

BOQ cum Price Schedule (Annexure-I)

Name of Project: 765/400kV Sub-Station, Jeerat (West Bengal)

Name of Work: BALANCE CIVIL WORKS FOR 765KV S/S AND 400KV SPR BUILDING AT JEERAT IN WEST BENGAL

Sl. No.	DESCRIPTION	UNIT	Unit Rate (Rs.)	QTY	Total Amount (Rs.)
1	2	3	4	5	6
1	Earthwork in excavation 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 3.6m, disposed earth to be levelled and neatly dressed.				
(a)	All kinds of soil.	cum	125.95	3600	453420.00
2	Earthwork in excavation 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 3.6m, 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	166.40	100	16640.00
3	Extra for every additional lift of 1.5 m or part thereof in excavation /banking excavated or stacked materials.				
(a)	All kinds of soil.	cum	51.75	80	4140.00
4	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 3.6m.	cum	125.75	3000	377250.00
5	Supplying and filling in plinth with Jamuna/local sand under floors including watering, ramming, consolidating and dressing etc all complete	cum	810.82	5.0	4054.10
6	Supplying, filling and compacting stone boulders, hard core of stone ballast etc mixed with sand at the site under floors, foundations, roads, cable trenches, drains, etc. in layers not exceeding 200mm thickness including royalty, carriage etc. all complete, for all leads and lift with all labour, material, tools, tackles, equipments, safeguards & incidentals as necessary as per specification and direction - of - Engineer -in- charge.	cum	1645.41	10	16454.10
7	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 -.				0.00
(a)	Lead upto 1 km.	cum	98.34	400	39336.00
8	Supplying chemical emulsion in sealed containers including delivery as specified.				
(a)	Chloropyriphos emulsifiable concentrate of 20%	litre	157.45	5	708.53
9	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti- termite treatment (excluding the cost of chemical emulsion) :				
(a)	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall &rodding etc. complete:				
(i.)	With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration.	RM	16.80	40	672.00
(b)	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc.				
(i.)	With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration.	RM	24.30	40	972.00
(c)	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor :				
(i.)	With Chlorpyriphos/Lindane E.C. 20% with 1% concentration.	Sqm	131.90	40	5276.00
10	Providing and laying damp proof course 50mm thick cement concrete 1:1.5:3 (1 Cement:1.5 coarse sand : 3 graded stone aggregate 12.5 mm nominal size).	Sqm	293.35	13	3813.55
11	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7 kg per sqm on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	Sqm	88.05	13	1144.65
12	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering:				
(a)	1:4:8 (1 cement : 4 fine sand : 8 graded stone aggregate 40 mm nominal size)	cum	3919.79	60	235187.40
(c)	1:2:4(1 cement :2 fine sand : 4 graded stone aggregate 40 mm nominal size)	cum	4943.80	5	24719.00

Sl. No.	DESCRIPTION	UNIT	Unit Rate (Rs.)	QTY	Total Amount (Rs.)
1	2	3	4	5	6
13	Grouting of block outs, pockets, foundations, bolts holes and underside of base plates with cement, sand aggregate (of size 6 mm and down) grout 1:1:2 with non-shrink additive/grouting compound and shall be of strength not less than M30 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	7705.97	4	27741.49
14	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC work including pumping of concrete to site of laying but excluding the cost of centering, 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. - M25 grade. (Note:- Cement content considered in M-25 is @330 kg/cum).				
(i.)	All works up to plinth level	cum	5887.43	660	3885703.80
(ii.)	All works above plinth level to floor V level	cum	6691.00	20	133820.00
15	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Quintal	533.82	360	192388.73
16	Centering and shuttering including strutting, propping etc. and removal of form for :				
(a)	Foundations, footings, bases of columns, etc. for mass concrete.	Sqm	184.42	230	42416.60
(b)	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	369.24	219	80863.56
(c)	Suspended floors, roofs, landings, balconies and access platform.	Sqm	413.62	125	51702.50
(d)	Lintels, beams, plinth beams, girders, bressumers, chajjas and cantilevers.	Sqm	333.23	61	20367.02
(e)	Columns, Pillars, Piers, Abutments, Posts and Struts.	Sqm	454.41	1000	454410.00
17	Extra for additional height in centring, shuttering wherever required with adequate bracing ,propping etc. including cost of deshuttering and decentering at all levels over a height of 3.5 meter for every additional height of 1 meter or part thereof (Plan area to be measured).				
(i.)	Suspended floors, roofs, landing, beams and balconies.	Sqm	169.97	125	21246.25
18	Steel reinforcement of grade Fe-500/500D TMT bars				
(a)	Including supply (To be procured from SAIL/TISCO/RINL/IISCO or Powergrid approved source) and straightening, cutting,bending, binding, (i/c cost of binding wire), placing in position, chairs & laps etc. all labour & material complete at all level and heights.	Kg	49.62	2000	99240.00
(b)	Excluding supply but including straightening, cutting,bending, binding, (i/c cost of binding wire), placing in position, chairs & laps etc. all labour & material complete at all level and heights. (Note: Rates are also includes Unloading, storage, watch and ward etc for BHEL supplied Reinforcement).	Kg	11.11	38000	422180.00
19	Structural steel work 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	51.36	2200	112992.00
20	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 covering of floors/trenches of control room building with chequered plates, stringers, treads, landings, etc., of staircases involving use of chequered plates, wherever required, all complete.	Kg	56.66	3200	181312.00
(b)	In gratings, frames, ladders, stair railings, gates (including pipes), rails, ISMB, ISMC and similar works.	Kg	78.07	2000	156140.00
21	Brick work with common burnt clay F.P.S. bricks as per Technical Specification of class designation 7.5 in foundation and plinth including weep holes:				
	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4524.10	5	22466.68
22	Brick work with common burnt clay F.P.S.bricks as per Technical Specification of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes including weep holes :				
	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5355.29	21	112514.64
23	6mm cement plaster to ceiling of mix				
	1:3 (1 cement : 3 fine sand)	Sqm	138.39	86	11901.54
24	12mm cement plaster on the wall/ concrete surface in the mix:				
	1:6 (1 cement: 6 fine sand)	Sqm	154.72	180	27849.60
25	18mm cement plaster on roof in two coats with under layer 12mm thick cement plaster 1:5 (1 cement :5 coarse sand) finished with a top layer of 6mm thick 1:6 cement plaster(1cement : 6 fine sand)	Sqm	245.49	290	71192.10

