NAYA RAIPUR DEVELOPMENT AUTHORITY

Tender Document for the Construction of Residential campus including buildings and services on plot no B03, Phase 1, CBD Complex, sector 21 at Naya Raipur

(Following Three-Envelope Tender Procedure)

TENDER DOCUMENT (PART ONE)

NIT No.: 79 / RB P1 /CBD/ EE C-IV / CE (E) / NRDA / 2013-14, Raipur, Dated: 04.03.2014

Issued by: Chief Executive Officer,
Naya Raipur Development Authority (NRDA)
Utility block, Capitol Complex, Sector- 19,
Naya Raipur- 492 002, Chhattisgarh
Tel No: + 91 771 2511500; Fax No.: +91 771 2511400.
Website: www.nayaraipur.com

Tender Document Contains

(a) Only schedule "A" and Section-I of schedule "D" are to be filled & singed by the tenderer
(b) All the certificates as per pre qualification criteria shall be appended with relevant forms of schedule"D"

1. PART ONE (NRDA F-1)-(Attached herewith, to be submit along the tender)

Part (A)

a) Press Notice
b) Detailed NIT

Part (B)

a) Schedule-A
   (i) Cost Abstract
   (ii) Bill of Quantities
b) Schedule-B –NIL
c) Schedule-C –NIL
d) Schedule-D
   Section-I..... Technical tender forms
   (i) Letter of Technical Tender
   (ii) Tenderer's Information Sheet
   (iii) Annual Turnover
   (iv) Specific Construction Experience
   (v) Declaration
   (vi) Check list for Technical tender evaluation
   Section –II ……..Scope of work
   Section –III..... Technical specifications of work
   Section –IV..... Special Conditions of Contract
   Section –V..... List of approved makes
   Section –VI..... Drawings
e) Schedule-E
f) Schedule-F

2. PART TWO (NRDA F-2/3))-Standard form (Not Attached herewith, and not to be submitted along the tender)
   Important note: - Link site http:// nayaraipur.com/documents/gcc.pdf
   1. General Guidelines
   2. Tender
   3. General rules and directions
   4. Conditions of contract
   5. Clauses of contract
   6. Model rules relating to labour, water supply and sanitation in labour camps safety code
   7. Contract forms
      (a) Draft Format for Performance Security
      (b) Earnest Money Deposit Form (Bank Guarantee)
      (c) Format of Contract Agreement
      (d) Draft Format for Performance Guarantee for Water Proofing and Anti-termite Works
      (e) Indemnity Bond
      (f) Indenture Bond
      (g) Notice for Appointment of Arbitrator
   8. Proforma of schedules (Schedule 'A' to Schedule 'F')

Naya Raipur Development Authority (NRDA)
Raipur, Chhattisgarh

Document details

Name of work : Construction of Residential campus including buildings and services on plot no B03, Phase 1, CBD Complex, sector 21 at Naya Raipur
Name of Tenderer:

Details

a) Cost of Tender Document : Rs
b) EMD : Rs

Signature of Tenderer

Date:_____

COST ABSTRACT

Construction of Residential campus including buildings and services on plot no B03, Phase 1, CBD Complex, sector 21 at Naya Raipur

Sl. No	Description	Amount in Figures (In INR)	Amount in Words (In INR)
A	CIVIL WORKS	-	
B	PLUMBING WORKS	-	
C	ELECTRICAL WORKS	-	
TOTAL		-	

BILL OF QUANTITY

Construction of Residential campus including buildings and services on plot no B03, Phase 1, CBD Complex, sector 21 at Naya Raipur

