भारत हेवी इलेक्ट्रिकल्स लिमिटेड
(भारत सरकार का उपक्रम)
BHARAT HEAVY ELECTRICALS LIMITED
(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:MJA-C725:TCN-01 Date: 24-01-2007

Sub	Tender change notice (TCN) 01.Publication of tender notice in news dailies.	
Job	Complete site grading & leveling, foundation work of boiler & ESP, drains etc for 2x500 MW unit # 1 & 2 at Mejia-B TPS, West Bengal.	
Ref	1.0	Tender no PSER:SCT:MJA-C725:07.
	2.0	BHEL's NIT vide reference no PSER:SCT:MJA-C725:0796, dated 19-01-07.

With reference to above, following points, relevant to tender, may please be noted and complied with while submitting offer.

1.0 Sl no 4.0 of pre-qualifying criteria (A), Annexure-1, has been modified as per enclosed Annexure-A.

2.0 Sl no 4.0 & sl no 17.0 of NIT has been modified as per enclosed Annexure-B.

3.0 Volume-III, Price Schedule has been modified in line with above in two parts, Volume-IIIA & Volume-IIIB. Bidder to fill-in both the Price Schedules as per instructions and submit price offers in respective sealed envelopes as per instruction only in the enclosed modifand Price Schedules.

4.0 Pre-bid discussion (PBD) has been scheduled on 30-01-2007 at 16-00 hrs at BHEL office, Salt Lake, Kolkata. Interested bidders are requested to participate in the PBD.

5.0 All other terms & conditions shall remain unchanged.

Based on above, you are requested to submit your offer by due date.

Thanking you,

Yours faithfully,
for BHARAT HYEAVY ELECTRICALS LTD

DGM (SCT)

Encl: As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)
POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091
फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211691

Annexure-A

Modified sl no 4.0 of pre-qualifying criteria.

SL NO	CRITERIA	REFERENCE ANNEXURE NO OF SUPPORTING DOCUMENT
4.0	SHOULD HAVE EXECUTED ANY CIVIL JOB INVOLVING EXCAVATION, FILLING, CONCRETING ETC DURING LAST 7 (SEVEN) YEARS, ENDING ON 21-12-06, VALUE OF WHICH SHOULD BE EITHER OF FOLLOWING. RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.	

Annexure-B

Modified sl no 4.0 of NIT

4.0 The offers shall be sent in four (4) separate sealed envelopes. Complete set of offer shall be sent to BHEL, PSER, Kolkata as per address given below and to other addressee as per following details.

Sl no	Description	No of copy
I. COVER-I (TECHNO-COMMERCIAL BID)		
I.a	Offer forwarding/ covering letter.	Original & 1 copy.
I.b	Duly filled-in `No deviation certificate' as per prescribed format to be placed after document under sl no I.a above. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no I.a above. It shall be specifically noted that deviation recorded elsewhere shall not be entertained.	Original & 1 copy.
I.c	Techno-commercial offer enclosing supporting document/ annexure/ schedules/ drawing etc as required in line with prescribed format. It shall be specifically noted that all documents as per above shall be indexed properly.	Original & 1 copy.
I.d	Duly filled-in annexures, formats etc of Volume-IE.	Original & 1 copy.
I.e	All volumes of tender document pertinent for the subject job together with subsequent changes in the tender in the form of TCN, correspondences etc, signed on all pages.	Original.
I.f	Volume – IIIA & IIIB (BOQ cum schedule of Price Schedule) – un-priced (without disclosing rates/ price for Volume-IIIA and without disclosing % for Volume-IIIB), **but** mentioning only **`quoted/ unquoted' for Volume-IIIA and `indicated % of total price against each item' for Volume-IIIB** against each item of schedules.	Original.
I.g	Cost of tender (if applicable).	
I.h	Any other details preferred by bidder with proper indexing.	Original.
IIA. COVER-IIA (PRICE BID/ABSOLUTE VALUE)		
II.a	Copy of offer forwarding/ covering letter (as referred in I.a).	1 copy.
II.b	Duly filled-in Volume-IIIA (BOQ-cum-price schedule in absolute value) together with signed preamble in separate sealed envelope.	Original.
IIB. COVER-IIB (PRICE BID/PERCENTAGE VALUE)		
IIIa	Copy of offer forwarding/ covering letter (as referred in I.a).	1 copy
IIIb	Duly filled-in Volume-IIIB (BOQ-cum-price schedule in percentage value) together with signed preamble in separate sealed envelope	Original
III. COVER-III (EMD)		
Demand Draft etc towards EMD as per instruction (if applicable).		
IV. COVER-IV		
All three aforesaid covers in sealed condition shall be enclosed in this cover. This cover shall be super-scribed with (i) Cover no; (ii) Details of enclosed covers and (ii) Name of the job, tender document no & due date of submission.		

