

Annexure -B

BILL OF QUANTITY_ INTERNAL PLUMBING				
SR. NO.	ITEM DESCRIPTION	UNIT	QTY	LIST OF MAKE
A1)	SANITARY WARES			
1.0	<p>Supply, Installation, Testing and Commissioning of Architect's/ client approved make, shade, glazed vitreous / Cloured European Water Closet conforming to Pattern 2 of IS: 2556 (Part -II), with concealed cistern tank with dual flush of 3/6 litre (IS-2326), The WC shall be comprising of the following:</p> <p>a) Concealed Cistern with comprising water saving dual flush 3Ltr/6Ltr.</p> <p>b) All standard accessories required to couple the concealed cistern with EWC from the manufacturer.</p> <p>c) Supports frame with fasteners/bolts for the water closet and concealed cistern tank.</p> <p>d) Matching coloured solid plastic seat & cover (as per IS-2548 Part-2,) heavy quality with rubber buffers fixed to the closet with CP brass pillar hinges.</p> <p>Cutting and making jari work etc. complete. Making civil & dry wall cutouts & closing shall be inclusive in the cost.</p>	Nos.	27	JAQUAR / PARRYWARE / HINDWARE
	<p>Supply, Installation, testing and commissioning of approved make wash Basin with overflow and with the following CP fittings and fixtures like Pillar Cock, 32 mm CP brass waste coupling with pop up waste system and 600 mm long braided hose and brass nuts, P trap/Bottel trap of chrome plated, 50 mm OD PVC waste pipe concealed in wall and taken up to the floor trap with necessary specials, 15 mm CP brass angular stop cock with wall flange with necessary fittings etc., complete. (All jointing material will be in vendor scope like Teflon tape etc.)Flow rate of WHB tap/faucet shall be 4lpm by using PCA technology flow aerator.</p> <p>The Wash Basin shall be comprising of the following:</p> <p>1) Basin as per achitecture drawing.</p> <p>2) CPBottle Trap</p> <p>2) CP Angular stop cock with 600mm long braided pipe.</p> <p>3) CP Waste coupling with pop up System.</p>	Nos.	5	JAQUAR / PARRYWARE / HINDWARE
2.0	<p>Supply, Installation, testing and commissioning of approved make wash Basin with overflow and with the following CP fittings and fixtures like Pillar Cock, 32 mm CP brass waste coupling with pop up waste system and 600 mm long braided hose and brass nuts, P trap/Bottel trap of chrome plated, 50 mm OD PVC waste pipe concealed in wall and taken up to the floor trap with necessary specials, 15 mm CP brass angular stop cock with wall flange with necessary fittings etc., complete. (All jointing material will be in vendor scope like Teflon tape etc.)Flow rate of WHB tap/faucet shall be 4lpm by using PCA technology flow aerator.</p> <p>The Wash Basin shall be comprising of the following:</p> <p>1) Basin as per achitecture drawing.</p> <p>2) CPBottle Trap</p> <p>2) CP Angular stop cock with 600mm long braided pipe.</p> <p>3) CP Waste coupling with pop up System.</p>	Nos.	20	JAQUAR / PARRYWARE / HINDWARE
3.0	<p>Supply, Installation, testing and commissioning of approved make wash Basin with overflow and with the following CP fittings and fixtures like Pillar Cock, 32 mm CP brass waste coupling with pop up waste system and 600 mm long braided hose and brass nuts, P trap/Bottel trap of chrome plated, 50 mm OD PVC waste pipe concealed in wall and taken up to the floor trap with necessary specials, 15 mm CP brass angular stop cock with wall flange with necessary fittings etc., complete. (All jointing material will be in vendor scope like Teflon tape etc.)Flow rate of WHB tap/faucet shall be 4lpm by using PCA technology flow aerator.</p> <p>The Wash Basin shall be comprising of the following:</p> <p>1) Basin as per achitecture drawing.</p> <p>2) CPBottle Trap</p> <p>2) CP Angular stop cock with 600mm long braided pipe.</p> <p>3) CP Waste coupling with pop up System.</p>	Nos.	12	JAQUAR / PARRYWARE / HINDWARE
