

BILL OF QUANTITY-CUM-PRICE SCHEDULE
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Name of Project : 765KV SUBSTATION AT WARDHA

Name of Work : CIVIL WORKS OF SUBSTATION

S.No.	Description of Item	Unit	Quantity	Unit Rate(Rs)	Amount(Rs)
1	Earthwork in excavation by mechanical means(Hydraulic excavator)/manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and disposal of excavated earth upto 100m and lift upto 3.5m, disposed earth to be levelled and neatly dressed.				
(a)	All kinds of soil .	cum	1000	101.85	101850.00
2	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and dressing of sides and ramming of bottoms, lift upto 3.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 100m.				
(a)	All kinds of soil .	cum	100	103.40	10340.00
3	Filling available excavated earth (including rock) in trenches, plinth, sides of foundations, etc., in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 100m and lift upto 3.5m.	cum	300	45.70	13710.00
4	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -.				
(a)	Lead upto 1 km.	cum	350	49.42	17297.00
(b)	Lead upto 3 km.	cum	350	63.32	22162.00
(c)	Lead upto 5 km.	cum	80	76.48	6118.40
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.				
(a)	1:2:4 (1 cement : 2coarse sand : 4 graded stone aggregate 20mm nominal size	cum	10	3257.45	32574.50

S.No.	Description of Item	Unit	Quantity	Unit Rate(Rs)	Amount(Rs)
(b)	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size)	cum	10	2713.05	27130.50
(c)	1:4:8(1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	cum	75	2449.00	183675.00
6	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering,finishing and reinforcement-All work up to plinth level				
(a)	1:1.5:3 (1 cement: 1.5 coarse sand:3 graded stone aggregate 20mm nominal size)	cum	650	3732.00	2425800.00
7	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars,piers,abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement:				
(a)	1:1.5:3 (1 cement:1.5 coarse sand:3 graded stone aggregate 20mm nominal size)	cum	60	4092.35	245541.00
8	Centering and shuttering including strutting, propping, etc., and removal of form at all heights for.				
(a)	Foundations, footings, bases of columns, etc., for mass concrete.	sqm	250	119.25	29812.50
(b)	RCC walls at all levels (any thickness).	sqm	700	180.40	126280.00
(c)	Lintels,beams,plinth beams and cantilevers.	sqm	80	162.65	13012.00
(d)	Columns, Pillars, Piers, Posts and Struts .	sqm	400	238.40	95360.00
9	Steel reinforcement -Cold twisted bars /TMT/HCR				
(a)	Including supply and bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete.	kg	25000	42.70	1067500.00
10	Structural steelwork welded in built up sections like edge protection angles, insert plates with lugs & framed work including providing, cutting, hoisting, fixing in position/ embedding in concrete and applying a priming coat of approved steel primer all complete.	kg	3500	46.35	162225.00
11	Steelwork welded in built up sections/framed work including providing, cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc., as required.				
(a)	In transformer gratings, ISMBs, ISMCs, rails, gates and similar works.	kg	25000	51.20	1280000.00

S.No.	Description of Item	Unit	Quantity	Unit Rate(Rs)	Amount(Rs)
12	Providing and fixing (all dia & length) foundation bolts in position with help of proper templates including supply of templates ,nuts and washers all complete as per specs, drawings & directions of Engr-in-Charge	kg	1000	62.75	62750.00
13	Extra over Item above for providing galvanised bolts (Mass of zinc coating = 610gms/sqm), nuts & washer .	kg	1000	8.00	8000.00
14	Fixing (all dia & length) foundation bolts in position with help of proper templates(template to be supplied by contractor) all complete as per specs, drawings & directions of Engr-in-Charge.Bolts to be provided by BHEL free of cost.	kg	500	6.50	3250.00
15	Providing and laying non-pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement: 2 fine sand) including testing of joints etc., complete.				
(a)	250mm dia. RCC pipe	RM	20	258.20	5164.00
16	Grouting of block outs, pockets, foundations, bolts holes and underside of base plates with ready mixed grout or grout consisting of 2 parts by weight of sand, 1 part by weight of cement including approved plasticizer, non-shrink admixture, in the required proportion as recommended by manufacturer/Engineer, including placing, curing, cleaning, surface preparation, testing, etc. complete with labour, materials, equipment, handling, testing, etc. all complete as per specifications, drawings and instructions of the Engineer.	cum	1.5	10000.00	15000.00
17	Filling of approved materials i/c cost of materials, labour and equipment for handling, transportation, placing and compacting as required to the required density and to the required elevations as per specification, drawings and directions of Engineer-in-Charge.				
	Broken/crushed/non crushed stone of size 40 to 60mm for placing over transformer grating.	cum	25	800.00	20000.00
18	Providing and Laying layerwise selected well compacted non-swelling soil below Concrete slab and foundations as necessary as per drawing and direction of Engineer -in-charge.	cum	550	427.00	234850.00

S.No.	Description of Item	Unit	Quantity	Unit Rate(Rs)	Amount(Rs)
19	Providing & fixing chainlink fencing including all allied activities, all complete as per customer's specification clause no. 8.0 , drawing and direction of Engineer incharge. (Rates shall be inclusive of all items like chainlink fence, galvanised tubular post, flats, PCC, painting etc.)	RM	70	1900.00	133000.00
20	Supplying and laying stone including antiweed treatment in the switchyard area as per customer's specification clause no. 4.0 & directions of Engineer in Charge (Rates shall be inclusive of 40mm size stone, antiweed and PCC (1:5:10) etc.).	sqm	1200	222.00	266400.00
21	Preparation and consolidation of subgrade with power road roller of 8 to 10 tonne capacity after excavating earth to an average of 22.5cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50m.	sqm	360	33.90	12204.00
22	Extra for compaction of earthwork in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (Proctor density)	cum	108	4.50	486.00
23	Supplying and stacking of graded stone aggregate at site of size range				
(a)	90mm to 45mm	cum	40	742.30	29692.00
(b)	63mm to 45mm	cum	40	768.45	30738.00
(c)	53mm to 22.4 mm	cum	28	810.55	22695.40
24	Laying spreading and compacting stone aggregate of specified sizes to WBM specifications including spreading in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10tonne in stages to proper grade and camber, applying and brooming requisite type of screening/binding material to fill up interstices of coarse aggregate water and compacting to the required density (payment for stone aggregate, screenings, kankar, moorum and red bajri etc., to be made separately)	cum	108	192.55	20795.40
25	Supplying and stacking of stone screenings/chippings at site				
(a)	13.2 mm nominal size (Type A)	cum	18	892.25	16060.50
(b)	11.2 mm nominal size (Type B)	cum	10	979.40	9794.00
26	Supplying and stacking of moorum at site.	cum	50	421.85	21092.50
	Total Amount				6772359.70