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
A	**CIVIL WORKS**					
A.1	**EARTH WORK**					
1.00	Excavation in all types and sizes of foundations, trenches and drains or for any other purpose with all lead and lift including seperation of usefull soil for refilling including stacking & levelling of same, and disposal of surplus excavated stuff and spoils beyond NRDA boundries or as directed by Engineer/Architect In-charge including soring, dewatering, surface dressing, etc., complete as per direction of Engineer/Architect In-charge.					
a	In all types of soil	Cu.m	58,758.00			-
b	In ordinary rock	Cu.m	7,344.00			-
c	In hard rock requiring blasting	Cu.m	7,344.00			-
2.00	Filling from available excavated stuff (Excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth consolidating each deposited layer by ramming and watering from deposited stack spoils as per direction of Engineer/Architect-In-charge.	Cu.m	18,921.00			-
3.00	Providing and filling in plinth in under floor in layers not exceeding 20 cm in depth consolidating each deposited layer by ramming and watering, including dressing etc. complete.					
a	With sand/ Crusher	Cu.m	1,183.00			-
b	With Hard Moorum	Cu.m	1,183.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
4.00	Supplying chlorpyriphos/ Lindane emulsifiable concentrate of 20% in sealed containers including delivery as specified.	Ltrs.	1,030.00			-
5.00	Diluting chemical emulsion (Chlorpyriphos/ lindane) in water as per manufacturers recommendation and injecting for pre-constructional curative cum preventive anti-termite treatment: (Five year service guarantee bond to be signed by contractor)					
	Surface treatment by spreading emulsion under floor, over the plinth area before laying base concrete @ 5 litres/ sqm.	Sqm	9,930.00			-
6.00	Treatment of inside of plinth masonry wall on using diluted chemical emulsion @ 1.5 litre per hole, including drilling 12 mm diameter holes in plinth wall below plinth protection at the intervals of 300 mm and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand).	metre	658.00			-
7.00	Treatment of outer side of plinth masonry wall using diluted chemical emulsion @ 1.5 litre per hole, including drilling 12 mm diameter holes in plinth wall at the junction of floor at the intervals of 300 mm and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand).	metre	658.00			-
A.2	**PLAIN CEMENT CONCRETE WORKS**					
8.00	Providing and laying nominal mix cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) with crushed stone aggregate using concrete mixer in foundation, plinth and at ground level excluding cost of form work including cost of all materials, labour,HOM of machinery,loading,unloading,transportation,curing,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Cu.m	1,432.00			-
9.00	Providing and laying nominal mix cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) with crushed stone aggregate using concrete mixer in all works excluding cost of form work including cost of all materials, labour,HOM of machinery,loading,unloading,transportation,curing,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Cu.m	212.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
10.00	Providing and laying nominal mix cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) with crushed stone aggregate using concrete mixer in foundation, plinth and at ground level excluding cost of form work including cost of all materials, labour,HOM of machinery,loading,unloading,transportation,curing,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Cu.m	60.00			-
11.00	Providing and laying nominal mix cement concrete 1:5:10 (1 cement : 5coarse sand : 10 graded stone aggregate 40mm nominal size) with crushed stone aggregate using concrete mixer in foundation, plinth and at ground level excluding cost of form work including cost of all materials, labour,HOM of machinery,loading,unloading,transportation,curing,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Cu.m	1,425.00			-
A.3	**MASONRY WORKS**					
12.00	Random rubble masonry with hard stone in foundation and plinth in Cement Mortar 1:6 (1 Cement : 6 Coarse Sand) including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand: 12 stone aggregate 20mm nominal size) at plinth level including cost of materials, labour,HOM of machinery, curing,lead and lift charges,and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Cu.m	15.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
13.00	Brick work with modular fly-ash lime bricks (FALG Bricks) confirming to IS:12894-2002 of class designation 40 in foundation and plinth in:Cement Mortar 1:6 (1 cement : 6 coarse sand)	Cu.m	50.00			-
14.00	Half Brick Masonary					
(a)	Providing and Construction of Half brick masonry with non modular fly ash lime (FALG) bricks of class designation 10 (i.e 100Kgf/Cm2), conforming to IS : 12894, in super structure above plinth and upto floor V level including cost of materials, labour charges,soaking of bricks, scaffolding, curing ,all lead and lift charges ,and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	23,466.00			-
(b)	Extra for providing and placing in position hopping 25x1.60 mm or 2 Nos 6mm dia MS bars reinforcement at every fifth course of half brick masonry.	Sq.m	23,466.00			-
15.00	Brick work with non modular fly ash lime bricks (FALG Bricks) conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :					
(a)	Cement Mortar 1:4 (1 cement : 4 coarse sand)	Cu.m	240.00			-
(b)	Cement Mortar 1:6 (1 cement : 6 coarse sand)	Cu.m	14,000.00			-
16.00	Extra for brickwork/AAC block masonary/Tile brick masonary/FLAG brick masonary in super structure above floor 5 Level, for each four floor levels or part thereof by mechanical means.					
a	Fifth Floor Level To Eight Roof Level	Cu.m	3,790.00			-
b	Nineth Floor Level To Twelth Roof Level	Cu.m	3,790.00			-
c	Thirteen Floor Level To Terrace Roof Level	Cu.m	1,685.00			-
A.4	**REINFORCED CEMENT CONCRETE**					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
17.00	Providing and laying design mix reinforcement cement concrete M-30 (using minimum cement 420 kg/cum concrete) with crushed graded stone aggregate 20mm nominal size using batching plant, transit mixer and concrete pump, in all works upto floor five level excluding cost of reinforcement and form work etc including cost of all materials.labour,HOM of machinery,curing,and all other incidental charges etc., complete as per design drawing . The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.					
(a)	M-30 (using minimum cement 420 kg/cum concrete)	Cu.m	9,049.00			-
18.00	Providing and laying design mix reinforcement cement concrete M-40 (using minimum cement 435 kg/cum concrete) with crushed graded stone aggregate 20mm nominal size using batching plant, transit mixer and concrete pump, in all works upto floor five level excluding cost of reinforcement and form work etc including cost of all materials.labour,HOM of machinery,curing,and all other incidental charges etc., complete as per design drawing . The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.					
(a)	M-40 (using minimum cement 435 kg/cum concrete)	Cu.m	6,523.00			-
(b)	Extra for all PCC/ RCC work above floor five level for every four floor levels or part thereof for lifting of all materials required including materials required for erecting form work etc complete.[For Above Column Concrete]					
(i)	Fifth Floor Level To Eight Roof Level	Cu.m	1,003.00			-
(ii)	Nineth Floor Level To Twelth Roof Level	Cu.m	1,003.00			-
(iii)	Thirteen Floor Level To Terrace Roof Level	Cu.m	443.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
19.00	Providing and laying design mix reinforcement cement concrete M-25 (using minimum cement 410 kg/cum Concrete) with crushed graded stone aggregate 20mm nominal size using batching plant, transit mixer and concrete pump, in all works upto floor five level excluding cost of reinforcement and form work etc including cost of all materials.labour,HOM of machinery,curing,and all other incidental charges etc., complete as per design drawing . The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.					
(a)	M-25 (using minimum cement 410 kg/cum concrete)	Cu.m	2,940.00			-
(d)	Extra for all PCC/ RCC work above floor five level for every four floor levels or part thereof for lifting of all materials required including materials required for erecting form work etc complete.[For Above items like 19 (a), (b), (c)]					
(i)	Fifth Floor Level To Eight Roof Level	Cu.m	255.00			-
(ii)	Nineth Floor Level To Twelth Roof Level	Cu.m	255.00			-
(iii)	Thirteen Floor Level To Terrace Roof Level	Cu.m	138.00			-
20.00	Providing and laying design mix reinforcement cement concrete with crushed graded stone aggregate 20mm nominal size using batching plant, transit mixer and concrete pump, in all works upto floor five level excluding cost of reinforcement and form work. etc including cost of all materials.labour,HOM of machinery,curing,lead and lift charges ,and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work. .All types M-20 (using minimum cement 390 kg/cum Concrete)					
(a)	M-20 (using minimum cement 390 kg/cum concrete)	Cu.m	581.00			-
(c)	Extra for all PCC/ RCC work above floor five level for every four floor levels or part thereof for lifting of all materials required including materials required for erecting form work etc complete.[For Above items like 20 (a), (b)]					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
(i)	Fifth Floor Level To Eight Roof Level	Cu.m	204.00			-
(ii)	Nineth Floor Level To Twelth Roof Level	Cu.m	204.00			-
(iii)	Thirteen Floor Level To Terrace Roof Level	Cu.m	51.00			-
21.00	Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @24 kgs ,with 12mm and down size graded metal coarse aggregate @0.5175 Cu.m and fine aggregate @0.345 Cu.m ,with superplastisiser @0.225 lts ,machine mixed well compacted for plain chajja of 7.5 cms ,average thickness,upto ground floor level including cost of all materials.labour,HOM of machinery,curing,lead and lift charges ,and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	980.00			-
22.00	Providing and laying design mix reinforcement cement concrete M-30 (using minimum cement 420 kg/cum concrete) with crushed graded stone aggregate 20mm nominal size using batching plant, transit mixer and concrete pump, in all works upto floor five level excluding cost of reinforcement and form work etc including cost of all materials.labour,HOM of machinery,curing,and all other incidental charges etc., complete as per design drawing . The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.					
(a)	M-30 (using minimum cement 420 kg/cum concrete)	Cu.m	22,640.00			-
(b)	Extra for all PCC/ RCC work above floor five level for every four floor levels or part thereof for lifting of all materials required including materials required for erecting form work etc complete.[For Above items like 22 (a)]					
(i)	Fifth Floor Level To Eight Roof Level	Cu.m	4,800.00			-
(ii)	Nineth Floor Level To Twelth Roof Level	Cu.m	4,800.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
(iii)	Thirteen Floor Level To Terrace Roof Level	Cu.m	1,560.00			-
23.00	Cement Concrete Pavement (Grade M-40) (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with minimum cement @ 400 kg per cum, coarse and fine aggregate conforming to IS:383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing)	Cu.m	1,892.00			-
24.00	Providing and fixing of expansion joint system related with Floor loaction as per drawings and direction of Engineer/Architect-in-Charge. The joint system will be of extruded aluminium base members, self aligning/self centering arrangement and support plates etc as per ASTM B221-02. The system shall be shuch that it provides floor to floor/ floor to wall expansion control system for various vertical locations in load application areas that accomodates multi directional seismic movement without stress to its components. System shall consist of metal profiles with a universal aluminium base member designed to accomodate 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 utilising manufacturer's pre-Engineer/Architected self centering arrangement that freely rotates/ moves in all directions. The Self-centering arrangement shall exihibit circular sphere ends that lock and slide inside the corresponding aluminium extrution cavity to allow freedom of movement and flexure in all directions including vertical displacement. provision of Moisture Barrier Membrane in all joint system to					
	Floor joint of 100 mm gap	Metre	525.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
25.00	Providing and fixing of expansion joint system related with wall joint (external/internal) location as per drawings and direction of Engineer/Architect-in-Charge. The joints shall be extruded Aluminium base members, self aligning/centering arrangement and support plates as per ASTM B221-02. The material shall be such that it provided 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 aluminium profiles exihibiting minimum exposed Aluminium surfaces Mechanically snap locking the multicellular to facilitate movement. (Materials shall confirm to ASTM 6063)					
	Wall joint of 100 mm gap	Metre	150.00			-
26.00	Providing and fixing of expansion joint system of approved make and manufacturer for various roof locations as per approved drawings and direction of Engineer/Architect-in-Charge. The joint shall be 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 water tight roof to roof/ roof to corner joint cover expansion control system that is capable of accomodating multidirectional seismic movement without stress to the components. The system shall consist of metal profile that incorporates a universal aluminium base member designed to accomodate various project conditions and roof treatments. The cover shall be designed of width and thickness required to satisfy movement and loading requirements and secured to base members by utilizing manufaturer's pre-Engineer/Architected self centering arrangement that freely rotates/ moves in all directions. The Self-centering arrangement shall exihibit circular sphere ends that lock and slide inside the corresponding aluminium extrution cavity to allow freedom of movement and flexure in all directions including vertical displacement. The Joint System shall resist					
	Roof joint of 100 mm gap	Metre	175.00			-
27.00	Cutting circular holes in RCC works including slabs, beams, walls, columns and all types of masonry works using core-cutting equipment including disposal of debris, repair of cut hole to required size and finish and sealing penetration with epoxy seal, waterproofing etc complete. Rates to consider holes upto 200mm diameter.					
a	In slabs [max thickness 400mm]	No's	1,800.00			-
b	In beams [max depth 1200mm]	No's	30.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
c	In walls [max thickness 400mm]	No's	50.00			-
A.5	**STEEL & FABRICATION**					
28.0	Providing and placing in position thermo-mechanically treated (TMT) steel reinforcement for RCC work including cutting, bending, binding etc. complete as per drawings including cost of binding wire and including all wastages etc. complete. cost of materials, labour, HOM of machinery complete, lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.					
(a)	Thermo-mechanically treated (TMT) steel reinforcement (Fe -500)	MT	5,213.00			-
(b)	Providing and fixing tapered/ parallel threaded couplers confirming to IS code on " Reiforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification", to reinforcement bars including therading, enlargement at connection by forging, protecting the prepared reinforcement bars and related operations as required to complete the works as per directions of the Engineer-in-Charge. (The length of bars in which coupler is to be provided should not be less than 4 metre, no deduction for labour and binding wire saved for not providing lap length shall be made).					
(i)	Coupler for 16 mm dia reinforcement bar	Each	10.00			-
(ii)	Coupler for 20 mm dia reinforcement bar	Each	10.00			-
(iii)	Coupler for 25 mm dia reinforcement bar	Each	8.00			-
(iv)	Coupler for 28 mm dia reinforcement bar	Each	8.00			-
(v)	Coupler for 32 mm dia reinforcement bar	Each	12.00			-
A.6	**CENTERING AND SHUTTERING FOR CONCRETE WORKS**					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
29.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Foundations, footings, base of columns and plinth beam in any shape and size. including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	15,660.00			-
30.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Columns, Pillars, Piers and likes- rectangular or square in shape including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	59,792.00			-
31.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Stair cases of all types excluding spiral and folded plate type, including risers and landings including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	8,375.00			-
32.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Wall of any thickness including attached pilasters, buttresses etcincluding cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	10,320.00			-
33.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Weather shade, chhajja, Cornices and mouldings etc including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	981.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
34.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Suspended floors, roofs, access platform, balconies (plain surfaces) and shelves (cast in situ) including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	90,553.00			-
35.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Beams, lintels, cantilevers & walls including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	91,352.00			-
36.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Edge of slab, breaks in floor and walls upto 200mm. including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	9,822.00			-
37.00	Providing and fixing formwork including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for Stair cases of all types Spiral / folded plate type stair cases including risers and landings including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	580.00			-
38.00	Extra for additional height every 1m or part thereof where height of staging for formwork exceeds 4.0 m, with adequate bracing, propping etc at all levels, for suspended floor, roof, landing, beam and balcony. (only plan area is to be measured)	Sq.m	7,086.00			-
39.00	Extra for form work above floor 5 level for each four floors or part there of Above All Items					
(a)	Fifth Floor Level To Eight Roof Level	Sq.m	57,620.00			-
(b)	Nineth Floor Level To Twelth Roof Level	Sq.m	57,620.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
©	Thirteen Floor Level To Terrace Roof Level	Sq.m	18,370.00			-
A.7	**DOORS, WINDOWS AND WOOD WORKS**					
40.00	Wood Door Frames					
(a)	Providing Burma Teak wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fastners of required dia & length (Hold fast lugs or dash fastener shal be paid for seperately) but including cost of materials,labour,HOM of mechaneries,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Cu.m	26.00			-
(b)	Providing And Fixing expandable fasteners of 50mm long size with necessary plastic sleeves and galvanised M.S Screws including drilling holes in CC/RCC/Masonary Works And Making Good .etc Complete including cost of materials,labour,HOM of mechaneries,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	No's	2,541.00			-
41.00	Providing and fixing in position doors, windows and ventilators frames made of cold rolled pressed steel sheet framed profiles made from commercial M.S. Sheets conforming to IS: 513 of 1973 and as per general specifications of IS: 4351 including hinges jamb, lock jamb, steel butt hinges, base tie, joints mitred and welded with 10 cm long legs of size 15 x 3mm M.S. flat, embedded in cement concrete blocks 15 x 10 x 10cm size of grade M-10 or rawl plugs and screws or with fixing clips or with bolts and nuts including neatly compacted filling M-10 cement concrete in profile section applying a priming coat of red oxide zinc chromate primer.					
	Single rebate 100mm x 50mm size, 1.6mm thick sheet.	R.m	8,741.00			-
42.00	Providing and fixing exterior grade type & phenoformaldehyde bound flush door shutters decorative type, core of block board construction with frame of first class hard wood and well matched approved veneering with vertical grains or cross bands and face veneers on both faces with grooves of shutters excluding hinges.					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
	35 mm. thick (single leaf)	Sq.m	3,508.00			-
43.00	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size complete as per manufacturers specification and direction of Engineer/Architect-in-Charge	R.m	4,771.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
44.00	Providing and fixing 30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel.					