4.0	<p>Supply, Installation, Testing and Commissioning of white vitreous china flat back with flush valve urinal of size 590x375x390mm as per IS-2556 (Part-2) with C.I. hangers and 15mm dia. C.P. spreader, with 40mm dia. C.P. waste Coupling, 32mm dia CP bottle trap and pipe to wall with C.P. flange complete including cutting and making good the walls and floors wherever required. Making civil & dry wall cutouts & closing shall be inclusive in the cost.</p>	Nos.	8	JAQUAR / PARRYWARE / HINDWARE

5.0	Supply,Installation, Testing and Commissioning of IWC-P of approved shade, conforming to Pattern 2 of IS: 2556 (Part -II), with SWR Self fit Soil PVC pipe and plug bend as per specifications; glazed vitreous / Colored Indian WC with S/ P trap- Water Closet (Squatting Orissa Type Pan) with concealed cistern tank with dual flush of 3/6 liter (IS-2326), with grouting the Pan in side the floor/wall , rubber gaskets, connecting PVC 110mm dia soil pipe with PVC coupling, trap, nuts, mounting cistern on WC., cutting and making jari work etc. complete. Making civil & dry wall and floor cutouts & closing shall be inclusive in the cost. Pls refer technical specifications for detailed requirement.	Nos.	8	JAQUAR / PARRYWARE / HINDWARE
A2) SANITARY FIXTURES & ACCESSORIES				
1.0	Supply,Installation, Testing and Commissioning of 2 way bib cock with C.P.Jet Spray, with 8mm Dia,1Rmt Long braided type Tube and accessories to complete the item. Making civil & dry wall cutouts & closing shall be inclusive in the cost.	Nos.	35	JAQUAR / PARRYWARE / HINDWARE
2.0	Supply ,Installation, Testing and Commissioning of 15mm dia pillar cock (Quarter turn type) for Washbasin , with required braided pipes from Pillar cock tap to angular stop cock etc complete.Making civil / dry wall cutouts & closing shall be inclusive in the cost.	Nos.	34	JAQUAR / PARRYWARE / HINDWARE
3.0	Supply of 15mm CP brass single lever concealed Bath Over head Shower and Hand Shower , spout, with adjustable type arm with wall flange with slipfit connection & hand shower with flexible pipe with bracket including all accessories.	Nos.	20	JAQUAR / PARRYWARE / HINDWARE
4.0	Supply, Installation, Testing and Commissioning of Wall mounted shower mixture 3 in 1 system for Bathroom. Which include single Lever wall mixture and Fitting with Built in Non return Valve with bend pipe for Dirty Utility pupose.	Nos.	5	JAQUAR / PARRYWARE / HINDWARE
5.0	Supply, Installation, Testing and Commissioning of Concealed 4way Diverter for shower with oprating lever face plate with built in non return Valve etc. complete. Making civil / dry wall cutouts & closing shall be inclusive in the cost.	Nos.	16	JAQUAR / PARRYWARE / HINDWARE
6.0	Supply ,Installation, Testing and Commissioning of 15mm dia Urinal Flush Valve for Urinal , with required braided pipes etc complete.Making civil / dry wall cutouts & closing shall be inclusive in the cost. (Executive Toilet)	Nos.	8	JAQUAR / PARRYWARE / HINDWARE
7.0	Supply, installation, testing & commissioning of Stainless Steel Sink of approved make, including and fixing with Stainless Steel Choke-stop strainer, 40 mm dia CP waste coupling full threaded. 40 mm dia flexible drain pipe. complete as per drawings and technical specifications. Conditions mentioned in item no.1 shall be applicable . b) Rate Quoted shall be inclusive of cost of cement, sand and other consumables like hacksaw blade etc.)	Nos.	5	NIRALI / NEELKANTH / FRANKE
8.0	Supply ,Installation, Testing and Commissioning of 15mm dia Sink cock (Quarter turn type) (for Kitchen sinks) , with required braided pipes from Pillar cock tap to angular stop cock etc complete.Making civil / dry wall cutouts & closing shall be inclusive in the cost.	Nos.	4	JAQUAR / PARRYWARE / HINDWARE
9.0	Supply,Installation, Testing and Commissioning of 15mm C.P. brass angle valve (Quarter turn type) with C.P. copper connecting pipe 450 mm long and nuts, washer and brass flange complete, including cutting and making good the wall where required. Making civil / dry wall cutouts & closing shall be inclusive in the cost. (For Geyser outlet and inlet)	Nos.	49	JAQUAR / PARRYWARE / HINDWARE