Sl. No.	DESCRIPTION	UNIT	Unit Rate (Rs.)	QTY	Total Amount (Rs.)
1	2	3	4	5	6
26	Add for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	RM	34.15	67	2282.93
27	Making plinth protection of 50mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) laid over 75mm thick bed of dry brick balast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	Sqm	426.82	19	8152.26
28	Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-charge.	Sqm	136.33	19	2603.90
29	Providing and fixing chicken wire mesh on wall, floor & ceiling surface all complete as per drawing/specification and direction of Engineer-in charge.	Sqm	40.89	382	15619.98
30	Providing and laying polished vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS: 15622 of approved make in all colours and shades laid over 20mm thick cement mortar 1:4 (1 Cement:4 coarse sand) and jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. complete as per direction of Engineer-in charge.				
	Size of tile 60 x 60 cm	Sqm	990.82	19	18924.66
31	Providing and fixing approved quality polished vitrified tiles (thickness to be specified by the manufacturer) of approved make and colours in skirting, risers of steps and dados over 12 mm thick bed of Cement mortar 1:3 (1 Cement:3 coarse sand) and jointing with grey cement slurry @3.3 kg/sqm including pointing in white cement mixed with pigment of matching shade complete.				
	Size of tile 60 x 60 cm	Sqm	1010.07	10	9646.17
32	Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building, all complete as per the architectural drawings, with 18 mm thick stone slab over 20 mm average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand), laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge				
(a)	Polished Granite stone slab jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent.	Sqm	2560.03	8	20480.24
33	Providing and laying polished Granite stone 18-20mm thk in skirting and dado with 6mm thick projection from adjacent plaster including mortar, cement slurry, pigments, curing, grinding, moulding, granite polishing etc. all complete.	Sqm	3010.10	3	9030.30
34	Providing and fixing min. 20mm thick mirror polished, premoulded and prepolished, machine cut for column fascia, kitchen platforms, vanity counters, window sills, fascia and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing etc. complete at all levels and sizes				
(a)	Granite black or customer approved color	Sqm	2762.11	1	2762.11
35	Providing and applying white cement based putty of average thickness 1mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth as directed by engineer-in-charge for all level and height.	Sqm	82.18	200	16436.00
36	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete at all level and height	Sqm	117.08	200	23416.00
37	Applying priming coat				
(a)	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works.	Sqm	15.19	100	1519.00
38	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:				
(a)	Two or more coats on new work of approved brand and manufacture	Sqm	74.91	153	11446.25
39	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade at all level and height				
(a)	New work (two or more coats) over and including priming coat with cement primer. (Work to be carried as per relevant IS codes.)	Sqm	91.81	210	19280.10
40	Finishing walls/ Slab with Premium Acrylic Smooth exterior paint with Silicone additives of required shade at all level and height:				
(a)	New work : (Two or more coat applied @ 1.43 ltr/10 sqm over and including primer coat of exterior primer applied @ 2.20 kg/10 sqm).	Sqm	89.57	300	26871.00