	10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive.An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per Manufacturer's specification including 3 nos ISI marked stainless steel hinges of size 100x58x1.9 mm complete and all necessary hardwares. (for W.C. and bathroom door shutter).Both side Pre-laminated panel PVC door shutter with front design	Sq.m	1,534.00			-
45.00	Providing and fixing aluminium work for doors, windows, ventilators and partitions made out of extruded aluminium standard sections (main section with minimum 1.5mm thickness) conforming to IS: 733, IS: 1285 mitred and jointed mechanically including aluminium cleats, neoprene weather stripping gasket beveled edge beading,Locks,and other necessary accessories and screws duly fixed in wall/ floor with fixing clips or hold fasteners or bolts and nuts as required aluminium sections shall be anodized transparent or dyed to approved shade according to IS: 1868, minimum anodic coating shall be of grade AC-15. (Glazing and panelling to be paid for separately)					
(a)	For shutter of doors, windows & ventilators including providing and making provision for fixing of fitting wherever required including the cost of PVC/ neoprene	Kg	15,795.00			-
(b)	Extra for polyester powder coated (minimum 50 micron) aluminium sections instead of anodized	Kg	15,795.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
46.00	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete.					
	With float glass panes of 5 mm thickness	Sq.m	5,079.00			-
47.00	Extra for providing and fixing 5mm tinted glass panes in aluminium door, window, ventilator shutters and partitions instead of float glass.	Sq.m	339.00			-
48.00	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately) Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	Kg	14,855.00			-
49.00	Providing and fixing stainless steel butt hinges with necessary stainless steel screws etc complete.					
(a)	125x2.5mm (heavy)	EACH	8,200.00			-
(b)	Providing and fixing M.S. bright finished or black enameled Butt hinges with necessary iron screws:100x58x1.90 mm	Each	2,370.00			-
50.00	Extra for providing lipping with second class teak wood battens 25 mm minimum depth on all edges of flush door shutters (Overall area of door shutter to be measured):	Sq.m	3,508.00			-
51.00	Providing and Fixing SS finished brass tower bolts (Barrel type) with necessary SS finished MS screws complete.					
a	250x10mm	Each	4,966.00			-
b	150x10 mm	Each	10.00			-
52.00	Providing and fixing brass door latch with brass polished MS screws complete:					
	250x16x5 mm	Each	2,050.00			-
53.00	Providing and fixing SS finished rim latch and pair of knob with necessary SS finished MS screws complete.	Each	395.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
54.00	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:					
	Twin rubber stopper	Each	2,450.00			-
55.00	Providing and fixing stainless steel fixed stopper with necessary stainless steel screws complete.					
	60 mm long	Each	385.00			-
56.00	Providing and fixing bright finished brass door handles with brass polished MS screws complete:					
	125 mm	Each	790.00			-
57.00	Providing and fixing aluminium door handles 2.5mm thick with necessary nickle plated iron screws etc complete.					
	150 mm	Each	4,896.00			-
58(a)	Provding and fixing of aluminium door locks including all screws.	Each	400.00			-
(b)	Provding and fixing of aluminium Aldrop for door including all screws.	Each	3,350.00			-
59.00	Providing & Fixing of Suspended Ceiling System with ARMGYP FB [Square edge] EDGE TILES WITH XL 24 mm EXPOSED GRID. The tiles should have Thermal Conductivity k = 0.24 w/m K, Colour White, Fire Performance Class 0/Class1 (BS 476 Part 6&7) in module size of 600 X 600 X 9 mm . The grid should be of make with XL 24 mm wide T - section flanges colour white having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees . The T Sections have a Galvanizing of 120 grams per M2 & passed through 500 hrs of Salt test.					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
	INSTALLATION: To comprise main runner spaced at 1200mm centres securely fixed to the structural soffit using suspension system (specifications below) at 1200mm maximum centre. The First/Last suspension system at the end of each main runner should not be greater than 450mm from the adjacent wall. Flush fitting 1200mm long cross tees to be interlocked between main runners at 600mm centre to form 1200 x 600 mm module. Cut cross tees longer than 600mm require independent support. 600 x 600mm module to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200 mm cross tees.Perimeter trim to be wall angles of size 3000x19x19mm, secured to walls at 450 mm maximum centres.					
	SUSPENSION SYSTEM accessories manufactured and supplied by consisting of M6 Anchor Fasteners with Vertical Hangers made of Galvanised steel of size 26 x 26 x 25 x 1.2mm with a Galvanised Thickness of 80grm/ sq.m, A pre Straightened Hanger wire of dia – 2.68 mm of 1.83 m length., thickness of 80 g/sq.m and a tensile strength of 344-413 MPa, along with Adjustable hook clips of 0.8mm thick, galvanised spring steel for 2.68 mm with a minimum pull strength of 110 kg. The adjustable clip also consists of a 3.5 mm aquiline wire to be used with the main runner.including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing and directions of Engineer/Architect in charge of works	Sq.m	3,638.00			-
A.8	**FLOORING AND CLADDING**					
60.00	Providing And Laying 50 mm thick concrete flooring with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm) finished with a floating coat of neat cement including cost of labours,cost materials,lead and lift charges ,curing and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Sq.m	5,807.00			-
61.00	Providing and laying vitrified floor tiles 600mm x 600mm with double charg multi charge printing with water absorption less than 0.5% and conforming to IS : 15622 of approved make in all colours and shades and size -600mm x 600mm mentioned below (+/- 10mm), laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc , complete including all lead, lift , at all levels and curing and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer in charge of the work.Sample to be approved by Engineer/Architect before laying. Make List:Kajaria/Naveen/Johnson	Sq.m	27,911.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
62.00	Providing and laying Vitrified tile skirting of 100mm ht with above specification of item 61 in CM 1:3 and 12mm / 1/2" thick mortar with groove and flush to the wall including cost of labours,cost materials,lead and lift charges ,curing and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.Sample to be approved by Architect before laying.	R.m	22,834.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
63.00	Providing and laying rectified ceramic glazed floor tiles for toilets of size 300x300mm or any other size conforming to IS : 15622 of approved make, colour, shade laid on 20 mm thick Cement Mortar 1:4 (1 cement : 4 coarse sand) including pointing the joints with white cement mixed with matching pigment etc., complete including cost of labours,cost materials,lead and lift charges ,curing ,acid washing and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer in charge of the work. Sample to be approved by Engineer/Architect before laying.Make List:Kajaria/Naveen/Johnson	Sq.m	3,638.00			-
64.00	Providing and laying rectified ceramic glazed floor tiles for Balcony And Utility of size 300x300mm or any other size conforming to IS : 15622 of approved make, colour, shade laid on 20 mm thick Cement Mortar 1:4 (1 cement : 4 coarse sand) including pointing the joints with white cement mixed with matching pigment etc., complete including cost of labours,cost materials,lead and lift charges ,curing ,acid washing and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.Sample to be approved by/Architect before layingMake List:Kajaria/Naveen/Johnson	Sq.m	4,818.00			-
65.00	Providing and fixing ceramic glazed wall tiles for toilet and kitchen conforming to IS : 15622 of approved make, colours, shades and size on wall and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with matching pigment.necessary corner beading provided complete including cost of labours,cost materials,lead and lift charges ,curing ,acid washing and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer in charge of the work.Sample to be approved by Engineer/Architect before laying. List:Kajaria/Naveen/Johnson	Sq.m	15,342.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
66.00	Supplying and laying of Laminate wooden Flooring with 8 mm thick laminate floor fixed to the floor with the adhesives, laid over a levelled floor surface including cost of foam below the laminated wooden flooring ,all materials, profiles,labour,lead and lift charges and all other incidental charges etc., complete as per design drawing and directions of Engineer/Architect in charge of works.[Basic rate Of Wooden flooring is Rs 1100/- Sq.m]	Sq.m	5,807.00			-
67.00	Providing and laying 75mm x 13mm Teak Wood skirting matched to existing Veneer for specified area using nails fevicols & adhesives, to be finished with 2 coats of melamine polish in spray semi matt finish after necessary sanding ,finishing & staining including cost of all materials, labour,lead and lift charges and all other incidental charges etc., complete as per design drawing and directions of Engineer/Architect in charge of works.	R.m	6,023.00			-
68.00	Granite Platform for Hand Wash Basin					
(a)	Providing and fixing 19mm thick Black Granite work (machine cut, table rubbed & mirror polished) for kitchen platform, vanity counters, window sills and similar locations of required size laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand) including joints treated with white cement mixed with matching pigment including rubbing and polishing to edge moulding to give high gloss finish. including the cost of all material, cost of labour,cost of equipment and machinery,all lead and lift,loading and unloading,transportation and all other incidental charges etc complete as per design drawing.The work shall be carried out as per directions of Engineer/Architect in charge of the work.Sample to be approved by Architect before laying.	Sq.m	1,655.00			-
(b)	Extra for making opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/Granite/stone work including making necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete	No's	1,262.00			-
69.00	Providing and fixing Heat Resistant Terrace Tiles (300 mm x 300 mm x 20 mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace with 6mm joints, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand), including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner and terminating skirting with approved GI flashing screwed to the parapet.	Sq.m	5,075.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
70.00	Flooring For Parking Area					
(a)	Providing and laying 52 mm thick cement concrete flooring with under layer of 40mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer of 12 mm thick cement metallic hardener concrete mix 1:2 (1 cement hardener mix : 2 stone aggregate of 6 mm size by volume) with metallic hardening compound of approved quality mixed with cement in ratio of 4:1 (4 cement : 1 metallic flo hardening compound by weight) including finishing etc. complete Including the cost of all material, cost of labour,cost of equipment and machinery,all lead and lift,loading and unloading,transportation and all other incidental charges etc complete as per design drawing.The work shall be carried out as per directions Engineer/Architect in charge of the work.	Sq.m	17,315.00			-
(b)	Extra for making chequers of approved pattern on cement concrete flooring, landing, pavement etc.	Sq.m	17,315.00			-
A.9	**PLASTERING AND PAINTIN**					
71.00	Providing 15mm thick cement plaster on the rough side of single or half brick wall in In Cement Mortar 1:4 (1 cement : 4 fine sand) ,to masonary including rounding off corners wherever required; Providing and removing scaffolding including the cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works.	Sq.m	1,96,855.00			-
72.00	Providing 12mm thick cement plaster in single coat with cement Mortar 1:3 (1 cement : 3 fine sand) to ceiling including rounding off corners wherever required ; Providing and removing scaffolding including the cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works.	Sq.m	96,276.00			-
73.00	External Wall Plastering					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
(a)	Providing 18mm thick cement plaster in two coats with under layer of 12mm thick plaster 1:5 (1 cement : 5 fine sand) and top layer of 6mm thick with cement plaster 1:3 (1 cement : 3 fine sand) finished rough with sponge.; Providing and removing scaffolding including the cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works.	Sq.m	45,302.00			-
(b)	Extra for plastering of exterior walls when height exceeds 10m above ground level for every additional height of 3.0m or part thereof.	Sq.m	45,302.00			-
74.00	Providing 15mm thick cement plaster on the rough side of single or half brick wall in In Cement Mortar 1:4 (1 cement : 4 fine sand) ,to masonary for base of dadooing works with approved quality ,providing and removing scaffolding including the cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works.	Sq.m	20,508.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
75.00	Emulsion Painting					
	Wall painting with acrylic luxury emulsion (plastic) paint (top most approved branded quality) to give an even shade.On new work (two or more coats)	Sq.m	2,93,131.00			-
76.00	Applying one coat of cement primer on wall surface.	Sq.m	2,93,131.00			-
77.00	Providing and applying 2mm thick ready mix exterior grade putty (Birla wall care, Alltek Superfine W/R of (NCL), J.K. wall putty) on walls to make the surface smooth and even.	Sq.m	2,93,131.00			-
78.00	Painting on new work (two or more coats) to give an even shade with:					
	Satin synthetic enamel paint (top most approved branded quality)	Sq.m	23,224.00			-
79.00	Providing and laying Melamine polish on new wood work (two or more coats) with spray machine after preparing surface by rubbing down smooth with sand papers, preparation of surface, applying 5 to 10 coats of french sprit polish, applying two coats of Melamine sealer and finally applying two coats of Melamine clear as per manufacturers specifications complete:	Sq.m	8,125.00			-
A.10	**WATER PROOFING WORKS**					
80.00	Providing and laying water proofing treatment in sunken portion of WCs, bathroom, kitchen etc., by applying cement slurry mixed with water proofing cement compound consisting of following applications including surface preparation:					
	i)First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours.					
	ii) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound@ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.					
	etc. complete including cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design Drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works	Sq.m	5,725.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
81.00	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures using rough Kota stone and consisting of:					
	i) 1st layer of 22mm to 25mm thick approved rough Kota stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound.					
	ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound.iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.					
	etc. complete including cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design Drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works	Sq.m	10,501.00			-
82.00	Providing and laying integral cement based treatment for water proofing on the vertical surface at all levels by fixing 22 mm to 25mm thick rough Kota stone slab with cement slurry mixed with water proofing compound conforming to IS:2645 with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with 20mm thick cement mortar 1:3 (1 cement : 3 coarse sand) with neat cement punning mixed with water proofing compound complete					
	etc. complete including cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design Drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works	Sq.m	3,744.00			-
83.00	Providing and laying integral cement based water proofing treatment on roofs, balconies, terraces etc with average thickness of 120mm and minimum thickness at khurra as 65 mm, consisting of following operations including surface preparation:					
	i) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement mixed with water proofing compound conforming to IS. 2645 over the RCC slab including adjoining walls upto 300mm height.					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
	ii) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) mixed with water proofing compound conforming to IS : 2645 over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) mixed with water proofing compound conforming to IS : 2645 to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.					
	iii) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645.					
	iv) Finishing the surface with 20 mm thick joint less cement mortar of mix 1:4 (1 cement :4 coarse sand) mixed with water proofing compound conforming to IS : 2645 including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.					
	v) 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:					
	etc. complete including cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design Drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works.Mode of measurement ;Plan area shall be measured.	Sq.m	7,537.00			-
84.00	Providing and placing in position suitable PVC water stops confirming to IS : 12200 for construction/ expantionjoints between RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete including cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design Drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works					
[a]	Serrated with central bulb (225mm wide, 8-11 mm thick)	Metre	949.00			-
[b]	Dumb bell with central bulb (180 mm wide, 8 mm thick)	Metre	10.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
[c]	Kickers (320 mm wide, 5 mm thick)	Metre	10.00			-
85.00	Grading roof for water proofing treatment with					
[a]	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cu.m	628.00			-
[b]	Cement mortar 1:4 (1cement : 4 coarse sand)	Cu.m	314.00			-
86.00	Providing and laying 3mm thick APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ltr and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under :Joint strength in longitudinal and transverse direction at 23°C as 650/450N/5cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane etc. complete including cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc	Sq.m	9,234.00			-
87.00	Extra for covering top of membrane with Geotextile, 120gsm non woven, 100% polyester of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation	Sq.m	9,234.00			-
88.00	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	Sq.m	55.00			-
A.11	**FABRICATION WORK**					
89.00	Structural Steel					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
	Structural steel work riveted or bolted or welded in built-up sections, trusses and frames work upto a height of 5m above plinth level, including cutting, hoisting, fixing in position and applying a priming coat of red oxide zinc chromate primer etc., complete as per design drawing and direction of Architect in charge. The quoted rate shall include necessary scaffolding, lifting, erection,transporting at all levels .	Kgs	2,126.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
90.00	M.S Railing					
	Providing and fixing approved pipe hand rail to walls (ramps, stair cases) including cutting chases and repairing the same to original condition, applying a priming coat of red oxide zinc chromate primer.including the cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design Drawing.Contractor to submit shop drawing as per drawing and as per site conditions.The work shall be carried out as per directions of Engineer/Architect in charge of works .					
	M.S Pipe	Kgs	1,69,108.00			-
91.00	M.S.Grill					
	Providing and fixing M.S. grill of approved pattern made of M.S. flats or square or round bars welded to steel frame of windows etc. including applying a priming coat of red oxide zinc chromate primer.including the cost of all material,cost of labour,cost of equipment and machinary ,all lead and lift ,loading and unloading ,transportation and all ohter incidental charges etc complete as per design Drawing.The work shall be carried out as per directions of Engineer/Architect in charge of works .	Kgs	50,020.00			-
92.00	M.S.Hand Pipe Railing					
	Providing and fixing approved pipe hand rail by welding to iron railing including applying a priming coat of red oxide zinc chromate primer.. including ,cost of labour,cost of materials,lead and lift charges and all other incidental charges etc., complete as per design drawing. The work shall be carried out as per the direction of the Engineer/Architect in charge of the work.	Kgs	43,648.00			-
	M.S Pipe					
93.00	Providing and fixing M.S. fan clamp/ hook for ceiling fan made out of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop.	Each	1,977.00			-
	SUB TOTAL; CIVIL WORKS					**-**