10.0	Supplying, Installing, Testing & Commissioning of PVC Nahani Trap 110 mm dia with CP/Pop up jali inside the toilet/Pantry filling area of minimum 50 mm water seal, making necessary cutting in slab or floors and making good including supports with cement concrete 1:3:6 complete as approved by Engineer-in-Charge.	Nos.	65	NEER/ ACO /
11.0	Receiving, checking, storing & fixing instant type water heater of 2.0 LTR. capacity including providing & fixing 2 nos. angular stop cock, 2 nos. non-return valve, 1 no. safety valve and steel wire pipe of size 15 mm of minimum 1 meter length for connecting geysers in bathroom.	Nos.	21	BAJAJ /RACOLD / AO SMITH

B)	INTERNAL WATER SUPPLY			
1.0	Providing and fixing, to wall, ceiling and floor, approved quality, CPVC SDR 11 pipes and fittings, conforming to ASTM D 2846, for sizes upto 50 mm and Sch 80 industrial piping for sizes above 50 mm confirming to ASTM F441, for supplies, approved make, including jointing with CPVC solvent cement and ensuring airtight joints, with necessary specials, couplers, unions, elbow, equal tees, tail piece, adapter (both male and female), reducer (single stage, double stage and triple stage), end cap, fabricated bend, etc., including testing, cutting, making good the wall, ceiling and floor etc. complete of the following nominal diameter (NB) size: For external exposed to atmosphere pipes covering of glass cloth with anti-weather lag coating to be done over the insulation material. Making civil / dry wall cutouts & closing shall be inclusive in the cost.			ASTRAL / SUPREME / PRINCE
1.01	15 mm dia	Rmt.	26	
1.02	20 mm dia	Rmt.	13	
1.03	25 mm dia	Rmt.	133	
1.04	32 mm dia	Rmt.	133	
1.05	40 mm dia	Rmt.	0	
2.0	Supplying, installation, testing and commissioning of full bore forged lever operated gun metal Ball valve (IS-9890 -1981) working pressure not less than PN10 with threaded joints complete with necessary specials, union, nipples, nuts, bolts, gaskets, washers etc.			ZOLOTO/ ARCO/ LEADER/ SANT
2.01	15mm dia.	Nos.	30	
2.02	20mm dia.	Nos.	9	
2.03	25mm dia.	Nos.	11	
2.04	32mm dia.	Nos.	6	
3.0	Providing, fixing, testing & commissioning of Forged Brass Air Release Valve on top of each riser of 15mm dia with full size NPT inlet and outlet connections with stop cock and all accessories as required.	Nos.	21	ZOLOTO/ ARCO/ LEADER/ SANT
C)	INTERNAL DRAINAGE :(SOIL, WASTE, VENT PIPES & FITTINGS)			
1.0	Supplying, fixing and testing Low Noise PP as per EN Standards with rubber ring joint inclusive of all necessary specials like bends, tees, offsets, doorbends, junctions, cowls, etc., laid under floor / fixed on walls, and etc., complete. Rate includes necessary MS angle brackets, hangers, supports as per detail drawing. and supporting sewerage drain pipe suitable GI U- clamps, bolts, nuts and washers etc. with MS grip bolts in columns / beams / walls / ceiling for fixing soil, waste and rain water pipe supports. The Brackets / clamps shall be painted with two coats of enamel (approved) paint over a coat of primer etc., complete.			ASTRAL / SUPREME / PRINCE
	Location: Exposed pipe/ Shaft Pipe			
1.01	50mm dia (6 kg/cm2)	Rmt.	126	
1.02	80mm dia (6 kg/cm2)	Rmt.	126	
1.03	110mm dia (6 kg/cm2)	Rmt.	126	
2.0	Supplying ,fixing, testing and commissioning of PVC pipe confirming to IS 4985 of Agricultural series - 6 kgs / sq.cm pressure rated, for underground soil, waste and vent laid under the soil from manhole to manhole outside the building, to the required slopes, jointing with solvent cement followed by application leak proof adhesives of FRP paste, including haunching / covering only the joints with cement concrete 1:3:6 at all the joints with and testing of joints with water column etc. complete.			ASTRAL / SUPREME / PRINCE
