



ARCHANA RAJ PLANNERS & CONSULTANTS

OFFICE ADDRESS: PANDIT SHANKER DUTT SHARMA MARG OPP.CIVIL LINES POLICE STATION.
0591-2414450, 09359438900(MORADABAD)

SCHEDULE OF WORK

FINISHING SPECIFICATIONS FOR PROJECT 'PEARL RESIDENCY-2'

- EXTERNAL SEWAGE AND STORM WATER DRAINAGE
- EXTERNAL WATER SUPPLY
- STP

SI.NO.	DESCRIPTION
A	EXTERNAL SEWAGE AND STORM WATER DRAINAGE
A.1	PIPING/SAUCER DRAIN WORKS.
1	Excavating trenches of required width for pipes, cables etc. including excavation for sockets and dressing of sides, ramming of bottoms, depth up to 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.
b	Pipes exceeding 300mm dia but not exceeding 600mm dia.
1.1	Extra for excavating trenches for pipes, cables, etc. in ordinary/hard rock exceeding 1.5 m in depth but not exceeding 3 m. (Rate is over corresponding basic item for depth up to 1.5 metre)
a	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia.
b	Pipes exceeding 300mm dia but not exceeding 600mm dia.
2	Providing and laying PVC PIPE (IS: 15328) including testing of joints etc. complete. (PCC below Pipe Shall be paid separately)
a	150 mm dia.
b	200 mm dia
c	250 mm dia.
d	300 mm dia.
2.1	Providing and Laying non pressure NP3 class R.C.C. pipes conforming to IS 458 with collars jointed with stiff mixture cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc. complete. (all round and up to haunching shall be paid separately) (for Hume pipe.)
a	300 mm dia. R.C.C. pipe
b	400 mm dia. R.C.C. pipe



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3	Providing and laying cement concrete 1:5:10 (1 cement: 5 fine sand: 10 graded stone aggregate 40mm nominal size) below S.W. pipes including bed concrete as per standard design (refer std. details).
a	150 mm dia. PVC. pipe
b	200 mm dia. PVC. pipe
c	250 mm dia..PVC. pipe
d	300 mm dia. PVC. pipe
4	Providing and laying Cast in Setu RCC Darin 450mm X 450mm with 75mm CC.
4.1	Providing and placing in position 100 mm thick factory made machine batched & machine mixed Precast RCC Rectangular Covers on drains of footpath of various sizes, of M-25 grade cement concrete for RCC work, including cost of centring, shuttering, reinforcement of 8 mm dia TMT bars of Fe 500 grade @ maximum 100mm c/c on both ways , neat cement punning on finished surface, properly encased on all edges with 1.6 mm thick , 100 mm wide MS sheet duly painted over priming coat , reinforcement to be welded at edges with MS sheet and providing 2 Nos. 12 mm dia bar for hooks etc i/c cost of cartage, all leads & lift, handling at site etc. all complete as per direction of Engineer-in-Charge.
A.2	CHAMBERS WORKS.
5	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), 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 :
	0.91 m - 1.60m 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 centring, shuttering all complete.(Including Excavation and 12 mm thick cement plaster atthe external surface.) :
a	With Sewer bricks conforming to IS : 4885



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5.1	Constructing brick masonry circular 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 (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 to 2.29 m deep with SFRC 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 centring, shuttering all complete. (Including Excavation and 12 mm thick cement plaster at the external surface.) :
a	With Sewer bricks conforming to IS : 4885
5.2	Constructing brick masonry circular manhole 1.52 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 (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 :
	Beyond 2.30 m deep with SFRC 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 centring, shuttering all complete. (Including Excavation and 12 mm thick cement plaster at the external surface):
a	With Sewer bricks conforming to IS :4885
A.3	HARVESTING PTS WORK.
5.7	Providing and executing reverse bore of rain water recharging comprising of rain water harvesting pit as per the the plumbing site plan drawing complete with PVC (6kg/cm ²)200 mm dia slotted pipe having having 3mm slot adequate size of bore filled with 3-6mm gravels compete with bail plug at bottom. The reverse bore shall be up to 300mm above water level and the execution of some shall be in accordance RWH detailed sketch and conservation manual of CPWD .Govt. of India . The cost shall be inclusive of all necessary excavation in all kind of soils, refilling and disposal of surplus earth with in the site or away from site as directed with-out any extra cost including required nos. 750 x 750 mm, Medium Duty, Wt : 125 kg, Ductile Iron cover with frame for Filter chamber. Filter Media shall be comprising of 300 mm thick 50-150 mm boulders, 300 mm thick 5-10 mm gravel and 300 mm thick coarse sand at the bottom of Pit below in 300 mm thick layer at the bottom of Filter chamber, below effective depth. All three layers shall be separated by G.I Wire Mesh screen of appropriate size.
5.7.1	Size- 4 mtr. diameter 3 mtr. water depth WD