SPECIAL NOTE

A) Your offer & documents submitted with the offer shall be signed and stamped in each page by your authorised representative. No overwriting/ correction in tender

documents by bidders shall be allowed. However, if correction is unavoidable, the same may be signed by authorized signatory.

B) All documents/ annexures submitted with the offer shall be properly annexed and placed in respective places of the offer as per enclosure list mentioned in the covering letter. BHEL shall not be responsible for any missing documents.

Modified sl no 17.0 of NIT

17.0 BHEL reserves the right to decide the successful bidder on the basis of reverse auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for reverse auction process prior to Reverse Auction and price will be decided through reverse auction process only. As such, sealed envelope containing price bid (Cover – IIA corresponding to Volume-IIIA) will not be opened, but, sealed envelope containing price bid (Cover-IIB) will be opened for deriving the absolute value of each item on the basis of closing price and percentage value quoted in Price Schedule Volume-IIIB.

However, if reverse auction process is not adopted or is unsuccessful for whatsoever reason, Price Schedule (Volume-IIIA) contained in sealed envelope (Cover-IIA) will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.

TENDER NO	**PSER:SCT:MJA-C725:07**	
VOLUME	**IIIA**	**PRICE SCHEDULE, REV-1**

JOB	**COMPLETE SITE GRADING & LEVELING, FOUNDATION WORK OF BOILER & ESP, DRAINS ETC**
CAPACITY	**2 x 500 MW UNIT # 1 & 2**
PROJECT	**MEJIA-B THERMAL POWER STATION, WEST BENGAL**

BHARAT HEAVY ELECTRICALS LIMITED
(A Govt Of India Undertaking)
POWER SECTOR – EASTERN REGION
PLOT – DJ 9/1, SECTOR II, SALT LAKE
KOLKATA – 700 091

VOLUME-IIIA PRICE SCHEDULE, REV-1	
Complete site grading & leveling, foundation work of boiler & ESP, drains etc for 2x500 MW unit # 1 & 2 at Mejia-B Thermal Power Station, West Bengal.	
TENDER NO - PSER:SCT:MJA-C725:07	
PREAMBLE	
1.0	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with other volumes of tender as applicable.
2.0	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
3.0	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4.0	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the tender document and this schedule.
5.0	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains within thirty percent (± 30%) of the contract price.
6.0	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same.
7.0	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
8.0	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted.
9.0	The tender shall be deemed to have studied the specifications, details of work to the done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
10.0	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.

VOLUME-IIIA
PRICE SCHEDULE, REV-1

Complete site grading & leveling, foundation work of boiler & ESP, drains etc for 2x500 MW unit # 1 & 2 at Mejia-B Thermal Power Station, West Bengal.

TENDER NO - PSER:SCT:MJA-C725:07.