	Location: Internal Toilet			
2.01	40mm dia	Rmt.	68	
2.02	50mm dia	Rmt.	14	
3.0	Supplying, fixing, jointing, testing and commissioning of PVC pipes (Type B pipes for below concrete) confirming to IS : 13592 for pipe cut to required lengths including all necessary fittings and specials such as bends, junctions offsets, access pieces . Making proper connection followed by application leak proof adhesives of FRP paste, including haunching / covering only the joints with cement concrete 1:3:6 at all the joints with and testing of joints with water column etc.			ASTRAL / SUPREME / PRINCE
0.01	75mm dia	Rmt.	91	
0.02	110mm dia	Rmt.	74	
4.0	Supplying, fixing and testing Floor- trap (6 Kg/sqcm) 110 dia with necessary of multitrapp connection (heavy duty hinged type trap of 110 mm dia inlet and 75 mm dia outlet fixed on a bed of cement concrete etc.complete.	Nos.	32	ASTRAL / SUPREME / PRINCE

5.0	Supplying, fixing and testing Multi Floor- trap (6 Kg/sqcm) 110 dia with necessary of multitrapping connection (heavy duty hinged type trap of 110 mm dia inlet, 75 mm dia outlet and 50 mm dia three connections fixed on a bed of cement concrete etc.complete.)	Nos.	37	ASTRAL / SUPREME / PRINCE
D) REMOVING OF INTERNAL PLUMBING SYSTEM				
1.0	Removal, stacking and disposal of European water closet components. Disconnecting the water supply to the toilet and removing the flush plate, concealed cistern tank and from EWC bowl and seat cover. All detached EWC and its components should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.	Nos.	25	
2.0	Removal, stacking and disposal of Counter top wash Basin with components. Disconnecting the water supply to the wash basin and removing the angle valve, bottle trap, pillar cock, supporting frame / structure and wash basin. All detached wash basin and its components should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.	Nos.	2	
3.0	Removal, stacking and disposal of Pedestal wall mounted wash Basin. Disconnecting the water supply to the wash basin and removing the angle cock, bottle trap, pillar cock, CI supports and wash basin . All detached wash basin and its components should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.	Nos.	29	
4.0	Removal, stacking and disposal of Flat back Urinals. Disconnecting the water supply to the urinals and removing the urinal flush valve, trap, waste coupling and urinal bowl. All detached urinal and its components should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.	Nos.	4	
5.0	Removal, stacking and disposal of Indian water closet (Orissa Type Pan). Disconnecting the water supply and removing the flush tank, orissa type pan and its components. All detached IWC and its components should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.	Nos.	3	
6.0	Removal, stacking and disposal of Shower, Disconnecting the water supply and removing the over head shower, hand shower, spout, adjustable type arm, wall flanges , slipfit connections, flexible pipe , wall mounted shower mixture brackets including all accessories. All detached shower and its components should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.	Nos.	18	
7.0	Removal, stacking and disposal of kitchen sink. Disconnecting of water supply and removing the kitchen sink, angle valve, sink tap waste coupling, and trap. All detached sink and its components should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.	Nos.	2	
8.0	Removing, stacking and disposal of concealed water supply pipe line, Disconnecting of water supply and removing of concealed water supply GI pipe line, isolation valves and fittings. All detached GI pipes isolation valves, fittings and the debris should be stacked at the client / client representative's designated area. All detached material should be disposed by following the local waste management guideline or authorities, appropriate disposal method.			
