

VOLUME II- PRICE BID SPECIFICATION
T.S.No BHE/PW/PUR/PIVVG-SNVP/1002

BOQ FOR SUPPLYING AND LAYING OF CI PIPELINE FOR SEWAGE NETWORKING ALONGWITH ASSOCIATED CIVIL WORKS AND PROVIDING AND APPLYING OF VINERATEX FINISH AT ALL ELEVATIONS IN VARIOUS PLANT AND NON PLANT BUILDINGS AT 2x350 MW PIPAVAV CAPP

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE (Rs) In Figures	RATE (Rs) In Words	AMOUNT
100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION, DRAWINGS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
101	Earth work in excavation upto 2m depth below ground level for foundation, trenches, pipe lines, storm water drains etc including setting out, clearing & grubbing, removal of debris, dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for all types of soils including ash, laterite, morrum, weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe pneumatic rock breaker attachment with poclain/excavator etc but does not require chiselling or blasting.	CUM	210			
102	Earth work in excavation upto 2m depth below ground level for foundation, trenches, pipe lines, storm water drains etc including setting out, clearing & grubbing, removal of debris, dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for hard rock requiring blasting/controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer.	CUM	490			

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103	Earth work in excavation for depth exceeding 2m but not exceeding 4m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for all types of soils including ash, laterite, morrum , weathered rock, decomposed rock, soft rock etc which can be excavated by means of crow bar, pick axe,,pneumatic rock breaker attachment with poclain/excavator etc but does not require chiselling or blasting.	CUM	330			
104	Earth work in excavation for depth exceeding 2m but not exceeding 4m below ground level for foundation, trenches, pipe lines, storm water drains etc including dewatering if required, strutting, shoring/sheet piling if required, dressing the sides, levelling to grade and stacking/disposal of surplus excavated material within a lead of 1.0 KM etc complete for hard rock requiring blasting /controlled blasting and/or chiselling, wedging, line drilling, pre shearing or any other means including supply, storage, handling of blasting materials etc without damaging the existing structures and as approved by Engineer.	CUM	770			
116	DISPOSAL OF SURPLUS EARTH					
a	Extra over item nos. 101 to 104 for disposal of surplus excavated earth/rock beyond an initial lead of 1km and up to a maximum lead of 2 Km. or part thereof	CUM	800			

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE (Rs) In Figures	RATE (Rs) In Words	AMOUNT
118	Back filling around foundations, in plinths etc to proper grade and level with selected soil within a lead beyond 1 Km but not exceeding 5Km from available excavated materials (from stock pile) including re-excavating loose thickness, watering and ramming/compacting in layers of 15cm thickness to atleast 90% of its maximum dry density by manual/mechanical means, dressing etc complete including transportation.	CUM	200			

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE (Rs) In Figures	RATE (Rs) In Words	AMOUNT
118a	Back filling around foundations and plinths trenches, drains etc to proper grade and level with selected excavated soil directly from excavation area within a lead of 1Km including watering and ramming/compacting in layers of 15cm thickness to at least 90% of its maximum dry density by manual/ mechanical means, dressing etc complete including transportation.	CUM	1000			
119	Supplying and filling sand under floors, in foundation and plinths including cost of sand, transporting for all leads, loading, unloading, spreading in layers in 25cm loose thickness at all depths, watering, compaction with mechanised compaction machine or manually to achieve a minimum 80% of relative density, dressing and levelling etc complete.	CUM	50			
200	PROVIDING AND PLACING CONCRETE WORK INCLUDING COST OF LABOUR, MATERIALS AND EQUIPMENT FOR HANDLING, TRANSPORTATION, BATCHING, MIXING, PLACING, VIBRATING AND CURING, (EXCLUDING COST OF CENTERING, SHUTTERING AND REINFORCEMENT) ETC COMPLETE AT ALL ELEVATIONS AS PER DRAWING, SPECIFICATIONS UNLESS SPECIFIED OTHERWISE AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
202	Plain Cement Concrete of grade M10/1:3:6 as levelling course , under water retaining structures, equipment foundations, under foundations/floors etc all complete.	CUM	21			
212 a	Concrete of Grade M-20 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size SRC cement of 33 grade	CUM	25			
212 b	Concrete of Grade M-30 conforming to IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size SRC cement of 33 grade	CUM	220			
213	Cement concrete 1:2:4 for Benching in sewage manholes with water proofing compound including cement punning finish as per IS 4111 and as directed by Engineer.	CUM	70			