SL NO	ST NO	DESCRIPTION	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
1.0		Earth work in stripping of top soil upto a minimum depth of 0.20 mtr below ground level so as to exclude all debris, grass, vegetation, bushes, trees including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/ stripped surface by manual or mechanical means, disposal of stripped materials within a lead of 1 km etc as per specification, drawing and as directed by the engineer.	480000	SQM		
2.0		Earth work in excavation upto any depth in all types of soil and soft rock including ash, laterite, moorum, weathered rock, decomposed rock etc which can be excavated by means of crow bar, pick axe etc but does not require chiselling or blasting, for levelling and grading including dressing the sides, leveling to grade, ramming/ compacting the graded surface, stacking/ disposal of surplus excavated material within a lead of 1 km etc complete as per specification, drawings and as directed by the engineer.	660000	CUM		
3.0		Earth work in excavation upto any depth in hard rock requiring blasting/ controlled blasting and/ or chiselling, wedging, line drilling, pre shearing or any other means without damaging the existing structures including supply, storage & handling of blasting materials etc, for levelling and grading including dressing the sides, leveling to grade, ramming/ compacting the graded surface, stacking/ disposal of surplus excavated material within a lead of 1 km etc complete as per specification, drawings and as directed by the engineer.	85500	CUM		
4.1		Disposal of surplus excavated earth beyond an initial lead of 1km and upto a lead of 3 km including leveling the dumped soil, compaction etc all complete as per specification and as directed by the engineer.	315000	CUM		
4.2		Disposal of surplus excavated earth beyond an initial lead of 1 km and upto a lead of 5 km including leveling the dumped soil, compaction etc all complete as per specification and as directed by engineer.	100000	CUM		
5.0		Earth work in filling for levelling and grading using selected excavated earth from compulsory excavations inside the project site on prepared surface obtained by compacting with mechanical means including setting out, filling in horizontal layers not exceeding 250 mm compacted thickness, spreading, sorting, breaking clods, watering, compaction with proper moisture content to achieve a minimum 95 % of maximum dry density (standard Proctor Density), dewatering (if required), testing, approaches, finishing to required lines, grades and slopes, levelling etc complete as per specification, drawing and as directed by the engineer.	325000	CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
6.0		Earth work in filling for levelling and grading using borrowed good earth (borrowed good earth to be arranged by the contractor at his own cost) on prepared surface obtained by compacting with mechanical means including setting out, filling in horizontal layers not exceeding 250 mm compacted thickness, spreading, sorting, breaking clods, watering, compaction with proper moisture content to achieve a minimum 95 % of maximum dry density (standard Proctor Density), dewatering (if required), testing, approaches, finishing to required lines, grades and slopes, levelling etc complete as per specification, drawing and as directed by the engineer.	25000	CUM		
7.0		Providing, stacking and laying 300 mm thick boulder pitching on the slopes of earth fill/cut with approved quality of rock fragments including materials, necessary excavations if any, compaction etc complete as per specification, drawing and as directed by the engineer.	9900	CUM		
	100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION AND DRAWING FOR BOIER & ESP FOUNDATION, RETAINING WALLS ETC				
8.0	101	Earthwork in excavation including providing coffer dams, shoring, strutting, sheeting, bracing, draining and pumping out water other than water below ground water table, clearing all grass, vegetation etc., trimming of excavation bottom, staking, levelling, grading, lift of 2 m below ground level, lead of upto 100 m, loading, unloading etc. of excavated materials all complete as per specifications, drawings and instructions of the engineer in charge.				
8.1	i)	In all types of soils including expansive soil, ash, morrum, laterite.	22531	CUM		
8.2	ii)	In soft rock and weathered rock which can be excavated by means of crow bar, pick axe etc but does not require chiselling, chemical grouting and blasting.	21861	CUM		
8.3	iii)	In hard rock, by means of controlled blasting including provision of sensor to assess the impact of blast on the adjacent structures.	2257	CUM		
8.4	iv)	In hard rock (blasting prohibited) by means of chiselling, wedging etc.	544	CUM		
9.0	102	Extra over item 101 above, for all types of soil/ rock, for additional lifts beyond the initial lift of 2 m for the following etc all complete as per specifications, drawings and instructions of the engineer in charge (cost of excavation and lift down to 2 mtr depth below ground level shall not be included in this item).				
9.1	i)	Lift in all types of soils.				
9.1.1	a	Lift beyond 2 m and upto 4 m.	4719	CUM		
9.1.2	b	Lift beyond 4 m and upto 7 m.	274	CUM		
9.2	ii)	Lift in all types of rocks.				
9.2.1	a	Lift beyond 2 m and upto 4 m.	15597	CUM		
9.2.2	b	Lift beyond 4 m and upto 7 m.	7630	CUM		
9.2.3	c	Lift beyond 7 m and upto 10 m.	183	CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
10.0	103	Extra over item 101 above for excavation below ground water table including lowering of ground water table to maintain dry working conditions for all activities up to filling/testing, water proofing all complete as per specifications, drawings and instructions of the engineer.	33296	CUM		
11.0	104	Extra over item 101 above for carriage of all types of excavated materails beyond the initial lead of 100 m (initial lead, loading and unloading included in item 101 above) all complete as per specifications, drawings and instructions of the engineer for the following leads.				
11.1	i)	Carriage beyond initial lead of 100 m but not exceeding 500 m	5599	CUM		
11.2	ii)	Carriage beyond 500 m and not exceeding 2 Km.	5599	CUM		
11.3	iii)	Carriage beyond 2 Km and not exceeding 5 Km.	1400	CUM		
11.4	iv)	Carriage beyond 5 Km and not exceeding 10 Km.	1400	CUM		
12.0	105	Filling using selected excavated materials in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc in layers not exceeding 250 mm thickness including lead upto 100 m and all lifts and including loading from stock pile, carting, unloading, filling, watering and compacting/ ramming each layer, all complete as per specifications, drawings and as directed by the engineer to achieve the following densities.				
12.1	i)	Ordinary manual compaction.	1511	CUM		
12.2	ii)	90% Standard Proctor density.	27199	CUM		
12.3	iii)	95% Standard Proctor density.	1511	CUM		
13.0	106	Filling using selected excavated materials directly from excavation area in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc in layers not exceeding 250 mm thickness including all lifts, filling, watering and compacting/ ramming each layer, all complete as per specifications, drawings and as directed by the engineer to achieve the following densities.				
13.1	i)	Ordinary manual compaction.	130	CUM		
13.2	ii)	90% Standard Proctor density.	2347	CUM		
13.3	iii)	95% Standard Proctor density.	130	CUM		
14.0	107	Filling using selected materials in trenches, plinths, sides of foundations, in the space below the grade level slab and other under ground structures, pipes etc in layers not exceeding 250 mm in thickness including all lifts and including excavating, loading, unloading, carting, filling, watering and compacting/ ramming each layer, all complete as per specifications, drawings and as directed by the engineer for the following works.				
14.1	i)	With selected soil brought from borrow areas arranged by contractor, including royalties, fees etc.for all leads and compacted to following densities.				
14.1.1	a	90% Standard Proctor density.	634	CUM		
14.1.2	b	95% Standard Proctor density.	70	CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
14.2	ii)	With selected sand brought from quarries/ river bed arranged by contractor, and compacting to 80% relative density etc for all leads.	362	CUM		
	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) COMPLETE AS PER DRAWING AND SPECIFICATIONS UNLESS SPECIFIED OTHERWISE FOR THE FOLLOWING.				
15.0	201	Concrete of grade M7.5 as filling course at any level below finished floor level, under and around foundations/ floors, mass dumps etc with 40 mm nominal size graded aggregate.	222	CUM		
16.0	202	Concrete of grade M10 as lean concrete, levelling course, mud mat under and around foundations/ floors etc with 40 mm nominal size graded aggregate.	1115	CUM		
17.0	205	Concrete of grade M25 in underground structures like foundations, columns below finish floor level, plinth beams, slab-on-grade, retaining walls, drains etc complete with 20 mm nominal size graded aggregate including anti termite treatment as per IS 6313.	20526	CUM		
18.0	214	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.				
18.1	i)	Plain cement concrete of all grades.	20	CUM		
18.2	ii)	Reinforced cement concrete of all grades.	50	CUM		
19.0	215	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement.	100	CUM		
20.0	216	Extra over and above ST NO 214 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge.	125	SQM		
	300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATIONS FOR ALL STRUCTURES, AS PER SPECIFICATIONS AND INCLUDING ALL LABOUR MATERIAL, SCAFFOLDINGS AND CENTEREING COMPLETE INCLUDING POCKETS ETC FOR THE FOLLOWING				
21.0	301a	Ordinary form work below finished ground floor level for foundations, footings, bases of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	20874	SQM		