8.01	15 mm dia	Rmt.	78	
8.01	20 mm dia	Rmt.	37	
8.02	25 mm dia	Rmt.	34	
8.02	32 mm dia	Rmt.	34	
8.03	40 mm dia	Rmt.	0	
All puddle flanges to be hot dip galvanised or epoxy coated.				

All masonry items like manholes & Covers (All chamber covers - HP composites), chamber for collection pits, water tanks, outer and inner walls of septic tank,UG sumps, over head tank,pump rooms, plant rooms,puddel flanges,core cutting etc., to be part of civil and not included in plumbing scope

All works shall be carried out to relevant specifications as enumerated elsewhere in the tender and as per the latest ISI specifications.

The contractor shall supply all fixing items like extension nipples, teflon tape, white cement, putty, coach screws, fischer bolts etc., for fixing Sanitary fixtures and CP fittings. The quoted rate for fixing the said items shall include the supply of all the above indicated items.

The Supply, Installation, Testing and Commissioning of Sprinkler / drip irrigation system for landscaping to be done by respective vendor or landscaping consultant and is not covered in the above BOQ.

BILL OF QUANTITY_ EXTERNAL PLUMBING

SR. NO.	ITEM DESCRIPTION	UNIT	QTY	LIST OF MAKE
E)	EXTERNAL WATER SUPPLY			
1.0	Supply, Installing, jointing, fixing testing and commissioning of approved make Polyethelene-Aluminium -Polyethelene (PE-AL-PE) Composite pipes are manufactured as per IS 15450 sizes from 1216 (16mm OD) 1620, 2025, 2532, 3240, 4050 and IAPMO IGC-India 308-2014 sizes from 1216, (16MM OD), 1620,2025,2532,3240,4050,5063,6375,7590 to 90110 (110 MM OD) pipes UV resistant with carbon black having thermal stability and fittings are composite compression or Brass compression for hot and cold water supply the fittings brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow, with clamps at 1.00 meter spacing. This includes necessary drilling holes, chasing walls and making the same good and testing of joints complete as per direction of the Engineer in charge. Wherever the pipes are crossing through the walls pipes should have sleeves in the wall and between pipe and sleeve should be sealed with silicone sealent.Annular space between pipe and sleeve provided wherever the pipes are crossing the wall will be sealed with glass wool in between & fire sealent compound at either end. (Water Transfer Line, inside shaft, and Loop piping)			KITEC / HULIOT / GEBERIT
1.01	40mm dia.	Rmt.	15	
1.02	50 mm dia	Rmt.	25	
1.03	65 mm dia	Rmt.	10	
2.0	Supplying, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50 mm dia SDR 11 as per IS 15778: 2007 & SDR 11 fittings as per ASTM D2846 / D2846M - 14, both of approved make., and above 50 mm dia CPVC Sch 40, Sch 80 Pipes as per ASTM F - 441 & Sch 80 fittings as per ASTM F439 - 13, both of approved make.. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc., with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., including necessary drilling holes, chasing walls and making the same good in as directed by the Engineer in-charge. Joints.Wherever the pipes are crossing through the walls pipes should have sleeves in the wall and between pipe and sleeve should be sealed with silicone sealent.Annular space between pipe and sleeve provided wherever the pipes are crossing the wall will be sealed with glass wool in between & fire sealent compound at either end . Cost shall be inclusive of all hangers, clamps, brackets etc. shall be of galvanized iron unless specified otherwise and then supply of the same shall also be included for rates under this head. Also rates including flusing and chemical cleaning of pipes.Charges for Labelling of pipe as per color schedule over painted surface of the pipes. All pipes are mentioned here is ID only. (Inside shaft, and Loop piping)			ASTRAL_FLO WGUARD / SUPREME / PRINCE
2.01	25mm dia.	Rmt.	126	
2.02	32mm dia.	Rmt.	126	
2.03	40mm dia.	Rmt.	17	