BILL OF QUANTITY

Construction of Residential campus including buildings and services on plot no B03, Phase 1, CBD Complex, sector 21 at Naya Raipur

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
B	**PLUMBING WORKS**					
1.0	**Sanitary Fixures & C.P. Brass Fittings**					
1.1	Providing and fixing 15 mm nominal bore C.P copper connection pipe with C.P brass nuts collar and PVC bush of approved quality					
a.	45 CM length	Each	79.00			-
1.2	Providing and fixing vitreous china wash basin with C.I. brackets, 32 mm C.P. brass waste of standard pattern, including painting of brackets, cutting and making good the walls wherever required :					
a.	White Size 550x400 mm	Each	8.00			-
b.	White Oval or round size 560x410mm.	Each	880.00			-
1.3	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink with drain board as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :					
a.	510x1040 mm bowl depth 200mm.	Each	385.00			-
1.4	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :					
a.	5mm thick mirror	Sqm	888.00			-
1.5	Providing and fixing 15 mm nominal bore C.P. brass fittings of approved make and conforming to IS:8931 including C.P. brass extension if required:					
a.	Bib cock (450gms)	Each	385.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
b.	Long body bib cock (500gms)	Each	10.00			-
c.	Two way bib cock (800gms)	Each	900.00			-
d.	Stop cock (concealed) (600gms)	Each	1,760.00			-
e.	Angle valve for basin mixer and geyser points (450gms)	Each	5,198.00			-
f.	Basin mixer pillar tap with spout (1000gms)	Each	880.00			-
g.	Kitchen sink mixer with cast swivel spout (1000gms)	Each	385.00			-
h.	Wall mixer with elegant knob (1400gms)	Each	880.00			-
i.	Bottle trap set with extension pipes	Each	888.00			-
j.	Toilet paper holder	Each	900.00			-
k.	Soap dish plate	Each	880.00			-
l.	Shower rose (revolving type) (150mm)	Each	880.00			-
m.	Towel rail (600mm long x 20mm dia)	Each	880.00			-
1.6	Providing and fixing of white vitreous china extended wall mounted water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3/6 litre (adjustable to 4/8 litre), including seat cover and cistern fittings, nuts, bolts and gasket etc complete.	Each	900.00			-
1.7	Providing and fixing vitreous china battery based infrared sensor operated of urinal approx. size 610x390x370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturer specifications and direction of Engineer-in-charge	Each	12.00			-
1.8	Providing and fixing of 15 mm C.P. brass pillar cock auto closing system pressmatic taps (Make Jaquar Cat No. 031 or equivalent) for wash basins complete including cutting and making good the walls wherever required.	Each	8.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
1.9	Providing and fixing of 15 mm C.P. brass health foucet (Make Jaquar Cat No. 563 or equivalent) with C.P. brass flange complete, including cutting and making good the wall wherever required.	Each	900.00			-
1.10	Providing & fixing of Stainless Steel wall mounted manual operated liquid soap dispenser (Make Utec Cat No. UT 325 or equivalent).	Each	8.00			-
1.11	Providing and fixing of C.P. brass twin coat hooks (Make Jaquar Cat No. 1161 or equivalent) fixed on toilet door with C.P. brass screws complete in all respects.	Each	900.00			-
1.12	Providing and fixing of 600x16 mm C.P. grab bar (Make Jaquar Cat No. 1507 or equivalent) complete with brackets fixed to PVC rawl plugs with C.P.brass screws.	Each	5.00			-
2.0	**Soil, Waste,Vent and R.W Pipes & Fittings**					
2.1	Providing and laying nominal mix cement concrete with crushed stone aggregate using concrete mixer in all works upto floor five level excluding cost of form work.					
a.	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	Cum	10.00			-
2.2	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	Each	70.00			-
2.3	Providing lead caulked joints to sand cast iron/ centrifugally cast (spun) pipes and fittings of diameter.					
a.	150 mm	Each	825.00			-
b.	100 mm	Each	12,010.00			-
c.	75 mm	Each	2,772.00			-
2.4	Providing and fixing MS stays and clamps for sand cast iron/ centrifugally cast (spun) pipes of diameter.					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	100 mm	Each	275.00			-
b.	75 mm	Each	57.00			-
2.5	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour over a coat of primer (of approved quality) for new work :					
a.	150 mm diameter pipe	Metre	2,240.00			-
b.	100 mm diameter pipe	Metre	11,705.00			-
c.	75 mm diameter pipe	Metre	2,545.00			-
2.6	Providing and fixing stainless steel drain jali of approved make/quality.	Each	2,779.00			-
2.7	Providing and fixing soil, waste and vent pipes.					
a.	150 mm dia Centrifugally cast (spun) Iron Socketed pipe as per IS: 3989	Metre	2,240.00			-
b.	100 mm dia Centrifugally cast (spun) Iron Socketed pipe as per IS: 3989	Metre	11,705.00			-
c.	75 mm dia Centrifugally cast (spun) Iron Socketed pipe as per IS: 3989	Metre	2,545.00			-
2.8	Providing and fixing plain bend of required degree.					
a.	150 mm dia Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	288.00			-
b.	100 mm dia Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	2,020.00			-
c.	75 mm dia Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	10.00			-
2.9	Providing and fixing double equal plain junction of required degree.					
a.	100x100x100x100 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	22.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
2.10	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts & nuts complete.					
a.	100x100x100 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	1,625.00			-
2.11	Providing and fixing single equal plain junction of required degree.					
a.	150x150x150 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	147.00			-
b.	100x100x100 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	104.00			-
2.12	Providing and fixing single unequal plain junction of required degree.					
a.	100x100x75 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	884.00			-
2.13	Providing and fixing terminal guard.					
a.	100 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	169.00			-
b.	75 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	58.00			-
2.14	Providing and fixing collar :					
a.	100 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	1,464.00			-
b.	75 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	59.00			-
2.15	Providing and fixing single unequal plain junction of required degree.					
a.	150x150x100 mm Centrifugally Cast (spun) Iron S&S as per IS: 3989	Each	307.00			-
b.	75x75x50 mm Centrifugally Cast (spun) Iron S&S as per IS: 3989	Each	884.00			-
2.16	Providing and fixing double unequal plain junction of required degree.					
a.	150x150x100x100 mm Centrifugally cast (spun) Iron S&S as per IS: 3989	Each	25.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
2.17	Providing and fixing of uPVC agricultural pipes conforming to IS:4985 Class III (6 kg/sqcm) including all fittings, e.g. couplings, tees, bends, reducers and screwed adoptors, plugs, unoins etc. and jointing with solvent cement joint including cutting and making good the floors and walls where required complete as per site.(for Waste Connections & Rain Water Pipes)					
a.	40 mm O.D.	Meter	3,250.00			-
b.	50 mm O.D.	Meter	100.00			-
c.	63 mm O.D.	Meter	880.00			-
d.	75 mm O.D.	Meter	2,210.00			-
e.	110 mm O.D.	Meter	2,285.00			-
2.18	Providing and fixing of uPVC P-Trap with extenssion piece including setting with cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 stone aggregate 20 MM nominal size) the inlet from floor level to trap rim to be grouted and cemented neat manner including cutting and making good the floor & wall wherever required complete in all respects.					
a.	110 mm OD inlet & 110 mm OD outlet.	Each	1,281.00			-
2.19	Providing and fixing of uPVC Plain Floor Trap jointing with solvent including setting with cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 stone aggregate 20 MM nominal size) the inlet from floor level to trap rim to be grouted and cemented neat manner including cutting and making good the floor & wall wherever required complete in all respects.					
a.	110 mm O.D inlet & 63 mm O.D outlet.	Each	2,034.00			-
2.20	Providing and fixing cast brass clean out plug with suitable insert keys for opening, male threaded joint with G.I. socket caulked to HCI soil pipe or C.I.(LA) pipe including cost of lead /drip seal joint as required.					
a.	100 mm dia	Each	184.00			-
b.	150 mm dia	Each	179.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
2.21	Providing and fixing G.I. Pipes conforming to IS: 1239 (Heavy Class) complete with G.I. Fittings and clamps, including cutting and making good the walls etc. (for Sump Risers)					
a.	80 mm dia. nominal bore	Metre	50.00			-
2.22	Painting GI pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work.					
a.	80 mm diameter pipe	Metre	50.00			-
2.23	Providing and fixing of GI clamps with EPDM rubber lining Zinc plated for support of vertical soil, waste, vent and rain water pipes, embedded in walls with anchor fastner etc. including cost of cutting holes and making good the walls complete in all respects.					
a.	For Pipes 75 mm dia.	Each	1,307.00			-
b.	For Pipes 100 mm dia.	Each	2,600.00			-
c.	For Pipes 150 mm dia.	Each	247.00			-
2.24	Providing and fixing GI clevis type hangers for pipes running horizontal along ceiling level including require length of GI treaded rod, nuts, a dash fastener including necessary drilling in RCC slabs and beams etc complete in all respects.					
a.	For Pipes 100 mm dia. With 12 mm dia. GI Rod	Each	100.00			-
b.	For Pipes 150 mm dia. With 16 mm dia. GI Rod.	Each	250.00			-
3.0	**Water Supply System**					
3.1	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes on wall surface, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.					
a.	20 mm nominal outer dia pipes	Metre	25.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
b.	25 mm nominal outer dia pipes	Metre	35.00			-
c.	32 mm nominal outer dia pipes	Metre	20.00			-
3.2	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes in concealed in wall, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints including cutting chases and making good the walls etc complete as per direction of Engineer in Charge.					
a.	15 mm nominal outer dia pipes	Metre	25,050.00			-
b.	20 mm nominal outer dia pipes	Metre	9,795.00			-
c.	25 mm nominal outer dia pipes	Metre	1,795.00			-
d.	32 mm nominal outer dia pipes	Metre	50.00			-
3.3	Providing and fixing on wall surface G.I. pipes Heavy class complete with G.I. fittings and clamps, including cutting, making good the walls etc. and testing of joints complete:					
a.	15 mm dia. Nominal bore	Metre	240.00			-
b.	20 mm dia. Nominal bore	Metre	460.00			-
c.	25 mm dia. Nominal bore	Metre	1,125.00			-
d.	32 mm dia. Nominal bore	Metre	2,290.00			-
e.	40 mm dia. Nominal bore	Metre	3,365.00			-
f.	50 mm dia. Nominal bore	Metre	2,620.00			-
g.	65 mm dia. Nominal bore	Metre	1,315.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
h.	80 mm dia. Nominal bore	Metre	250.00			-
i.	100 mm dia. Nominal bore	Metre	65.00			-
3.4	Providing and laying in trenches G.I. pipes medium class complete with G.I. fittings including excavation of trenches, refilling the same and testing of joints complete:					
a.	80 mm dia. nominal bore	Metre	100.00			-
3.5	Providing and fixing G.I. Union in G.I. pipe (New work) including cutting and threading the pipe and making long screws etc. complete:					
a.	15 mm dia. Nominal bore	Each	10.00			-
b.	20 mm dia. Nominal bore	Each	20.00			-
c.	25 mm dia. Nominal bore	Each	45.00			-
d.	32 mm dia. Nominal bore	Each	90.00			-
e.	40 mm dia. Nominal bore	Each	135.00			-
f.	50 mm dia. Nominal bore	Each	100.00			-
g.	65 mm dia. Nominal bore	Each	20.00			-
h.	80 mm dia. Nominal bore	Each	10.00			-
3.6	Painting G.I. pipes and fittings with synthetic enamel white paint over a red oxide zinc chromate priming coat, both of approved quality for new work:					
a.	15 mm diameter pipe	Metre	240.00			-
b.	20 mm diameter pipe	Metre	460.00			-
c.	25 mm diameter pipe	Metre	1,125.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
d.	32 mm diameter pipe	Metre	2,290.00			-
e.	40 mm diameter pipe	Metre	3,365.00			-
f.	50 mm diameter pipe	Metre	2,620.00			-
g.	65 mm diameter pipe	Metre	1,315.00			-
h.	80 mm diameter pipe	Metre	250.00			-
i.	100 mm diameter pipe	Metre	65.00			-
3.7	Painting of GI pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality.					
a.	80 mm dia.	Metre	100.00			-
3.8	Providing and filling fine sand or coarser grade all-round the G.I. pipes in external work.					
a.	80 mm dia.	Metre	100.00			-
3.9	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :					
a.	80 mm dia nominal bore	Each	2.00			-
3.1	Cutting holes upto 30x30 cm in walls including making good the same :	Each	50.00			-
3.11	Cutting holes upto 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof.	Each	100.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
3.12	Constructing masonry Chamber 60x60x75 cm, inside with FLAG bricks of 35 kg/ cm^2 in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :	Each	2.00			-
3.13	Constructing masonry Chamber 60x45x50 cm, inside with FLAG bricks of 35 kg/ cm^2 in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand :10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :	Each	2.00			-
3.14	Providing and fixing Ball valve with hard chrome plated ball inside PTFE (Teflon) seat & ring with chrome plated centre handle with female BSP threads complete in all respects.					
a.	15 mm dia	Each	1,265.00			-
b.	20 mm dia.	Each	1,273.00			-
c.	25 mm dia	Each	65.00			-
d.	32 mm dia	Each	31.00			-
e.	40 mm dia	Each	140.00			-
3.15	Providing and fixing cast iron wafer type butterfly valves (PN-16) complete with 2 nos. matching flanges (Table-E),bolts, nuts, 3.0 mm thick insertion neoprene gasket.					
a.	50 mm dia	Each	99.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
b.	65 mm dia	Each	2.00			-
c.	80 mm dia	Each	11.00			-
d.	100 mm dia	Each	4.00			-
3.16	Providing and fixing motorised butterfly valve, IP- 67, with float type sensors suitable for 240 volts with working pressure rating of not less than 5kg/cm2, torque of motor should be capable to open and close valve at 5 kg/sq.cm pressure, with control panel and sensors to open valve when water level is low in tanks and to close when water level is high in water tanks including 03 Nos butterfly valves along with byepass piping, necessary cables, conduits, upto junction box (upto 6 mt qty approx) etc. complete.					
a.	40 mm dia	Each	9.00			-
b.	50 mm dia	Each	9.00			-
3.17	Providing and fixing Thermoflex or Kaiflex thermal insulation tubing, a elastomeric flexible material having hermetic blister closed cell structure of expanded synthetic rubber over pipes of following nominal bores and thickness including protection by wrapping with 22 gauge alumminium sheet with riveted screw joints all required accessories complete as per specification.					
	13 mm thick					
a.	For 15 mm dia Pipe	Metre	120.00			-
b.	For 20 mm dia Pipe	Metre	110.00			-
c.	For 25 mm dia Pipe	Metre	315.00			-
d.	For 32 mm dia Pipe	Metre	415.00			-
e.	For 40 mm dia Pipe	Metre	560.00			-
f.	For 50 mm dia Pipe	Metre	395.00			-
g.	For 65 mm dia Pipe	Metre	15.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
4.0	**Sewerage System**					
4.1	Excavation for all types and sizes of foundations, trenches and drains or for any other purpose including disposal of excavated stuff upto 1.5 m lift and lead upto 50m (at least 5m away from the excavated area), including dressing and leveling of pits.					
a.	In all types of soil	Cum	1,248.00			-
4.2	Extra for every additional lift of 1.5 m or part thereof.					
a.	All types of soil	Cum	1,555.00			-
4.3	Filling from available excavated stuff (Excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering with a lead upto 50 M. and lift upto 1.5 M.	Cum	320.00			-
4.4	Providing,laying and jointing following P.V.C.-U pipes with solvent cement join for Non pressure gravity drain and sewer applications including testing of joints, cost of jointing materials etc. complete in all respect. [Conform to IS: 15328 : 2003, solvent cement shall Conform to IS 14182]. SN-8					
a.	160 mm dia.	Metre	30.00			-
b.	250 mm dia.	Metre	620.00			-
4.5	Providing and laying Cement concrete grade M-5 (Nominal Mix) with 40 mm nominal size stone aggregate around S.W.pipe including bed concrete 15cm thicki/c curing, testing etc. complete for 100mm dia.to 300mm dia pipe.(For type" Concrete Around")					
a.	150 mm dia.	Metre	30.00			-
b.	250 mm dia.	Metre	620.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
4.6	Providing and fixing SW gully trap complete with CI grating ,Brick masonry chamber in cement mortar 1:4 (1 cement: 4 fine sand) water tight CI cover with frame of 30x30 cm size including necessary Excavation,cement concrete grade M-5 (NominalMix) with stone aggregate 40mm nominal size,fixing CI cover with frame in Cement concrete grade M-15 (Nominal Mix) with stone aggregate 20mm nominal size,12mm thick cement plaster 1:2(1 cement:2 coarse sand) finished with a floating coat of neat cement complete.					
a.	180x150mm size "P" or "S" type	Each	27.00			-