SL NO	ST NO	DESCRIPTION	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
22.0	301 b	Fairface form work below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc for exposed concrete works.	2945	SQM		
23.0	306	Providing, fixing and removing formwork in block-outs/ pockets and openings (below 0.1 sqm contact surface area with concrete) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.				
23.1	i)	Upto 300 mm depth.	15	NO		
23.2	ii)	From 301 mm upto 600 mm depth.	20	NO		
23.3	iii)	From 601 mm upto 1000 mm depth	5	NO		
	400	REINFORCEMENTS				
24.0	402	Providing,straightening, cutting, bending, placing at any level, binding in position high yield strength steel reinforcements in concrete including cost of reinforcement and binding wire, labour etc complete all as per specifications & drawings.	2102	MT		
	700	MS EMBEDMENTS				
25.0	702	Fixing of embedments, MS inserts, pipe sleeves, rails, guide rails angle pieces, anchor bolts of various diameters, plates of dimensions as required including cost of all labour, materials and equipment for fixing in position, scaffolding and setting in position, transportation from stores within the plant boundary to work spot, loading, unloading etc complete as per specifications and drawings.	120	MT		
	800	GROUTING AS PER SPECIFICATION FOR THE FOLLOWING.				
26.0	802	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection, and alignment if necessary, of heavy machinery at any elevations including roughening surface, cleaning, ramming, curing, etc with Conbextra GPX-2 of 'Fosroc' or equivalent all complete as per specifications (cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	4	CUM		
27.0	803a	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection, and alignment if necessary, of main structural steel work at any elevations including roughening surface, cleaning, ramming, curing, etc with Conbextra GP-1 or equivalent all complete as per specifications (cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	36	CUM		
28.0	803 b	Providing and fixing weep holes consisting of 100 mm dia LDPE pipe sleeves (average length 1500 mm) along with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq opening along with 300x300 mm sq, 300 mm deep, 40 mm aggregates to cover fabric mesh mouth complete as directed by engineer in charge.	385	NO		