2.04	50mm dia.	Rmt.	168	
2.05	65mm dia.	Rmt.	168	

3.0	Supplying, installation, testing and commissioning of full bore forged lever operated gun metal Ball valve (IS-9890 -1981) working pressure not less than PN10 with threaded joints complete with necessary specials, union, nipples, nuts, bolts, gaskets, washers etc.			ZOLOTO/ AUDCO/ LEADER/ SANT
3.01	25mm dia.	Nos.	11	
3.02	32mm dia.	Nos.	11	
3.03	40mm dia.	Nos.	2	
3.04	50 mm dia	Nos.	7	
3.05	65 mm dia	Nos.	5	
4.0	Supply, Installation testing & Commissioning of Solenoid Valve with all required accessories like three ball valves, two union connectors, pressure gauge,float level, control panel etc. complete			DANFOSS / HONEYWELL / SIEMENS / EMERSON (AECO)
4.01	32mm dia.	Nos.	0	
4.02	40mm dia.	Nos.	0	
4.03	50mm dia.	Nos.	1	
5.0	Supply, Installation, Testing and Commissioning of HDPE pipes (Double wall corrugated) under ground in soft/ hard murrum with all required of rubber gaskets , RCC block/ supports, encasing etc., and as per the specified invert level and slope. As per the Detial Drawings and specifications. (per running meter cost include the necessary excavation, laying in position and back filling etc.) (For Garden water supply pipe line sleeve)			ASTRAL / SUPREME / PRINCE
5.01	150 mm dia. Foam Core SN8 Pipe	Rmt.	30	
F)	EXTERNAL DRAINAGE			
1.0	Supplying, fixing, jointing, testing and commissioning of PVC pipes (Type B pipes for below concrete) conforming to IS : 13592 for pipe cut to required lengths including all necessary fittings and specials such as bends, junctions offsets, access pieces .Making proper connection followed by application leak proof adhesives of FRP paste, including haunching / covering only the joints with cement concrete 1:3:6 at all the joints with and testing of joints with water column etc.			
1.01	110mm dia	Rmt.	30	
2.0	Supply, Installation, Testing and Commissioning of HD Polyethelene (PE) . pipes for Drainage Class SN4 Pipes for underground drainage and sewerage Under CODE -IS 4984 conforming to ISO-21138- 3:2007 with necessary This includes jointing of pipes & fittings with with one step food grade solvent cement . and testing of joints complete as per direction of engineer in charge. each collar joint with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand)			ASTRAL / SUPREME / PRINCE
2.01	250 mm dia.	Rmt.	36	
2.02	200 mm dia.	Rmt.	54	
2.03	150 mm dia.	Rmt.	60	
3.0	Excavating trenches in soil/rock for Soil & waste water pipes of required width for pipes etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 3.5 mtr. including backfilling in layers not exceeding 600 mm in width including consolidating each deposited layer by ramming, dewatering etc. and disposing of surplus excavated soil as directed, outside the site at designated dumping site keeping the Owner and Consultants indemnified.	Cu.M	101	
4.0	Constructing masonry inspection Chamber for Soil & waste water in 200 mm thick solid concrete block masonry in cement mortar 1:5 (1 cement :5 fine sand) for drainge, with heavy duty pre-cast FRP chamber cover fixed in FRP coping over masonry walls, including necessary excavation, foundation concrete 1:4:8 (1 cement :4 fine sand : 8 graded stone aggregate 40 mm nominal size), inside and outside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12mm thick, inside surface finished with a floating coat of neat cement complete including using waterproofing compound as per standard design.): (Sewerage drain chamber) For depth above 0.6 mtr. up to 1.4 mtr depth with below mention inspection/manhole Chamber sizes			MANHOLE CONSTRUCTE D LOCALY AT SITE COVER AND FRAME WILL OF :- THERMODRAI N/ TECHNO DRAIN / SIMTEX
4.01	600X600MM	Nos.	0	
4.02	600X900MM	Nos.	16	
4.03	900X900MM	Nos.	0	