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE (Rs) In Figures	RATE (Rs) In Words	AMOUNT
300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATION INCLUDING ALL LABOUR, MATERIAL, SCAFFOLDING COMPLETE INCLUDING POCKETS ETC AS PER SPECIFICATIONS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
301	Ordinary form work (reasonably good steel/plywood surface) below finished ground floor level for foundations, footings, bases of columns, walls, columns pilasters, beams, mass concrete, trenches etc.	SQM	90			
302	Fairface form work (using commercial laminated plywood with steel/wooden frame)below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc for exposed concrete works.	SQM	1700			
400	REINFORCEMENTS					
402	Taking delivery of steel from BHEL stores/store yard, loading, transporting and unloading at site, straightening, cutting, bending, placing in position at any level, binding in position of Tor steel reinforcements (TMT) supplied by BHEL free of cost, confirming to HCR -M Grade FE - 500 including cost of binding wire, labour, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. Only HCR -M Grade FE - 500, reinforcement steel shall be supplied by BHEL free of cost.	MT	32			
600	Supplying and laying of 25 mm Mastic sealant all around the pipe at Manhole joints including all labours, equipment and cost of sealing compound etc. complete as per specification and drawings or as directed by Engineer in charge.	SQM	10			

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE (Rs) In Figures	RATE (Rs) In Words	AMOUNT
1000	BRICKWORK MASONRY INCLUDING SUPPLY OF MATERIAL, COST OF LABOUR, SCAFFOLDING ETC COMPLETE AS PER SPECIFICATIONS, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
1001	Providing brick work in cement mortar 1:4 (1 part cement: 4 parts coarse sand) in walls, chambers etc of 230mm & above in thickness at all depths, places and positions below GL including raking out joints, curing, scaffolding etc. all complete excluding plastering and painting, using bricks of class designation 5 (crushing strength of 5N/sq.mm) quality of nominal dimensions as per specification.	CUM	10			
1007	Dismantling existing brick work at all level including stacking and removing the debris within a lead of 1Km., including transportation, loading, unloading, etc all complete and as directed by Engineer.	CUM	2			
1200	CEMENT MORTAR PLASTER INCLUDING MAKING GROOVES WHEREVER REQUIRED, ALL MATERIALS, SCAFFOLDING, CURING ETC COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
1201	Providing 20 mm thick plaster in two layers for the inside faces of manhole in cement mortar 1:3	SQM	32			
1202	Providing 12 mm thick plaster in cement mortar 1:5 for outside face of man hole the brick walls with smooth finish on the even side of the wall as per specification.	SQM	32			
1300	FINISHES, PAINTING TO CONCRETE, PLASTERED SURFACES, SURFACE PREPARATION INCLUDING ALL MATERIALS, LABOUR, SCAFFOLDING ETC ALL COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
1304a	Providing and applying Granular finish (vineratex) of 2mm thick of approved make and colour over External plain-faced cement plaster at all elevations for various buildings including material, labour, scaffolding, curing etc complete as per drawing and specification.	SQM	16000			
2200	SANITARY WORKS					

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	RATE (Rs) In Figures	RATE (Rs) In Words	AMOUNT
2208	Supply, laying and jointing 150mm diameter heavy duty cast iron pipes including bends, branches and all other necessary fittings, lead caulking, a coat of bituminous paint, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete as per specifications.	RM	1200			
2209	Providing and fixing C.I Manhole heavy duty cover of size 560mm dia square frame as per IS 1726/91 including frame from reputed manufacture all complete as per specifications.	Each	42			
2210	Supply and fixing of GI rungs with bitumen paint as per specifications, drawings and as directed by Engineer	Qtl	180			
GRAND TOTAL AMOUNT (IN FIGURES)						
GRAND TOTAL AMOUNT (IN WORDS)						