SL NO	ST NO	DESCRIPTION	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
29.0	1808	Laying of earthing mats/ rods including transportation from yard stores, loading, unloading, cutting to length, welding etc complete as per specification and as directed by engineer-in-charge.	35	MT		
30.0		Consolidation of sub-grade with road roller including making good the undulations etc with earth or quarry spoils etc and rerolling the subgrade to required levels and camber.	15000	SQM		
31.0		Supplying, stacking and laying moorum of approved quality at site including watering, ramming consolidating and dressing etc complete.	4500	CUM.		
32.0		Transporation & laying 300 mm thick base/ sub base course in 2 layers of 150 mm thickness each with coal rejection boulder including screening, sorting, spreading to template and consolidation with road roller including carriage spreading and consolidation of blinding material moorum etc Including cost of material, labour, all complete.	5000	CUM		
33.0		Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete - 600mm dia, as per specification.	200	RM		
34.0		Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete - 900mm dia, as per specification.	150	RM		
35.0		Providing brick work in cement mortar 1:6 (1 part cement: 6 parts coarse sand) in walls, chambers etc of 254 mm & above in thickness at all elevation including raking out joints, curing, scaffolding etc all complete excluding plastering and paintng, using bricks of class designation 5.0 or best locally available quality of nominal dimensions as per specification.	250	CUM		
36.0		Providing & laying water bound macadam base/ sub base course in layers of required thickness with stone aggregate 63 mm to 40 mm size, stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc Including cost of material labour etc all complete as per specification.	1500	CUM.		
37.0		Laying water bound macadam wearing course with stone aggregate 50 mm to 20 mm size stone screening and binding material including screening, sorting, spreading to template and consolidation with road roller including carriage spreading and consolidation of blinding material moorum etc Including cost of material labour etc all complete as per specification.	1500	CUM.		

SL NO	ST NO	DESCRIPTION	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
38.0		Providing and laying soling with brick jhama of sizes of 50 mm to 100 mm, at all position and depths below or above finished ground floor level, below foundations, below flooring, below erection common roads, providing hard standing, and hard surfacing, etc in one or more layers each of approximately 75 mm thickness, hand packing, filling in interstices with quarry spalls and providing a layer of moorum/ sand over layer of soling to make the surface even including watering, thoroughly compacting each layer with 10 tonne power roller with minimum 6 passes (or with vibrating plate of approved capacity at places not approachable by power roller) all as per the direction of the engineer and as per specification.	1500	CUM		
39.0		Providing & laying 25 mm thick premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of size 12.5 mm and 10 mm respectively per 100 sqm with hot bitumen @ 52 kg and 56 kg per cum of 12.5 mm & 10 mm size stone chippings respectively including a tack coat with hot bitumen @ 1.00 kg per sqm of road surface including consolidation with road roller etc, all complete, with bitumen heated and then mixed with solvent at the rate of 70 gms per kg of bitumen including cost of all material, labour all complete as per specification, drawings and instructions of the engineer.	2500	SQM		
40.0		Providing mixing and laying of compacted 75 mm thk bituminous macadam course. Bitumen shall be of a suitable grade complying with IS-73 and aggregates and binder material as specified in specification all complete including hot mixing, hot laying rolling as per IRC specification all complete as per drawing, specification and as directed by engineer.	2500	SQM		
TOTAL						
41.0		For Item not covered above, quote % above or below the CPWD-Schedule (DSR-2002).				
41.1		Rate for complete item.				
41.2		Rate for supply only.				
41.3		Rate for item excluding supply of materials.				

TENDER NO	**PSER:SCT:MJA-C725:07**	
VOLUME	**IIIB**	**PRICE SCHEDULE, REV-1**

JOB	**COMPLETE SITE GRADING & LEVELING, FOUNDATION WORK OF BOILER & ESP, DRAINS ETC**
CAPACITY	**2 x 500 MW UNIT # 1 & 2**
PROJECT	**MEJIA-B THERMAL POWER STATION, WEST BENGAL**

BHARAT HEAVY ELECTRICALS LIMITED
(A Govt Of India Undertaking)
POWER SECTOR – EASTERN REGION
PLOT – DJ 9/1, SECTOR II, SALT LAKE
KOLKATA – 700 091

VOLUME-IIIB PRICE SCHEDULE, REV-1	
Complete site grading & leveling, foundation work of boiler & ESP, drains etc for 2x500 MW unit # 1 & 2 at Mejia-B Thermal Power Station, West Bengal.	
TENDER NO - PSER:SCT:MJA-C725:07	
PREAMBLE	
1.0	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with other volumes of tender as applicable.
2.0	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
3.0	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4.0	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the tender document and this schedule.
5.0	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains within thirty percent ($\pm$ 30%) of the contract price.
6.0	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same.
7.0	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.
8.0	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted.
9.0	The tender shall be deemed to have studied the specifications, details of work to the done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
10.0	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.

VOLUME-IIIB
PRICE SCHEDULE, REV-1

Complete site grading & leveling, foundation work of boiler & ESP, drains etc for 2x500 MW unit # 1 & 2 at Mejia-B Thermal Power Station, West Bengal.

TENDER NO - PSER:SCT:MJA-C725:07.