4.7	Constructing Brick masonry manhole in cement mortar 1:4 (1 cement : 4 fine sand) RCC top slab Cement Concrete grade M-15 (Nominal Mix) with stone aggregate 20 mm nominal size, foundation in cement concrete grade M-7.5 (Nominal Mix) with stone aggregate 40 mm nominal size, inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making channels in Cement Concrete grade M-15 (Nominal Mix) with stone aggregate 20 mm nominal size including finishing the channel to shape, curing etc. with CI cover with frame etc.					
a.	Manhole with above specifications having inside size 90x80 cm and 60 cm deep including C.I. cover with frame (lightduty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):	Each	8.00			-
4.8	Extra for depth of man holes given at item 23.2					
a.	Size 90x80 cm	Metre	2.00			-
4.9	Construction of circular type manhole 900 mm internal dia. at bottom, 560 mm dia at top total depth of manhole 900 mm in FLAG brick masonry with 1:5 cemen tmortar (1 cement : 5 fine sand), 12 mm thick Cement plaster 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement .22.5 cm foundation in cement concrete grade M-10 (Nominal Mix) with stone aggregate 40 mm nominal size, RCC top slab cement concrete M-20 (Nominal Mix) with stone aggregate 20 mm nominal size and making channel in cement concrete grade M-15 (Nominal Mix) with stone aggregate 20 mm nominal size neatly finished, curing fixing of ISI marked heavy duty SFRC cover etc. complete as per standard design.	Each	18.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
4.1	Extra for increasing depth of manhole from depth of 900 mm to 1650 mm.	Metre	7.00			-
4.11	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	609.00			-
4.12	Making connection of drain or sewer line with existing service lines manhole including breaking in to and making good the walls, floors etc. with cement concrete grade M-15 (Nominal Mix) with stone aggregate 20 mm nominal size plastered with Cement Mortar 1:3 (1 Cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels etc. complete.					
a.	For 250 to 300 mm dia pipes	Each	1.00			-
4.13	Excavating trenches of required width for pipes, cables etc. including excavation for sockets and dressing of sides, ramming of bottoms, depth upto 1.5 M including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cms in depth including consolidating each deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed, within a lead of 50 m. **All kinds of soil.**					
a.	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia. Metre	Metre	1,250.00			-
4.14	Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre.)					
a.	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia. Metre	Metre	531.11			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
4.15	Constructing brick masonry circular type manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement: 4 coarse sand) ,inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement:3 coarse sand: 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement all complete as per standard design.					
	1.68 m deep with S.F.R.C cover and frame (heavy duty,HD-20 grade designation) 560 mm internal diameter conforming to I.S.12592, total weight of cover and frame to be not less than 182 kg, fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately)					
a.	With common burnt clay FPS (Non modular) bricks of class designation 7.5.	Each	56.00			-
4.16	Extra for depth for circular type manholes .1.22 m internal dia (at bottom) beyond 1.68 to 2.29 m					
a	With common burnt clay FPS (Non modular) bricks of class designation 7.5.	Metre	24.00			-
5.0	**External Storm Water Drainage System**					
5.1	Providing and laying nominal mix cement concrete with crushed stone aggregate using concrete mixer in foundation, plinth and at ground level excluding cost of form work.					
a.	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size).	Cum	33.00			-
5.2	Making connection of drain or sewer line with existing service lines manhole including breaking in to and making good the walls, floors etc. with cement concrete grade M-15 (Nominal Mix) with stone aggregate 20 mm nominal size plastered with Cement Mortar 1:3 (1 Cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels etc. complete.					
a.	For pipes 350 to 450 mm diameter	Each	1.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
5.3	Road Gully Chambers:-Construction of Brick masonry road gully chambers with brick work in cement mortar1:5 (1 cemen t: 5 fine sand) and 12 mm plaster1:3 including foundation in cement concrete 1:5:10 (1 cement :5 fine sand : 10 stone aggregate 40mm nominal size).					
a.	Chamber 50x45x60 cm with 500x450 mm CI Horizontal grating with frame.	Each	40.00			-
5.4	Excavating trenches of required width for pipes, cables etc. including excavation for sockets and dressing of sides, ramming of bottoms, depth upto 1.5 M including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cms in depth including consolidating each deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed, within a lead of 50 m. **All kinds of soil.**					
b.	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm dia. Metre	Metre	290.00			-
5.5	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :					
a.	150 mm dia. R.C.C. pipe	Metre	50.00			-
b.	250 mm dia. R.C.C. pipe	Metre	100.00			-
c.	300 mm dia. R.C.C. pipe	Metre	450.00			-
5.6	Providing and Laying non-pressure (NP3) RCC socket & spigot pipes with rubber gasket joint including testing of joints .[Conforming to IS ; 458-1988, ISI marked laying as per IS 783:1985)					
a.	150 mm dia. R.C.C. pipe	Metre	50.00			-
b.	250 mm dia. R.C.C. pipe	Metre	100.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
c.	300 mm dia. R.C.C. pipe	Metre	450.00			-
d.	450 mm dia. R.C.C. pipe	Metre	270.00			-
e.	500 mm dia. R.C.C. pipe	Metre	20.00			-
6.0	**Rain Water Harvesting System**					
6.1	Providing and fixing form work including centering, shuttering, strutting, staging, propping bracing etc. complete and including its removal at all levels, for:					
a.	Suspended floors, roofs, access platform, balconies (plain surfaces) and shelves (cast in situ)	Sqm	100.00			-
6.2	Providing and laying nominal mix cement concrete with crushed stone aggregate using concrete mixer in foundation, plinth and at ground level excluding cost of form work.					
a.	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	Cum	9.00			-
b.	1:2:4 (1cement : 2 Coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	2.00			-
6.3	Providing and laying design mix reinforcement cement concrete with crushed graded stone aggregate 20mm nominal size using batching plant, transit mixer and concrete pump, in all works upto floor five level excluding cost of reinforcement and form work.					
a.	M-25 (using minimum cement 410 kg/cum concrete)	Cum	17.00			-
6.4	Providing and placing in position reinforcement for R.C.C. work including straightening, cutting, bending, binding etc. complete as per drawings including cost of binding wire all complete:					
a.	Thermo-Mechanically treated bars	Kg	2,040.00			-
6.5	Brick work with FLAG bricks of crushing strength not less than 35 kg/sqcm and water absorption not more than 20% in foundation and plinth in:					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	Cement Mortar 1:5 (1 Cement : 5 Coarse Sand)	Cum	196.00			-
6.60	Providing and fixing in position precast circular 560mm internal dia SFRC/ R.C.C. manhole cover or cover and frame of approved quality:					
a.	Cover and frame H D - 20	Each	15.00			-
6.7	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer –in-charge, upto 90 metre depth below ground level.					
a.	All types of soil-400 mm dia.	Metre	200.00			-
6.8	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer –in-charge, beyond 90 metre & upto 150 metre depth below ground level.					
a.	All types of soil-400 mm dia.	Metre	-			-
6.9	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer –in-charge.					
a.	200 mm nominal size dia.	Metre	50.00			-
6.1	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.					
a.	200 mm nominal size dia.	Metre	150.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
6.11	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	Cum	36.00			-
6.12	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	Cum	36.00			-
6.13	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer –in-charge.	Cum	36.00			-
6.14	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	Cum	7.50			-
6.15	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	Hour	100.00			-
6.16	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:					
a.	200 mm dia	Each	5.00			-
6.17	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.					
a.	200 mm clamp.	Each	5.00			-
6.18	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	200 mm dia	Each	5.00			-
7.0	**Water Supply and Drainage Pumps**					
7.1	Providing, installing, testing and commissining of factory assembled variable speed hydropneumatic system mounted on a common base plate comprising of Two Nos. vertical centrifugal pumping set with S.S body, stainless steel impeller and mechanical seal, shaft directly coupled to a TEFC induction motor suitable for 400/440 volts, 3 phase, 50 cycles AC supply with 150 mm dia pressure gauge with gunmetal isolation cock, vibration eliminating pads under foundation, one No. microprocessor based controller, two Nos. variable frequency drives, one No.remote sensors, transmitters, sequence running cotroller, dry running Protection,motor control centre, necessary power and control cabling from MCC to pumps including required rating of MCB, two Nos. required capacity M.S diaphragam tank with interchangeable butyl rubber membrane,complete in all respects including stainless steel grade 316 suction and delivery headers with required dia pipe and valves , power box, equipped with fuses/ isolators/circuit breakers as r labour,					
a.	**For Domestic Water Supply**					
	Set of two pumps **(1 Working + 1 Standby)**					
	Capacity - 7.0 LPS (Each)					
	Head - 65.0 M.					
	H.P. - 10.0 HP (Approx.)	Set	1.00			-
b.	**For Flushing Water Supply**					
	Set of two pumps **(1 Working + 1 Standby)**					
	Capacity - 4.0 LPS (Each)					
	Head - 65.0 M.					
	H.P. - 7.5 HP (Approx.)	Set	1.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
7.2	Providing, installing, testing and commissining of factory assembled fixed speed hydropneumatic system mounted on a common base plate comprising of one. vertical centrifugal pumping set with S.S body, stainless steel impeller and mechanical seal, shaft directly coupled to a TEFC induction motor suitable for 400/440 volts, 3 phase, 50 cycles AC supply with 150 mm dia pressure gauge with gunmetal isolation cock, vibration eliminating pads under foundation, dry running Protection,motor control centre, necessary power and control cabling from MCC to pumps including required rating of MCB, one Nos. required capacity M.S diaphragam tank with interchangeable butyl rubber membrane,complete in all respects including stainless steel grade 316 suction and delivery headers with required dia pipe and valves , power box, equipped with fuses/ isolators/circuit breakers as required.					
a.	**For Domestic Water Supply at Terrace Level**					
	Capacity - 5.0 LPS (Each)					
	Head - 22.0 M.					
	H.P. - 3.0 HP (Approx.)	Set	7.00			-
7.3	Providing, installing, testing and commissining of Vertical centrifugal pumping set (Imported) with S.S body and stainless steel impeller, mech. seal, connected to a TEFC induction motor suitable for 400/440 volts, 3 phase 50 cycles AC supply with sequence running cotroller, dry running Protection, 150 mm dia pressure gauge with gunmetal isolation cock, vibration eliminating pads under foundations, 80x40 mm I section base plate bolted to cement concrete foundations complete.					
a.	**Irrigation Pumps**					
	Set of two pumps **(1 Working + 1 Standby)**					
	Capacity - 4.0 LPS					
	Head - 40.0 M.					
	H.P. - 5.0 HP Approx.	Set	1.00			-
7.4	Providing, installing, testing and commissining of submersible single stage single entry pumps with C.I.body and C.I. two vane enclosed type impeller connected to TEFC submersible motor for 415 volts, 3 phase, 50 cycles A.C. power supply with mechanical seal, pump connector unit with rubber diaphram and bend, vertical discharge pipe, guide pipe and chain in built level controller, sequence running cotroller, dry running Protection complete in all respects.					
	(Pumps shall be installed in a set of two pumps One working and One standby)					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	**Basement Drainage Pumps**					
	(Pumps to be suitable to handle solids upto 12 mm size)					
	Capacity- 225 LPM (Each)					
	Head - 15 M					
	H.P. - 1.5 HP Approx.	Set	5.00			-
b.	**Sewage Sump Pumps**					
	(Pumps to be suitable to handle solids upto 40 mm size)					
	Capacity- 225 LPM (Each)					
	Head - 15 M					
	H.P. - 1.5 HP Approx.	Set	1.00			-
7.5	Providing and fixing G.I.pipes to I.S. 1239 (Heavy class) with G.I. fittings, flanges & clamps, including cutting and making good the walls etc. complete.					
a.	40 mm dia	Metre	25.00			-
b.	50 mm dia	Metre	30.00			-
c.	65 mm dia	Metre	50.00			-
d.	80 mm dia	Metre	40.00			-
e.	100 mm dia	Metre	60.00			-
f.	150 mm dia	Metre	20.00			-
7.6	Painting G.I. pipes (heavy class) with two or more coats of synthetic enamel paint of approved quality and shade over a coat of approved prming coat as directed by the Engineer-in-charge (shade as per pipe colour code).					
a.	40 mm dia	Metre	25.00			-
b.	50 mm dia	Metre	30.00			-
c.	65 mm dia	Metre	50.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
d.	80 mm dia	Metre	40.00			-
e.	100 mm dia	Metre	60.00			-
f.	150 mm dia	Metre	20.00			-
7.7	Providing and fixing cast iron wafer type butterfly valves (PN-16) complete with 2 nos. matching flanges (Table-E),bolts, nuts, 3.0 mm thick insertion neoprene gasket.					
a.	50 mm dia	Each	2.00			-
b.	65 mm dia	Each	12.00			-
c.	80 mm dia	Each	2.00			-
d.	100 mm dia	Each	2.00			-
e.	150 mm dia	Each	3.00			-
7.8	Providing and fixing of cast iron dual plate wafer type check valves (PN-16) including 2 nos. matching flanges (Table-E), nuts, bolts, 3.0 mm thick thick insertion neoprene gasket.					
a.	50 mm dia	Each	2.00			-
b.	65 mm dia	Each	12.00			-
c.	80 mm dia	Each	2.00			-
d.	100 mm dia	Each	2.00			-
7.9	Providing & fixing resilient rubber neoprene lined style arch vibration eliminators suitable for raw water upto pressure 20 kg/cm^2.					
a.	50 mm dia	Each	2.00			-
b.	65 mm dia	Each	12.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
c.	80 mm dia	Each	2.00			-
d.	100 mm dia	Each	2.00			-
7.10	Providing and fixing CI Y type suction strainer with gunmetal or brass internal parts installed outside water tanks.					
a.	100 mm dia	Each	2.00			-
b.	150 mm dia	Each	1.00			-
7.11	Design, manufacture, Supply, Installation, Testing & Commissioning of following wall mounted Starter Panel fabricated from 14 gauge CRCA sheet for load bearing member & 16 gauge CRCA sheet for non-load bearing members, dust and vermin proof with galvanized hardware interconnection wiring complete in all respects.					
a.	**For Sump Pump**					
	Incoming:-					
	One incoming main TPN MCB of 40 amp, 10 KA required rating.					
	Fully taped aluminum TPN 63 Amp. bus bar / copper wire of suitable size.					
	1 no. voltmeter with VSS.					
	3 Nos. LED type Phase indication lamps (R,Y,B) with 2A control MCB					
	one set of LED type ON, OFF indication lamps. (R,G)					
	Outgoings:-					
	02 Nos. TPN MCB of 20 A with 10 KA service breaking capacity for sump pump.					
	Two ampere meters one for each motor with ASS					
	02 Nos. Auto DOL Starter for 3.0 HP motor. Each shall have Auto/ Manual selector switch, over load relay, single phasing preventor, ON/OFF/ Trip indication lamps, ON/OFF push Buttons, contactor.					
	Space for one liquid level controllers.					
	All internal wiring colour coded from incoming mains to various switchgear, starter, meter, indicating lamp and bus bar. All the cable entry to the panel shall be from the top. (The shop drawing to be prepared and approved before fabrication)					
	Motor control centre as described above	Set	5.00			-
b.	**For Water Supply Pumps (At Pump Room)**					
	Incoming:-					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
	One incoming main TPN MCCB of 100 amp, 25KA required rating.					
	200 Amps TPN Aluminiun bus bars with heat coloured shrinkable insulation sleeve. - 1 Set					
	VAF digital electronic meter with inbuilt selector switch and 100/5 Amps suitable VA, CL 1 CTs . protected by MCB - 1 Set					
	Phase indicating light shall be protected by 2 Amps SP MCB's. - 1 Set					
	ON / OFF indicating lamps protected by MCB.					
	Outgoings:-					
	04 Nos. TPN MCB of 32 A with 10 KA service breaking capacity for irrigation pump & Sump Pump .					
	04 Nos. Amp meters with (0- 32 A) with required CT ratio and 2A control MCB, LED type ON/OFF/Trip indication lamps with auto manual selector switch.					
	02 Nos. TPN MCCB of 100 A with 25 KA service breaking capacity for domestic & flushing water hydropneumatic pumps. **(Only connection to inbuilt panel of domestic & flushing water hydropneumatic system)**					
	01 Nos. Amp meters with (0-160 A) with required CT ratio and 2A control MCB, LED type ON/OFF/Trip indication lamps with auto manual selector switch.					
