

## **BILL OF QUANTITY**

**Name of Project**

**: 400kV SWITCHYARD AT KOTHAGUDAM TPS**

**Name of Work**

**: BALANCE CIVIL WORKS FOR 400KV SWITCHYARD**

S.No.	Description of Item	Unit	Quantity	Unit Rate	Amount ( In Rs)
<b>1</b>	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.				
<b>(a)</b>	All kinds of soil.	cum	1000	125.95	125950.00
<b>(b)</b>	Ordinary Rock	cum	100	221.05	22105.00
<b>(c)</b>	Hrd Rock	cum	100	619.80	61980.00
<b>2</b>	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	800	125.75	100600.00
<b>3</b>	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 -.				
<b>(a)</b>	Lead upto 5 km.	cum	400	149.17	59668.00
<b>4</b>	Providing, laying and compacting boulder soiling ( stone aggregate 90-45 mm) of required thickness in layers not exceeding 100 mm in floor, foundations of equipment and under the floors as per direction of Engineer-in-Charge/technicl specification.	cum	20	806.70	16134.00
<b>5</b>	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.				
<b>(a)</b>	M15	cum	70	4943.80	346066.00
<b>(b)</b>	M10	cum	10	4415.45	44154.50
<b>6</b>	Providing and laying in position machine batched and machine mixed design <b>mix M25</b> 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 centering, shuttering, finishing and reinforcement, including admixtures in recommeded proportions as per IS:9103 to accelarate, retard setting of concrete, improve workability without impairing strength and durabiliy as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately)				
<b>(a)</b>	All works upto plinth level	cum	350	5887.43	2060600.50
<b>(b)</b>	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quintal	100	533.82	53382.00
<b>7</b>	Centering and shuttering including strutting, propping, etc., and removal of form for:				
<b>(a)</b>	Foundations, footings, bases of columns, etc., for mass concrete.	sqm	250	184.42	46105.00
<b>(b)</b>	RCC walls at all levels (any thickness).	sqm	100	369.24	36924.00
<b>(c)</b>	Columns, Pillars, Piers, Posts and Struts .	sqm	400	454.41	181764.00
<b>8</b>	Steel reinforcement -TMT Bars (Fe500 grade)				

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S.No.	Description of Item	Unit	Quantity	Unit Rate	Amount ( In Rs)
(a)	Including supply ,straightening,cutting, bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete.	kg	100	49.62	4962.00
(b)	Excluding supply but including unloading,storing,watch & ward ,handling , straightening,cutting,bending, binding (i/c cost of binding wire), placing in position, etc., all labour & material, complete.	kg	21500	12.83	275845.00
9	Grouting of block outs, pockets, foundations, bolts holes and underside of base plates 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.				
(a)	ConbextraGP-1 or equivalent	cum	1	8348.65	8348.65
10	Supplying & fixing galvanised (all dia & length) foundation bolts ( zinc coating 610 gm /sqm)in position with help of proper templates including nuts, washers and template all complete as per drawings & directions of Engr-in-Charge.	kg	2500	77.14	192845.20
11	Fixing (all dia & length) foundation bolts in position with help of proper templates( template to be supplied by contractor) including nuts and washers all complete as per specs, drawings & directions of Engr-in-Charge.(Foundation bolts shall be supplied by BHEL.)	kg	2500	36.93	92325.00
12	Applying two coat of residual petroleum bitumen of penetration 85/25 grade as per IS:702 of approved quality using 1.7 kg per sqm on concrete surface in contact with soil, after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	sqm	250	176.10	44025.00
13	Structural steelwork welded in built up sections like edge protection angles, pipes, 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	1000	51.36	51360.00
14	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
a)	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	kg	9000	78.07	702630.00
15	Providing, laying and fixing rails(52kg/rm) and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete.	kg	2000	56.66	113320.00
16	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	10	1454.55	14545.50
17	Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards.	cum	10	1386.53	13865.30
	<b>TOTAL</b>				<b>4669505</b>

**ANNEXURE-II**

**TRANSMISSION BUSINESS GROUP  
(SUB- CONTRACTS MANAGEMENT)  
TBG - NOIDA**

**PRICE SCHEDULE FORMAT**

**SUB: EXECUTION AND HANDING OVER OF BALANCE CIVIL WORKS OF: 400KV SWITCHYARD AT  
KOTHAGUDAM TPS**

(a) I/ We hereby agree to execute the above work at ----- % (in figure).....  
----- (in words) Above / Below/ At Par the rates of items given in BOQ  
(Annexure-I) of subject tender.

**NOTE:**

1. In this annexure the tenderer shall quote a percentage above/ below/At Par the rates shown in the Bill of Quantities (Annexure-I) of subject tender. The percentage quoted shall be clearly written both in words and figures In case of discrepancy in rates in figure and words, the minimum will be taken into account by BHEL.
2. The quoted percentage will apply to the individual items uniformly.

Date:

Place

Signature of tenderer

Name & Designation of authorized person(s) with seal

**ANNEXURE-III**

**SUMMARY OF PRICES FOR EXECUTION AND HANDING OVER OF BALANCE CIVIL WORKS OF: 400KV SWITCHYARD AT KOTHAGUDAM TPS**

<b>Sl No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
1	Total amount as per the rates in BOQ for EXECUTION AND HANDING OVER OF CIVIL WORKS BALANCE CIVIL WORKS OF: 400KV SWITCHYARD AT KOTHAGUDAM TPS (Annexure-I)	46,69,505
2	Value of percentage above/below/at par (As indicated in Price Schedule Format, Annexure-II) applicable to the total amount of civil work (Sl. no. 1 above)	.....% above/below/ at par
3	<b>Total amount after consideration of percentage above/below/ at par.</b>	