Sl no	ST NO	Description of item	Quantity		Price in percent (%) of total price for each item (in figures & words)
1.0		Earth work in stripping of top soil upto a minimum depth of 0.20 mtr below ground level so as to exclude all debris, grass, vegetation, bushes, trees including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/ stripped surface by manual or mechanical means, disposal of stripped materials within a lead of 1 km etc as per specification, drawing and as directed by the engineer.	480000	SQM	
2.0		Earth work in excavation upto any depth in all types of soil and soft rock including ash, laterite, moorum, weathered rock, decomposed rock etc which can be excavated by means of crow bar, pick axe etc but does not require chiselling or blasting, for levelling and grading including dressing the sides, leveling to grade, ramming/ compacting the graded surface, stacking/ disposal of surplus excavated material within a lead of 1 km etc complete as per specification, drawings and as directed by the engineer.	660000	CUM	
3.0		Earth work in excavation upto any depth in hard rock requiring blasting/ controlled blasting and/ or chiselling, wedging, line drilling, pre shearing or any other means without damaging the existing structures including supply, storage & handling of blasting materials etc, for levelling and grading including dressing the sides, leveling to grade, ramming/ compacting the graded surface, stacking/ disposal of surplus excavated material within a lead of 1 km etc complete as per specification, drawings and as directed by the engineer.	85500	CUM	
4.1		Disposal of surplus excavated earth beyond an initial lead of 1km and upto a lead of 3 km including leveling the dumped soil, compaction etc all complete as per specification and as directed by the engineer.	315000	CUM	
4.2		Disposal of surplus excavated earth beyond an initial lead of 1 km and upto a lead of 5 km including leveling the dumped soil, compaction etc all complete as per specification and as directed by engineer.	100000	CUM	
5.0		Earth work in filling for levelling and grading using selected excavated earth from compulsory excavations inside the project site on prepared surface obtained by compacting with mechanical means including setting out, filling in horizontal layers not exceeding 250 mm compacted thickness, spreading, sorting, breaking clods, watering, compaction with proper moisture content to achieve a minimum 95 % of maximum dry density (standard Proctor Density), dewatering (if required), testing, approaches, finishing to required lines, grades and slopes, levelling etc complete as per specification, drawing and as directed by the engineer.	325000	CUM	

Sl no	ST NO	Description of item	Quantity		Price in percent (%) of total price for each item (in figures & words)
6.0		Earth work in filling for levelling and grading using borrowed good earth (borrowed good earth to be arranged by the contractor at his own cost) on prepared surface obtained by compacting with mechanical means including setting out, filling in horizontal layers not exceeding 250 mm compacted thickness, spreading, sorting, breaking clods, watering, compaction with proper moisture content to achieve a minimum 95 % of maximum dry density (standard Proctor Density), dewatering (if required), testing, approaches, finishing to required lines, grades and slopes, levelling etc complete as per specification, drawing and as directed by the engineer.	25000	CUM	
7.0		Providing, stacking and laying 300 mm thick boulder pitching on the slopes of earth fill/cut with approved quality of rock fragments including materials, necessary excavations if any, compaction etc complete as per specification, drawing and as directed by the engineer.	9900	CUM	
	100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION AND DRAWING FOR BOIER & ESP FOUNDATION, RETAINING WALLS ETC			
8.0	101	Earthwork in excavation including providing coffer dams, shoring, strutting, sheeting, bracing, draining and pumping out water other than water below ground water table, clearing all grass, vegetation etc., trimming of excavation bottom, staking, levelling, grading, lift of 2 m below ground level, lead of upto 100 m, loading, unloading etc. of excavated materials all complete as per specifications, drawings and instructions of the engineer in charge.			
8.1	i)	In all types of soils including expansive soil, ash, morrum, laterite.	22531	CUM	
8.2	ii)	In soft rock and weathered rock which can be excavated by means of crow bar, pick axe etc but does not require chiselling, chemical grouting and blasting.	21861	CUM	
8.3	iii)	In hard rock, by means of controlled blasting including provision of sensor to assess the impact of blast on the adjacent structures.	2257	CUM	
8.4	iv)	In hard rock (blasting prohibited) by means of chiselling, wedging etc.	544	CUM	
9.0	102	Extra over item 101 above, for all types of soil/ rock, for additional lifts beyond the initial lift of 2 m for the following etc all complete as per specifications, drawings and instructions of the engineer in charge (cost of excavation and lift down to 2 mtr depth below ground level shall not be included in this item).			
9.1	i)	Lift in all types of soils.			
9.1.1	a	Lift beyond 2 m and upto 4 m.	4719	CUM	
9.1.2	b	Lift beyond 4 m and upto 7 m.	274	CUM	
9.2	ii)	Lift in all types of rocks.			
9.2.1	a	Lift beyond 2 m and upto 4 m.	15597	CUM	
9.2.2	b	Lift beyond 4 m and upto 7 m.	7630	CUM	
9.2.3	c	Lift beyond 7 m and upto 10 m.	183	CUM	