	04 Nos. Auto DOL Starter 5.0-7.5 HP motor. Each shall have Auto/ Manual selector switch, over load relay, single phasing preventor, ON/OFF/ Trip indication lamps, ON/OFF push Buttons, contactor and suitable No. of Potential free contacts for remote / local operations, indication & interlocking and Building Management system.					
	Space for two sets liquid level controllers.					
	All internal wiring colour coded from incoming mains to various switchgear, starter, meter, indicating lamp and bus bar. All the cable entry to the panel shall be from the top. (The shop drawing to be prepared and approved before fabrication)					
	Motor control centre as described above	Each	1.00			-
7.12	Controllers with low voltage relays, stainless steel probes and PVC shroud, wiring from tank top to probes of required length. (No of probes as required for function of each controller).For Sump Pumps					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	To start pump when sump is full and to stop when sump is at low level and both pumps are start when sump is overflow	Each	8.00			-
7.13	Providing and fixing heavy duty PVC insulated copper armoured cables 1.1KVA grade including necessary support clamps at ceiling level and connection lugs complete in all respects.					
a.	Control cable for liquid level controller 2 core 1.5 mm^2	Metre	450.00			-
b.	Power cable 3 core 4 mm^2	Metre	100.00			-
c.	Power cable 3 core 6 mm^2	Metre	50.00			-
d.	Power cable 3 core 10 mm^2	Metre	50.00			-
8.0	**Fire Hydrant System**					
8.1	Providing and fixing mild steel pipes including all fittings like anchor fastners, couplings, bends, elbows, tees, flanges etc. welding as required, application of anti-corrosive treatment to buried pipes by 4 mm thick multi layer PYPKOTE membrane applied over a coat of primer as per manufacture's recommendations, including necessary trenching, refilling etc. complete.Pipes conforming to I.S.1239 (Heavy class)					
a.	80 mm dia	Metre	35.00			-
b.	100 mm dia	Metre	20.00			-
c.	150 mm dia	Metre	100.00			-
8.2	Providing and fixing mild steel pipes conforming to I.S.1239 (Heavy class) including all fittings like bends,elbows,tees,flanges, fastners,couplings, GI/MS hangers, clamps, supports (approved quality) as required etc.and painting of pipes and fittings with one coat of steel primer and two or more coats of synthetic enamel paint,welded or screwed joints as required, cutting holes and chases in brick or RCC walls and making good complete. (Internal work)					
a.	25 mm dia	Metre	210.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
b.	80 mm dia	Metre	795.00			-
c.	100 mm dia	Metre	555.00			-
d.	150 mm dia	Metre	655.00			-
8.3	Providing & fixing **SS fire hydrant landing valve** with 80 mm NB flanged inlet (Table-E Flange) , SS spindle controlled 63 mm dia female instantaneous outlet type. SS coupling, blank cap, chain, twist release type lug & all accessories Conforming to IS standards. Including flanged tapping from wet rise complete as required.					
a.	Single Landing Valve	Each	140.00			-
8.4	Providing and fixing first aid fire hose reel wall mounting swinging type fitted with 20 mm dia 36.5 m long high pressure (10.2 Kg/cm^2) themo plastic hose tube Type2, conforming to IS: 12585 Type II with 5 mm outlet stainless steel nozzle with shut off valve (I.S. 884-1969).	Each	117.00			-
8.5	Providing and fixing of Non-percolating flexible hose (RRL type-'B' with EPDM Lined) ISI marked (IS:636) 63 mm dia x 15 M long complete with instantaneous type stainless steel 63 mm dia. IS marked Male and female couplings (IS:903) bound and rivetted to hose pipe with copper rivets and 1.5 mm copper wire.	Each	280.00			-
8.6	Providing and fixing standard short size stainless steel branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(IS:903)	Each	140.00			-
8.7	Providing and fixing of gun metal Fire Brigade connection (Suction collecting head) consisting of 63 mm dia instantaneous type male coupling with built-in check valves and 150 mm dia.flanged outlet complete with bolts, nuts and rubber insertions as required as per IS:904-1983. (One for fire tank, One for sprinkler riser & One for wet riser connections)					
a.	Four way	Each	2.00			-
8.8	Providing and fixing of gun metal fire Brigade Suction Hose coupling (Draw-out Connection) with nut for female coupling as per IS:902- 1974 complete with 100 mm dia. G.I. Suction pipe and 100 mm dia. 1No. C.I. Foot valve flanged (to be connected to static water tank).	Each	1.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
8.9	Providing and fixing single acting air valve with screwed inlet 25 mm dia.	Each	9.00			-
8.10	Providing and fixing forged brass ball valve of approved quality with tested pressure PN 1.5 MPa (screwed end) 25 mm nominal bore.	Each	126.00			-
8.11	Providing and fixing of Weather proof hose cabinets fabricated from 18 g M.S. Sheet with full glass door and mortise locking arrangement , suitable to accommodate one Hydrant landing valve, 2 nos. 15 M long hose and 1 No branch pipe. The cabinet shall be painted with one coat of primer and finished stove enamelled "Fire Red", "Fire Hose" written on front including suitably mounted on a raised masonry platform as required. (Approx 0.75mx0.6 m x 0.25 m).	Each	14.00			-
8.12	Providing and fixing MS partly glazed single/double hung lockable shutter fabricated from MS section as required with 5 mm thick glass for fire station complete including stove enamelled painting of door and frame and words "Fire Hydrant" written on glass, suitable to accommodate 2 Hydrant landing valves, 1 fire hose reel, 2 nos.15m long 63 mm dia hose,1-branch pipe, 1no. fire man's axe, fire extiguishers 2 nos, including suitably mounted on a raised masonry platform as required. (Approx.size 0.90 m x 2.1m)	Each	126.00			-
8.13	Providing and fixing dial type pressure gauge with isolation cock and pipe at hydrant station.					
a.	Dial diameter 100 mm caliberation-0-15 kg	Each	140.00			-
8.14	Providing and fixing cast iron wafer type butterfly valves (PN-16) complete with 2 nos. matching flanges (Table-E),bolts, nuts, 3.0 mm thick insertion neoprene gasket.					
a.	100 mm dia	Each	9.00			-
b.	150 mm dia	Each	3.00			-
8.15	Providing and fixing of cast iron dual plate wafer type check valves (PN-16) including 2 nos. matching flanges (Table-E), nuts, bolts, 3.0 mm thick thick insertion neoprene gasket.					
a.	100 mm dia	Each	9.00			-
b.	150 mm dia	Each	2.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
9.0	**Fire Sprinkler System**					
9.1	Providing and fixing mild steel pipes conforming to I.S.1239 (Heavy Class) including all fittings like bends,elbows,tees,flanges, fastners,couplings, GI/MS hangers, clamps, supports (approved quality) as required etc.and painting of pipes and fittings with one coat of steel primer and two or more coats of synthetic enamel paint,welded or screwed joints as required,cutting holes and chases in brick or RCC walls and making good complete. (Internal work)					
a.	25 mm dia	Metre	11,780.00			-
b.	32 mm dia	Metre	1,870.00			-
c.	40 mm dia	Metre	2,250.00			-
d.	50 mm dia	Metre	3,650.00			-
e.	65 mm dia	Metre	1,895.00			-
f.	80 mm dia	Metre	2,120.00			-
g.	100 mm dia	Metre	1,590.00			-
h.	150 mm dia	Metre	2,900.00			-
9.2	Providing and fixing mild steel pipes conforming to I.S.1239 (Medium Class) including amking floor drain connection frm FHC all fittings like bends,elbows,tees,flanges, fastners,couplings, GI/MS hangers, clamps, supports (approved quality) as required etc.and painting of pipes and fittings with one coat of steel primer and two or more coats of synthetic enamel paint,welded or screwed joints as required,cutting holes and chases in brick or RCC walls and making good complete. (Drain Pipe)					
a.	80 mm dia	Metre	460.00			-
9.3	Providing and fixing 15 mm dia gunmetal sprinkler head with quartz bulb and set to operate at specified temperature.					
a.	Temperature of operation 68 deg. C.					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
i.	Pendent/Upright type (For exposed location)	Each	3,885.00			-
ii.	Side wall type (Normal Throw)	Each	2,650.00			-
iii.	Side wall type (Extended Throw)	Each	200.00			-
iv.	Semi concealed type with two piece adjustable rosette plate.	Each	675.00			-
9.4	Providing and fixing 15 mm dia forged brass window nozzle type sprinkler head (K-23, with an angle of 180 Degree) with a flow rate of 40 LPM at pressure of 3.0 Kg/cm2 .	Each	385.00			-
9.5	Providing and fixing of Deluge valve with automatic alarm system suitable for 100 mm dia pipe including with all necessary accessories to be connected with control valve drain and test valve as per manufacturer's design.	Each	20.00			-
9.6	Providing and fixing installation valve with turbine type automatic alarm to be connected with control valve drain and test valve as per manufacturer's design.					
a.	150 mm dia.	Each	3.00			-
9.7	Providing and fixing 25 mm dia inspecting & testing assembly with built in bye pass arrangement and connection to drain line.	Each	105.00			-
9.8	Providing and fixing single acting air valve with screwed inlet 25 mm dia. Tested for 25 kg/sq.cm pressure.	Each	9.00			-
9.9	Providing and fixing cast brass ball valve of approved quality with tested pressure PN16 (screwed end) .					
a.	25 mm nominal bore.	Each	10.00			-
b.	32 mm nominal bore.	Each	10.00			-
c.	40 mm nominal bore.	Each	2.00			-
9.10	Providing and fixing cast iron wafer type butterfly valves (PN-16) complete with 2 nos. matching flanges (Table-E),bolts, nuts, 3.0 mm thick insertion neoprene gasket.					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	65 mm dia	Each	2.00			-
b.	80 mm dia	Each	45.00			-
c.	100 mm dia	Each	36.00			-
d.	150 mm dia	Each	33.00			-
9.11	Providing and fixing of cast iron dual plate wafer type check valves (PN-16) including 2 nos. matching flanges (Table-E), nuts, bolts, 3.0 mm thick thick insertion neoprene gasket.					
a.	150 mm dia	Each	9.00			-
9.12	Providing and fixing electricaly operated flow indicating switches System Sensor in sprinkler branch line on each floor with necessary junction box installed in accessible place. (Wiring from switches to panel not included)					
a.	For 80 mm dia line	Each	45.00			-
b.	For 100 mm dia line	Each	36.00			-
c.	For 150 mm dia line	Each	27.00			-
9.13	Providing and fixing dial type pressure gauge with isolation cock and pipe.					
a.	Dial diameter 100 mm caliberation 0-15 kg	Each	105.00			-
10.0	**Fire Pumps & Accessories**					
10.1	Supply, installation, testing and commissioning of electrically driven high pressure centrifugal fire hydrant /sprinkler pump, suitable for automatic operation consisting of the following:					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	Horizontal, **split casing** centrifugal pump, suitable for operation on 415 volts ± 6%, 3 phase, 50 HZ AC supply. The installation shall be complete with flexible coupling and coupling guard as required. Fire pump shall have CI casing, CS diffusers, bronze impeller (hard finished and dynamically balanced) and SS (304) shaft with mechanical seal,**head of pump** to ensure a minimum pressure of 3.5 Kg/Sqcm at the farthest or top most hydrant / sprinkler. The installation shall be complete with necessary pressure gauge on delivery side.					
b.	Squirrel cage induction motor, TEFC type suitable for operation on 415 volts, 3 phase 50 HZ A.C supply, for the above pump with synchronous speed of 1450 RPM, conforming to IP 55 protection & class F insulation. The motor shall conform to IS 325-1978 (up to date).					
c.	Common base plate for (a) and (b) from M.S. Channel for required size.					
10.1.1	Main Pumps 2280 LPM @ 95 M.	Each	2.00			-
10.1.2	Water Curtain Pump 2280 LPM @ 50 M.	Each	1.00			-
10.2	Supply, installation, testing and commissioning of **jockey pump** (pressurisation pump) comprising of the following:					
a.	Vertical centrifugal multi stage pump, suitable for operation on 415 volts ± 6%, 3 phase, 50 HZ A.C supply. The installation shall be complete with Flexible coupling and coupling guard, complete as required.					
b.	The pump casing shall be CI, shaft shall be SS & impeller/ shaft sleeve/casing wearing ring shall be bronze. The pump shall be provided with mechanical seal The system shall be complete with necessary pressure gauge with gun metal shut off cock on delivery side.					
c.	Squirrel cage induction motor TEFC type for operation on 415 V, 3 phase 50 Hz AC supply for the above pump with a synchronous speed of **2900 RPM** as required.					
d	Common base plate for (a) and (c) from M.S. channel as required size.					
	For pump defined above & of duty as follows :					
10.2.1	For Main System Flow : 180 LPM @ 95 M. Head	Each	1.00			-
10.2.2	For Water Curtain System Flow : 180 LPM @ 95 M. Head	Each	1.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
10.3	Supply, installation, testing and commissioning of **Diesel Engine driven** fire pump suitable for automatic operation comprising of the following and conforming to BS 649/IS 10002 all amended upto date.					
	Horizontal, **split casing** centrifugal pump, suitable for operation on 415 volts ± 6%, 3 phase, 50 HZ AC supply. The installation shall be complete with flexible coupling and coupling guard as required. Fire pump shall have CI casing, CS diffusers, bronze impeller (hard finished and dynamically balanced) and SS (304) shaft with mechanical seal, capable for **delivering 2280 LPM at outlet head of 95 mts** to ensure a minimum pressure of 3.5 Kg/Sqcm at the farthest or topmost hydrant / sprinkler. The installation shall be complete with necessary pressure gauge on delivery side.					
	Heat exchanger cooled (secondary cooling) diesel engine of speed **1500 RPM** suitable for the above pump with automatic starting mechanism and other accessories including fuel tank (fabricated from 6mm MS sheet, painted with two coats of synthetic enamel paint over a coat of primer) of capacity adequate to sustain pump operation for 8 hours continuous working. The tank shall be fitted with Magnetic oil level indicator, MH with cover, drain valve, air vent including structural supports (painted with approved shade), 2 Nos. x 12 volt battery (alternator of engine and panel is suitable for 12 volt current rating) with stand heat exchanger with necessary piping connections & fittings complete as required.					
	Common base plate for (a) and (b) from M.S. channel of required size.	Each	1.00			-
10.4	Providing & fixing 150 mm diameter MS Class 'B' for diesel engine exhaust pipe (including all fittings, clamps, steel support) of suitable dia for the diesel engine. The pipe shall be provided insulation with fibre glass wool and wraped with 22g. aluminium sheet complete with all respect.	Metre	100.00			-
10.5	Supply, Installation, Testing & Commissioning of double flanged vertical air vessel fabricated shell from 10 mm thick & dished ends 10 mm thick M.S.plate, 450 mm dia and 2.00 m high common for fire and jockey pumps complete with four nos dual setting pressure switches to operate jockey and main pumps at drop of pressure as given in the specifications.	Each	1.00			-
10.6	Providing and fixing alarm system for fire pumps comprising audible hooter and red blinking lamp wired to pressure switch including cost of pressure switch mounted on air vessel complete in all respects.	Each	1.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
10.7	Providing and fixing heavy duty PVC insulated, PVC armoured conductor cables 1100 V grade including necessary support clamps and connection lugs complete in all respects.					
a.	Power cable 3 core 95 sq mm aluminium conductor armoured cable	Metre	60.00			-
b.	Power cable 3 core 10 sq mm copper conductor armoured cable.	Metre	50.00			-
10.8	Providing and fixing aprox. 9 M. long and 300 mm dia M.S. plate 8 mm thick rolled and welded pipe suction header with two inlets of 200 mm dia and three outlets of 150 mm dia, and two outlet of 80 mm dia, all outlets and ends with flanged connections blank flanges, painting with one coat of zinc chromate primer and two or more coats of synthetic enamel paint to give an even shade, structural supports as required common for fire hydrant and sprinkler systems.	Each	1.00			-
10.9	Providing and fixing aprox. 9 M. long and 250 mm dia delivery header fabricated from 8 mm thick M.S. plate rolled and welded, with three inlets of 150 mm dia, two inlet of 65 mm dia, two outlets of 150 mm dia, two outlets of 50 mm dia for pressure vessals, wafer type NRV gear operated butterfly valve of PN 1.6 rating including painting with one coat of zinc chromate primer and two or more coats of synthetic enamel paint to give an even shade and required structural supports. All outlets and inlets to be provided with MS flanges, the cost of which shall be included in the rate of header.	Each	1.00			-
10.10	Providing and fixing cast iron wafer type butterfly valves (PN-16) complete with 2 nos. matching flanges (Table-E),bolts, nuts, 3.0 mm thick insertion neoprene gasket.					
a.	80 mm dia.	Each	2.00			-
b.	100 mm dia	Each	6.00			-
c.	150 mm dia	Each	4.00			-
d.	200 mm dia.	Each	1.00			-
10.11	Providing and fixing of cast iron dual plate wafer type check valves (PN-16) including 2 nos. matching flanges (Table-E), nuts, bolts, 3.0 mm thick thick insertion neoprene gasket.					