	Supply, Installation, Testing and Commissioning of Square mouth uPVC gully trap grade 'A' complete in brick masonry gully trap chamber with 150 mm thick solid concrete block masonry and water tight double seal FRP cover with frame of 300 x 300 mm internal size. The weight of cover to be not less than 4.5 kg and frame to be not less than 2.70 kg. as per standard design.	Nos.	14	ASTRAL / SUPREME / PRINCE
5.0	Constructing masonry Circular Manhole for Soil & waste water in 200 mm thick solid concrete block masonry in cement mortar 1:5 (1 cement :5 fine sand) for drainage, with heavy duty GI recessed chamber cover fixed in coping over masonry walls, including necessary excavation, foundation concrete 1:4:8 (1 cement :4 fine sand : 8 graded stone aggregate 40 mm nominal size), inside and outside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12mm thick, inside surface finished with a floating coat of neat cement complete including using waterproofing compound as per standard design.): (Sewerage drain chamber) For depth above 1.2 mtr. up to 1.4 mtr depth with below mention inspection/manhole Chamber sizes			MANHOLE CONSTRUCTED LOCALY AT SITE COVER AND FRAME WILL OF :- THERMODRAIN/ TECHNO DRAIN / SIMTEX
	Above 1.2 m depth having Bottom Diameter 1.5 M	Nos.	2	
6.0	Supplying, fixing and testing Floor- trap (6 Kg/sqcm) 110 dia with necessary of multitrapp connection (heavy duty hinged type trap of 110 mm dia inlet and 75 mm dia outlet fixed on a bed of cement concrete etc.complete.	Nos.	4	KITEC / HULIOT / GEBERIT
7.0	Supplying, fixing and testing Car parking Drain with- trap (6 Kg/sqcm) 110 dia with necessary of multitrapp connection (heavy duty hinged type trap of 110 mm dia inlet and 75 mm dia outlet fixed on a bed of cement concrete etc.complete.	Nos.	4	KITEC / HULIOT / GEBERIT
G)	EXTERNAL STORM WATER DISPOSAL NETWORK			
1.0	Supplying, fixing and testing Low Noise PP as per EN Standards with rubber ring joint inclusive of all necessary specials like bends, tees, offsets, doorbends, junctions, cowls, etc., laid under floor / fixed on walls, and etc., complete..Rate includes necessary MS angle brackets, hangers, supports as per detail drawing for supporting sewerage water Providing pipes with suitable GI U- clamps, bolts, nuts and washers etc. with MS grip bolts in columns / beams / walls / ceiling for fixing soil, waste and rain water pipe supports. The Brackets / clamps shall be painted with two coats of enamel (approved) paint over a coat of primer etc., complete.			ASTRAL / SUPREME / PRINCE
	Location: External rain water pipe			
1.01	80 mm dia.	Rmt.	12	
0.01	110 mm dia.	Rmt.	161	
2.0	Supplying and fixing of Scupper Roof drain/Leaf trap with kurra made out of PVC with flange and grating for rain water outlets on terrace etc., complete.			ASTRAL / SUPREME / PRINCE
2.01	a) 110 mm dia side outlet	Nos.	14	
2.02	a) 80 mm dia side outlet	Nos.	4	
3.0	Supply, Installation, Testing and Commissioning of HDPE pipes (Double wall corrugated) under ground in soft/ hard murrum with all required of rubber gaskets , RCC block/ supports, encasing etc., and as per the specified invert level and slope. As per the Detial Drawings and specifications. (per running meter cost include the necessary excavation, laying in position and back filling etc.) (For Storm water Line, manhole connections)			ASTRAL / SUPREME / PRINCE
	Location: External rain water pipe			
3.01	250 mm dia. Foam Core SN-8 Pipe	Rmt.	36	
3.02	200 mm dia. Foam Core SN-8 Pipe	Rmt.	54	
3.03	150 mm dia. Foam Core SN-8 Pipe	Rmt.	60	
4.0	Excavating trenches in soil/rock for storm water disposal of required width for pipes etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.0 m including getting out the excavated soil, and then refilling the soil as required, in layers not exceeding 600 mm in width including consolidating each deposited layer by ramming, dewatering etc. and disposing of surplus excavated soil as directed, outside the site at designated dumping site keeping the Owner and Consultants indemnified.	Cu.M	101	