Sl no	ST NO	Description of item	Quantity		Price in percent (%) of total price for each item (in figures & words)
10.0	103	Extra over item 101 above for excavation below ground water table including lowering of ground water table to maintain dry working conditions for all activities up to filling/testing, water proofing all complete as per specifications, drawings and instructions of the engineer.	33296	CUM	
11.0	104	Extra over item 101 above for carriage of all types of excavated materails beyond the initial lead of 100 m (initial lead, loading and unloading included in item 101 above) all complete as per specifications, drawings and instructions of the engineer for the following leads.			
11.1	i)	Carriage beyond initial lead of 100 m but not exceeding 500 m	5599	CUM	
11.2	ii)	Carriage beyond 500 m and not exceeding 2 Km.	5599	CUM	
11.3	iii)	Carriage beyond 2 Km and not exceeding 5 Km.	1400	CUM	
11.4	iv)	Carriage beyond 5 Km and not exceeding 10 Km.	1400	CUM	
12.0	105	Filling using selected excavated materials in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc in layers not exceeding 250 mm thickness including lead upto 100 m and all lifts and including loading from stock pile, carting, unloading, filling, watering and compacting/ ramming each layer, all complete as per specifications, drawings and as directed by the engineer to achieve the following densities.			
12.1	i)	Ordinary manual compaction.	1511	CUM	
12.2	ii)	90% Standard Proctor density.	27199	CUM	
12.3	iii)	95% Standard Proctor density.	1511	CUM	
13.0	106	Filling using selected excavated materials directly from excavation area in trenches, plinths, sides of foundations and other underground structures, pipes, area levelling etc in layers not exceeding 250 mm thickness including all lifts, filling, watering and compacting/ ramming each layer, all complete as per specifications, drawings and as directed by the engineer to achieve the following densities.			
13.1	i)	Ordinary manual compaction.	130	CUM	
13.2	ii)	90% Standard Proctor density.	2347	CUM	
13.3	iii)	95% Standard Proctor density.	130	CUM	
14.0	107	Filling using selected materials in trenches, plinths, sides of foundations, in the space below the grade level slab and other under ground structures, pipes etc in layers not exceeding 250 mm in thickness including all lifts and including excavating, loading, unloading, carting, filling, watering and compacting/ ramming each layer, all complete as per specifications, drawings and as directed by the engineer for the following works.			
14.1	i)	With selected soil brought from borrow areas arranged by contractor, including royalties, fees etc.for all leads and compacted to following densities.			
14.1.1	a	90% Standard Proctor density.	634	CUM	
14.1.2	b	95% Standard Proctor density.	70	CUM	
14.2	ii)	With selected sand brought from quarries/ river bed arranged by contractor, and compacting to 80% relative density etc for all leads.	362	CUM	

Sl no	ST NO	Description of item	Quantity		Price in percent (%) of total price for each item (in figures & words)
	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) COMPLETE AS PER DRAWING AND SPECIFICATIONS UNLESS SPECIFIED OTHERWISE FOR THE FOLLOWING.			
15.0	201	Concrete of grade M7.5 as filling course at any level below finished floor level, under and around foundations/ floors, mass dumps etc with 40 mm nominal size graded aggregate.	222	CUM	
16.0	202	Concrete of grade M10 as lean concrete, levelling course, mud mat under and around foundations/ floors etc with 40 mm nominal size graded aggregate.	1115	CUM	
17.0	205	Concrete of grade M25 in underground structures like foundations, columns below finish floor level, plinth beams, slab-on-grade, retaining walls, drains etc complete with 20 mm nominal size graded aggregate including anti termite treatment as per IS 6313.	20526	CUM	
18.0	214	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.			
18.1	i)	Plain cement concrete of all grades.	20	CUM	
18.2	ii)	Reinforced cement concrete of all grades.	50	CUM	
19.0	215	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement.	100	CUM	
20.0	216	Extra over and above ST NO 214 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge.	125	SQM	
	300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATIONS FOR ALL STRUCTURES, AS PER SPECIFICATIONS AND INCLUDING ALL LABOUR MATERIAL, SCAFFOLDINGS AND CENTEREING COMPLETE INCLUDING POCKETS ETC FOR THE FOLLOWING			
21.0	301a	Ordinary form work below finished ground floor level for foundations, footings, bases of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	20874	SQM	
22.0	301 b	Fairface form work below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc for exposed concrete works.	2945	SQM	