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
a.	80 mm dia.	Each	2.00			-
b.	100 mm dia	Each	4.00			-
c.	200 mm dia.	Each	1.00			-
10.12	Providing and fixing resilient rubber neoprene lined single arch vibration eliminators with unit control suitable for raw water upto 45^0C temperature working pressure 12 kg and test pressure 20 kg/cm^2.					
a.	80 mm dia	Each	2.00			-
b.	100 mm dia	Each	6.00			-
c.	150 mm dia.	Each	4.00			-
11.0	**Hand Appliances**					
11.1	Providing and fixing carbon-di-oxide type fire extinguishers consisting of welded M.S. cylinderical body, squeeze lever discharge valve fitted with pressure indicating guage internal discharge tube 30 cms long high pressure discharge hose, discharge nozzle, suspension bracket conforming to IS:15683 finished externally with red enamel paint and fixed to wall with brackets complete with internal charge.					
a.	Capacity 4.5 Kg.	Each	126.00			-
11.2	Providing and fixing mechanical foam type fire extingushers consisting of welded M.S. trolley mounted cylindrical body, squeeze lever discharge valve fitted with pressure discharge hose, discharge nozzle, trolley etc., ISI marked as per IS:13386 finished externally with red enamel paint.					
a.	Capacity 50 lit (D.G.Room)	Each	1.00			-
11.3	Providing and fixing carbon-di-oxide fire extingushers trolley mounted with all accessories internal discharge tube,high pressure discharge hose,discharge nozzle, ISI marked as per IS:2878 finished externally with red enamel paint.					
a.	Capacity 22.5 kg.	Each	2.00			-