Sl. No.	DESCRIPTION	UNIT	Unit Rate (Rs.)	QTY	Total Amount (Rs.)
1	2	3	4	5	6
41	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded builtup standard tubular and other sections of approved make conforming to IS: 733 and IS:1285, fixed with rawl plugs and screws or with fixing clips or with expansion hold fasteners including necessary filling up of gaps at junctions at top, bottom and sides with required PVC/neoprene felt, etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/panelling, CP brass/stainless steel screws, all complete as per architectural drawings and direction of Engineer-in-charge. (Glazing and panelling to be paid for separately).				
(a)	For Fixed Portion				
	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	334.55	24	8029.20
(b)	For shutters of doors, windows & ventilators including providing and fixing hinges/pivots and fittings wherever required including the cost of PVC/neoprene gasket required.				
	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	391.32	20	7826.40
42	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions, etc., with PVC/neoprene gasket, etc., complete as per the architectural drawings and directions of Engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item).				
(a)	With float glass panes of 5.5mm (minimum) thickness (weight not less than 13.75kg/sqm)	Sqm	886.51	35	31027.85
(b)	With 5.5mm (minimum) thick toughened reflective glass	Sqm	1581.79	25	39544.75
43	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	Each	590.20	4	2360.80
44	Providing and fixing aluminium sliding door bolts anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete.				
(a)	300 X 16 mm	Each	184.35	2	368.70
(b)	150 X 10mm	Each	55.22	2	110.44
45	Providing and fixing aluminium handles anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc., complete.				
(a)	125mm	Each	43.86	4	175.44
(b)	100mm	Each	38.77	2	77.54
46	Providing and fixing IS:3564 marked aluminium die cast body tubular type universal hydraulic door closer of approved quality and make with accessories and screws complete.	Each	358.96	5	1794.80
47	Providing and fixing pressed steel door frames manufactured from commercial mild steel sheet of 1.25mm thickness including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50X25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-Charge:				
(a)	Profile C	RM	318.17	28	8908.76
48	Providing and fixing ISI marked flush door shutters decorative type, core of block board construction with frame of 1st class hard wood and well matched real 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
(a)	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	Sqm	2148.42	10.0	21484.20
49	Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion, (i) Single socketed pipes including all fittings like bends, bat clamps gratings etc.				
(a)	110 mm diameter	RM	211.92	28	5933.76
50	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion Single socketed pipes.				
(a)	110 mm bend 87.5 degree	each	99.94	10	999.4
(b)	110 shoe plain	each	87.15	10	871.5

Sl. No.	DESCRIPTION	UNIT	Unit Rate (Rs.)	QTY	Total Amount (Rs.)
1	2	3	4	5	6
51	Making khurras 45X45cm with average minimum thickness of 5cm cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate of 20mm nominal size) over PVC sheet 1mX1mX400micron, finished with 12mm cement plaster 1:3 (1 cement: 3 coarse sand) and a coat of neat cement rounding the edges and making and finishing the outlet complete.	Each	178.17	8	1425.36
52	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with waterproofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement : 4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :				
(a)	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sqm	954.20	122	116412.40
53	Providing and fixing in position in culvert/road crossing/building PVC pipes conforming to IS : 12818 including jointing with seal all complete as per drawing and specification.				
(a)	150mm diameter	RM	211.92	2	423.84
54	Fixing of foundation bolts in position with help of proper templates (to be supplied by contractor) including nuts and washers all complete as per drawings & directions of Engr-in-Charge. Note: 1.) Weight of the template shall not be measured for payment purpose. 2.) The Dia and Length of BHEL Supplied Foundation bolt may vary upto 80mm & 2.4 metre respectively. 3.) Rates are also includes Unloading, storage, watch and ward etc for BHEL supplied Foundation bolt	Kg	9.20	6700	61640.00
55	Providing and laying non-pressure NP2 class (light duty) R.C.C. 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)	300 mm dia. R.C.C. pipe	RM	459.59	8	3511.27
56	Demolishing cement concrete manually/by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 meter lead as per direction of				
(a)	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	CUM	997.05	1	997.05
(b)	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	CUM	615.15	1	615.15
57	Demolishing R.C.C. work manually/by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 meter lead as per direction of Engineer-in-charge	CUM	1454.55	2	2909.10
TOTAL AMOUNT (Rs.)- Excluding GST					7818154.44

ANNEXURE-II

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

PRICE SCHEDULE FORMAT

**SUB: TENDER FOR "EXECUTION & HANDING OVER OF BALANCE CIVIL WORKS FOR 765 KV
SUB-STATION AND 400 KV SPR BUILDING AT JEERAT IN WEST BENGAL".**

TENDER NO.:- TBSM/JEERAT/BALANCE CIVIL/PKG-V/TENDER/20-21

DATE: 12.10.2020

(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)

Subject :- EXECUTION & HANDING OVER OF BALANCE CIVIL WORKS FOR 765 KV SUB-STATION AND 400 KV SPR BUILDING AT JEERAT IN WEST BENGAL.

Tender Spec. no.:- TBSM/JEERAT/BALANCE CIVIL/PKG-V/TENDER/20-21 DATE: 12.10.2020

Sl No.	Description	Amount (Rs.)
1	Total amount as per the rates in BOQ for " EXECUTION & HANDING OVER OF BALANCE CIVIL WORKS FOR 765 KV SUB-STATION AND 400 KV SPR BUILDING AT JEERAT IN WEST BENGAL" (Annexure-I)	78,18,154.44
2	Value of percentage above/below/at par (As indicated in Price Schedule Format, Annexure-II) applicable to the total amount of subject work (Sl. no. 1 above)% above/below/ at par
3	Total amount after consideration of percentage above/below/ at par.	
4	Total amount (in words)after consideration of percentage above/below/ at par.	