outlet velocity. Axial Fan shall be AMCA certified for Air and Sound performance in accordance to AMCA 210 and AMCA 300. Manufacturer shall furnish AMCA Test Certificate for air & sound performance along with UL fire test certificate (Latest) for No. fan sourced from that particular factory. The noise level of axial fan shall be less than 80 dB at a distance of 3.0 mt from the fan.The fan shall be low RPM (less than or equal to 1450 RPM) and capacities shall be as follows				
a	Stairwell Pressurisation FAN 20500 CFM Static Pressure : 35 mm wg	Nos.	2.00		
b	Stairwell Pressurisation FAN 13500 CFM Static Pressure : 25 mm wg	Nos.	2.00		
c	Liftwell Pressurisation FAN 14000 CFM Static Pressure : 35 mm wg	Nos.	6.00		
d	Lift Lobby Pressurisation FAN 13500 CFM Static Pressure : 35 mm wg	Nos.	2.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
63	Supply, installation, testing and commissioning of Motorized fire damper for lift lobby as per specifications. Fire Damper to be UL555 listed and to have at least 1½ hour fire rating.(DSR-16.20.1)	Sqm	55.00		
64	Supply, installation, testing and commissioning of Actuator for motorized fire damper for lift lobby. (DSR-16.20.2)	Nos.	59.00		
65	Supplying & fixing of powder coated extruded aluminium Supply air grill with aluminium volume control dampers as per specifications (DSR-16.15)	Sqm	80.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
	MCC Panel for Ventilation				
66	Design , Drawing Supply, installation, testing & Commissioning of Ventilation Panel-1 (Location:- Basement-1) Note :-Detail Design of PLC based ventilation Panel shall be design by Vendor/ Contractor . For Detail design of ventilation panel check ventilation panel sld & Logic table.Sizing & rating Selection of MCCB,MCB & VFD Drives as per electrical technical data sheet by Vendor/ contractor. Incomer: 400 A TPN MCCB 25KA-1 NOS Busbar: 400 A AL tinned busbars Outgoing: 1)63 A TPN MCCB 25 KA D CURVE -6 Nos, 2) 25 A TPN MCB 10 KA D CURVE- 32 Nos.	Nos.	1.00		
67	Design , Drawing Supply, installation, testing & Commissioning of Ventilation Panel-1 (Location:- Basement-2) Note :-Detail Design of PLC based ventilation Panel shall be design by Vendor/Contractor. For Detail design of ventilation panel check ventilation panel sld & Logic table.Sizing & rating Selection of MCCB,MCB & VFD Drives as per electrical technical data sheet by vendor/contractor. Incomer: 400 A TPN MCCB 25KA-1 NOS Busbar: 400 A AL tinned busbars Outgoing: 1)63 A TPN MCCB 25 KA D CURVE -6 Nos, 2) 25 A TPN MCB 10 KA D CURVE- 30 Nos	Nos.	1.00		
68	Design , Drawing Supply, installation, testing & Commissioning of Ventilation Panel-1 (Location:- Basement-3) Note :-Detail Design of PLC based ventilation Panel shall be design by Vendor/Contractor. For Detail design of ventilation panel check ventilation panel sld & Logic table. Sizing & rating Selection of MCCB,MCB & VFD Drives as per electrical technical data sheet by vendor/contractor. Incomer: 400 A TPN MCCB 25KA-1 NOS Busbar: 400 A AL tinned busbars Outgoing: 1)63 A TPN MCCB 25 KA D CURVE -6 Nos,2) 25 A TPN MCB 10 KA D CURVE- 40 Nos	Nos.	1.00		
69	Design , Drawing Supply, installation, testing & Commissioning of Ventilation Panel-1 (Location:- Terrace) for pressurization fans interlock with the fire signal & BMS with the necessary feeders ,accessories and terminations.	Nos.	2.00		
70	Supply, installation, testing and commissioning of control cabling wire 4Cx10sq mm Copper	Rmt.	1000.00		
71	Supply, installation, testing and commissioning of control cabling wire 6Cx2.5sq mm Copper	Rmt.	3900.00		
72	Supply and Installation of Cable Tray 200mm wide x 50mm ht including threaded rods, flanges and supports as per required on site.	Rmt.	480.00		
73	Supply and installation of Communication cable 3/4 wiring for CO sensor.	Rmt.	600.00		
74	Supply and installation of Controlling cable 3/4 wiring for Fire damper actuator.	Rmt.	250.00		

SR. NO	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
75	Hard Drawn Copper Piping with Threaded connection 25mmϕ Dia including Insulation.	Rmt.	1806.00		
	TOTAL COST OF HVAC WORKS	**Rs.**			