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
11.4	Providing and fixing ABC Powder type fire extinguishers consisting of welded M.S. cylinderical body, squeeze lever discharge valve fitted with pressure indicating guage internal discharge tube 30 cms long high pressure discharge hose, discharge nozzle, suspension bracket conforming to IS:15683 finished externally with red enamel paint and fixed to wall with brackets complete with internal charge.					
a.	Capacity 4.0 Kg.	Each	126.00			-
	SUB TOTAL ; PLUMBING WORKS					**-**

BILL OF QUANTITY

Construction of Residential campus including buildings and services on plot no B03, Phase 1, CBD Complex, sector 21 at Naya Raipur

Sl.No	Description	Unit	Quantity	Rate [In INR]	Rate in Words [In INR]	Amount [In INR]
C	**ELECTRICAL WORKS**					
C1.01	Supply and fixing of following sizes PVC Conduit along with accessories in concealed complete as required.					
a)	20mm dia.	Rmtr	15,290.00			-
b)	25mm dia.	Rmtr	14,950.00			-
c)	32mm dia.	Rmtr	1,780.00			-
C1.02	Providing & fixing of 6" Size Hexagonal Heavy Duty **Fan hook box** (made of 16 Guage M.S. Sheet with plain M.S.Rod of 12 mm dia x 450 mm long including primer and painting) in RCC Slab (Before Pouring of Concrete) and complete the work in all respect as per drawing, inclusive of all consumables, machineries and material , labour, overhead etc.all staging, scaffolding, chasing, chipping, breaking, repair etc.complete as per Specification and as directed by Engineer In-charge.	Nos	348			-
	SUB TOTAL ; ELECTRICAL WORKS					**-**