5.0	Constructing masonry inspection Chamber for Storm water in 200 mm thick solid concrete block masonry in cement mortar 1:5 (1 cement :5 fine sand) for Storm Water, with heavy duty pre-cast FRP chamber cover fixed in FRP coping over masonry walls, including necessary excavation, foundation concrete 1:4:8 (1 cement :4 fine sand : 8 graded stone aggregate 40 mm nominal size), inside and outside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12mm thick, inside surface finished with a floating coat of neat cement complete including using waterproofing compound as per standard design.):			MANHOLE CONSTRUCTE D LOCALY AT SITE COVER AND FRAME WILL OF :- THERMODRAI N/ TECHNO DRAIN / SIMTEX
5.01	600 x 600 mm	Nos.	4	
5.02	900 x 600 mm	Nos.	10	
5.03	1200 x 1200 mm	Nos.	0	
5.04	1500 x 1200 mm	Nos.	0	
6.0	Making connection to existing storm water line / existing drain including bracking them in a systematic way with suitable excavation, dewatering, dismantling of the RCC or masonry wall or pipe line, passing the storm water line in the existing structure either through masonry or CC and providing suitable "Y" tee to connect to existing pipe line, Reconstruction of dismantled existing structure according to the original one to bring to working conditions, testing etc. complete, work to be done in the presence of municipal eng. including all liaison cost.	Nos.	2	
7.0	Supply,Installation, Testing and Commissioning of ductile iron readymade grating for rain water channel with necessary angle work, water proofing and plastering work and making good for leakproof to drain rain water .300mm in width. To sustain the load of 10MT.	Rmt.	6	NECO/ THERMODRAI N /PRINCE
8.0	Supply and Installation of Twin flap backwater valve with emergency closure, Ø 200 made of polymer.With 2 polymer flaps, self-closing, one of which can be locked by hand as an emergency closure.Inlet/outlet for connection to PVC pipe according to DIN 19534.			ASTRAL / SUPREME / PRINCE
8.01	160 mm dia.	Nos.	1	
8.02	200 mm dia.	Nos.	1	
H)	PLUMBING VALVES AND ACCESSORIES FOR WATER SUPPLY IN PUMP ROOM			
1.0	Butterfly valves : Supply, installation, testing & commissioning of heavy duty valves PN-16 rated for all valves, except for AHU valve station which shall be with PN-10 Rating valves as specified and shown on the drawing complete with: a) Flanges for valves above 50 mm dia and screwed ends with flanges for valves below 50 mm dia. b) Additional supports c) Nuts, bolts, gaskets etc. d) with ports for balancing valves only 150 mm butterfly valves :			ZOLOTO / ADVANCE / SANT/ZOLOT O /LEHRY
1.01	65mm dia	Nos.	2	
1.02	50mm dia	Nos.	2	
2.0	Supply, Installation, Testing and Commissioning of SS Dial type 6" dia Pressure Gauge (range 0-15 kg/cm²) set with siphon tubing and pet cock of approved make & best quality.	Nos.	2	H-GURU / BAUMER /EMERALD
I)	REMOVING OF EXTERNAL PLUMBING SYSTEM			
1.0	Removal, stacking and disposal of CI pipes , Removing the CI pipes for External drainage system and its fittings including all accessories. All detached CI pipes and its components should be stacked at the client / client representative's designated area. All detached material sholud be disposed by following the local waste management guideline or authorities, appropriate disposal method.			
1.01	80mm dia	Rmt.	240	
1.02	110mm dia	Rmt.	120	
2.0	Removal, stacking and disposal of CI pipes , Removing the GI pipes for External drainage system and its fittings including all accessories. All detached GI pipes and its components should be stacked at the client / client representative's designated area. All detached material sholud be disposed by following the local waste management guideline or authorities, appropriate disposal method.			
2.01	25 mm dia	Rmt.	130	
2.02	32 mm dia	Rmt.	130	
2.03	40 mm dia	Rmt.	18	
2.04	50mm dia.	Rmt.	150	
2.05	65mm dia.	Rmt.	150	