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5.8	Constructing Distilling chamber/Oil Trap of brick work with bricks of class 75 with cement mortar 1:5 (1 cement:5 fine sand) plastering internal face with cement mortar 1:3 (1 cement: 3 fine sand and rough plaster on outer face with a floating coat of neat cement. R.C.C top slab with Heavy duty SFRC manhole cover and frame of 600 mm dia. The weight of cover to be not less than 58 kg & frame not be less than 58 kg as per standard design. Including excavation, dewatering, refilling, watering, ramming and removing the surplus excavated material complete as required. (All sizes are clear internal sizes). Depth shall be as per actual site condition and invert level.
5.8.1	Size 1500 x 1000 x 1000 mm water depth (Total Depth shall be as per invert level of site)
	SUB TOTAL OF --A
B	EXTERNAL WATER SUPPLY
6	Domestic Water supply/ Irrigation water supply/ treated water supply -Providing, laying and jointing in position HDPE PE 100 PN 6.0 main line pipe conforming to IS: 4984 and suitable for the respecting working pressure with all fittings complete. The jointing shall be butt fusion welding as per approved drawing and specification including excavation in all kind of soil, refilling, ramming, shoring, removing the excavated surplus material, providing adequate support to the pipe and making good the same complete as required. Rate shall include for dewatering necessary to execute the work. The pipe shall not be less than 1.0 m below ground level at any point.
	External work
a	25 mm dia nominal bore
b	50 mm dia nominal bore
6.1	Supply,installation ,testing & commissioning in position 25 mm dia lawn hydrants consisting of 25 mm dia Ball valve, GI nipple (1.5 metre length) and threaded hose receiver complete as required. The item includes taking a connection from the HDPE ring main via a connector.
6.2	Supply, installation, testing & commissioning of male/ female screwed end full way lever operated forged brass ball valve (PN 16) of brass body with forged brass ball & Teflon seat tested to a pressure 24 Kg / sq.cm with (threaded joints) complete as required.
a	15 mm nominal bore (WITH EACH WATER POINTS.)
b	50 mm nominal bore (FOR EACH JUNCTION OF IWS LINE.)
6.3	Supply, Installation, Testing and commissioning of slim seal type C.I. Butterfly valve confirming to IS 13592 (Body :Grey Cast Iron, shaft : SS, Disc : SG Iron (Rison coated), Liner : HT - EPDM) of approved make with PN 16 rating flange dimensions shall be confirming to IS 6392, washer, nuts & bolts. Rated to temperature of 85 Deg C and tested to a pressure not less than 24 Kg/Sq.cm.
a	80 mm nominal bore (IN PLANT ROOM.)
6.4	Constructing masonry Chamber 45x45x45 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with surface box with lockable arrangement, i/c 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 approved



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	drawing and specification :
a	With common burnt clay F.P.S.(non modular) bricks of class designation
	SUB TOTAL--B
C	STP
1	Supply, Installation , Testing & Commissioning of MBBR prefabricated 80 KLD STP with Clog pump, Irrigation pump etc.
	TOTAL--A (plumbing)
S.No.	Description
1	250 mm NP3 Hume Pipe Laying & Fixing
2	150 mm NP3 Hume Pipe Laying & Fixing
3	4 inch HDPE Pipe for Pole Connection & Street light poles
4	PCC for-250 mm Hume Pipe
5	PCC for 150mm Hume Pipe
6	Pole Foundation with conduits
7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone- III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone- III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) : With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5
	Total- B (Electrical)
	Toe Wall with Height 1 Mtr & plaster on Both side
	Total- C (Toe Wall)



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	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. With material conforming to Grade-II (size range 53 mm to 0.075 mm) having CBR Value-25 Thickness 200 mm
	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. Thickness 100 mm
	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centring, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. Thickness 150mm
	Paver Block
	Total- D (Road)
	Boundary Wall
	Supply & Construct Boundary wall with column at every 4M, 2 beam sand Expansion joint at every 24m Height of Boundary wall 2.4m above ground and 1.2m below
	Total- E (Boundary Wall)