Sl no	ST NO	Description of item	Quantity		Price in percent (%) of total price for each item (in figures & words)
23.0	306	Providing, fixing and removing formwork in block-outs/ pockets and openings (below 0.1 sqm contact surface area with concrete) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.			
23.1	i)	Upto 300 mm depth.	15	NO	
23.2	ii)	From 301 mm upto 600 mm depth.	20	NO	
23.3	iii)	From 601 mm upto 1000 mm depth	5	NO	
	400	REINFORCEMENTS			
24.0	402	Providing,straightening, cutting, bending, placing at any level, binding in position high yield strength steel reinforcements in concrete including cost of reinforcement and binding wire, labour etc complete all as per specifications & drawings.	2102	MT	
	700	MS EMBEDMENTS			
25.0	702	Fixing of embedments, MS inserts, pipe sleeves, rails, guide rails angle pieces, anchor bolts of various diameters, plates of dimensions as required including cost of all labour, materials and equipment for fixing in position, scaffolding and setting in position, transportation from stores within the plant boundary to work spot, loading, unloading etc complete as per specifications and drawings.	120	MT	
	800	GROUTING AS PER SPECIFICATION FOR THE FOLLOWING.			
26.0	802	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection, and alignment if necessary, of heavy machinery at any elevations including roughening surface, cleaning, ramming, curing, etc with Conbextra GPX-2 of 'Fosroc' or equivalent all complete as per specifications (cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	4	CUM	
27.0	803a	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection, and alignment if necessary, of main structural steel work at any elevations including roughening surface, cleaning, ramming, curing, etc with Conbextra GP-1 or equivalent all complete as per specifications (cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	36	CUM	
28.0	803 b	Providing and fixing weep holes consisting of 100 mm dia LDPE pipe sleeves (average length 1500 mm) along with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq opening along with 300x300 mm sq, 300 mm deep, 40 mm aggregates to cover fabric mesh mouth complete as directed by engineer in charge.	385	NO	
29.0	1808	Laying of earthing mats/ rods including transportation from yard stores, loading, unloading, cutting to length, welding etc complete as per specification and as directed by engineer-in-charge.	35	MT	
30.0		Consolidation of sub-grade with road roller including making good the undulations etc with earth or quarry spoils etc and rerolling the subgrade to required levels and camber.	15000	SQM	

Sl no	ST NO	Description of item	Quantity		Price in percent (%) of total price for each item (in figures & words)
31.0		Supplying, stacking and laying moorum of approved quality at site including watering, ramming consolidating and dressing etc complete.	4500	CUM.	
32.0		Transporation & laying 300 mm thick base/ sub base course in 2 layers of 150 mm thickness each with coal rejection boulder including screening, sorting, spreading to template and consolidation with road roller including carriage spreading and consolidation of blinding material moorum etc Including cost of material, labour, all complete.	5000	CUM	
33.0		Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete - 600mm dia, as per specification.	200	RM	
34.0		Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete - 900mm dia, as per specification.	150	RM	
35.0		Providing brick work in cement mortar 1:6 (1 part cement: 6 parts coarse sand) in walls, chambers etc of 254 mm & above in thickness at all elevation including raking out joints, curing, scaffolding etc all complete excluding plastering and paintng, using bricks of class designation 5.0 or best locally available quality of nominal dimensions as per specification.	250	CUM	
36.0		Providing & laying water bound macadam base/ sub base course in layers of required thickness with stone aggregate 63 mm to 40 mm size, stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc Including cost of material labour etc all complete as per specification.	1500	CUM.	
37.0		Laying water bound macadam wearing course with stone aggregate 50 mm to 20 mm size stone screening and binding material including screening, sorting, spreading to template and consolidation with road roller including carriage spreading and consolidation of blinding material moorum etc Including cost of material labour etc all complete as per specification.	1500	CUM.	
38.0		Providing and laying soling with brick jhama of sizes of 50 mm to 100 mm, at all position and depths below or above finished ground floor level, below foundations, below flooring, below erection common roads, providing hard standing, and hard surfacing, etc in one or more layers each of approximately 75 mm thickness, hand packing, filling in interstices with quarry spalls and providing a layer of moorum/ sand over layer of soling to make the surface even including watering, thoroughly compacting each layer with 10 tonne power roller with minimum 6 passes (or with vibrating plate of approved capacity at places not approachable by power roller) all as per the direction of the engineer and as per specification.	1500	CUM	

Sl no	ST NO	Description of item	Quantity		Price in percent (%) of total price for each item (in figures & words)
39.0		Providing & laying 25 mm thick premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of size 12.5 mm and 10 mm respectively per 100 sqm with hot bitumen @ 52 kg and 56 kg per cum of 12.5 mm & 10 mm size stone chippings respectively including a tack coat with hot bitumen @ 1.00 kg per sqm of road surface including consolidation with road roller etc, all complete, with bitumen heated and then mixed with solvent at the rate of 70 gms per kg of bitumen including cost of all material, labour all complete as per specification, drawings and instructions of the engineer.	2500	SQM	
40.0		Providing mixing and laying of compacted 75 mm thk bituminous macadam course. Bitumen shall be of a suitable grade complying with IS-73 and aggregates and binder material as specified in specification all complete including hot mixing, hot laying rolling as per IRC specification all complete as per drawing, specification and as directed by engineer.	2500	SQM	
TOTAL					**100%**