



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

**BHARAT HEAVY ELECTRICALS LIMITED**

(A Govt. of India Undertaking)

**TCN - 02**

Ref: PSER:SCT:SDG-C1221:TCN-02

Date: 11-07-2011

Sub	Tender change notice (TCN) 02.	
Job	1.0	PKG-A: Civil works of bore cast-in-situ piling, pile cap, pedestals, etc of 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.
	2.0	PKG-B: Civil works of bore cast-in-situ piling, pile cap, pedestals, etc of 1x500 MW unit # 4 for 2x500 MW units at Sagardighi STPP, WB.
Ref	1.0	Tender no PSER:SCT:SDG-C1221:11
	2.0	BHEL's NIT, vide reference no PSER:SCT:SDG-C1221:2438, dated 23-06-11.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:SDG-C1221:TCN-01, dated 05-07-11.
	4.0	All other pertinent issues till date.

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

- 1.0 Amendment/ clarification to tender terms as per enclosed Annexure-A.
- 2.0 Revised Volume-III A, Price Schedule, Rev-2 for PKG-A and PKG-B, superseding earlier version. Bidder shall submit offer for PKG-A and PKG-B, as applicable, in separate sealed envelopes, as per attached revised price schedule.
- 3.0 Revised 'No deviation certificate' as per enclosed Annexure-2. Bidder to submit 'No deviation certificate' as per attached format only.
- 4.0 All other terms & conditions shall remain unchanged.

In offer has already been submitted/ forwarded, bidder may (i) Submit revised complete offer, superseding earlier offer or (ii) Submit supplementary offer (Techno-commercial and price offer in separate sealed envelopes) in view the subject TCN, which will be processed in conjunction with original offer.

Thanking you,

Yours faithfully,  
for BHARAT HEAVY ELECTRICALS LTD

Engineer (SCT)

Encl

As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SECTOR-II, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211691/ 23211798/ 23211795

JOB	1.0	PKG-A Civil works of bore cast-in-situ piling, pile cap, pedestals, etc of 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.
	2.0	PKG-B Civil works of bore cast-in-situ piling, pile cap, pedestals, etc of 1x500 MW unit # 4 for 2x500 MW units at Sagardighi STPP, WB.
TENDER NO	PSER:SCT:SDG-C1221:11	

SL NO	AMENDMENT/ MODIFICATION	
<b>1.0</b>	<b>Volume-IF</b>	
1.1	Clause no 3.1.1 of VOLUME-IF-CML stands revised as under.	
	3.1.1	Civil works of bore cast-in-situ piling, below finished ground level concreting (pile cap, pedestals, plinth beams etc) for main power house, mill & bunker building, boilers, ESP, ESP control room, ID ducts and machine foundation (TG raft, mill, PA/ FD/ ID fans) except TG columns, including construction of 1 no single storied field hostel blocks (as per drawings/ direction of BHEL, to be provided during execution) for 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.
1.2	Clause no 22.4.18 of VOLUME-IF-CML stand revised as under.	
	22.4.18	Ply shuttering board (4500 sqm). Within 45 days.
1.3	Clause no 32.2.10 of VOLUME-IF-CML stand revised as under.	
	32.2.10	Readiness of field hostel (Applicable for PKG-A only). Within 8 months.
<b>2.0</b>	<b>Volume-IIIA</b>	
2.1	Volume-IIIA, Price Schedule of PKG-A is revised as Volume-IIIA-PKG-A, Rev-2, superseding previous version. Bidder shall submit offer as per revised version only.	
2.2	Volume-IIIA, Price Schedule of PKG-B is revised as Volume-IIIA-PKG-B, Rev-2, superseding previous version. Bidder shall submit offer as per revised version only.	
<b>3.0</b>	<b>GENERAL</b>	
3.1	It is clarified that scope under PKG-A includes construction of 1 no field hostel as per tender instead of 2 nos as specified previously. Accordingly, wherever specified in tender, 2 nos field hostel shall be read as 1 no field hostel.	
3.2	For all brick work under this tender, Ash Lime Brick shall be used for SCH-2 of Volume-IIIA of PKG-A and entire scope of Volume-IIIA of PKG-B. Bidder shall supply ash/ ash lime bricks. Bidder's quoted rates shall be in consideration to this.	
3.3	Bidder shall submit offer strictly in compliance with technical specification and tender terms along with amendment/ clarifications issued till date within the due date.	
3.4	All other terms & conditions shall remain unchanged.	

**VOLUME-III  
PRICE SCHEDULE, REV-2  
(PACKAGE-A)**

**Civil works of bore cast-in-situ piling, below finished ground level concreting (pile cap, pedestals, plinth beams etc) for main power house, mill & bunker building, boilers, ESP, ESP control room, ID ducts and machine foundation (TG raft, mill, PA/ FD/ ID fans) except TG columns, misc civil works of 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.**

**TENDER NO - PSER:SCT:SDG-C1221:11**

**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 various volumes of tender as per NIT together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
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	Unless otherwise specified & except for tender on lumpsum basis, for all item rate based tenders, the quantities of the various items mentioned in price schedule are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted/ accepted rates shall remain firm and valid as long as variation in total value of work executed under this contract including extra items, but excluding any price escalation, remains within +/- 30% (thirty percent) of the contract price given in the LOI/ WO.
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 be 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.
11.0	Evaluation & awarding will be done separately on PKG-A & PKG-B. PKG-B shall be decided first and who-so-ever is successful in PKG-B shall not be considered for PKG-A (They will not be considered for Reverse Auction/ price bid opening of PKG-A).

**VOLUME-III  
PRICE SCHEDULE, REV-2  
(PACKAGE-A)**

**Civil works of bore cast-in-situ piling, below finished ground level concreting (pile cap, pedestals, plinth beams etc) for main power house, mill & bunker building, boilers, ESP, ESP control room, ID ducts and machine foundation (TG raft, mill, PA/ FD/ ID fans) except TG columns, misc civil works of 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.**

**TENDER NO - PSER:SCT:SDG-C1221:11**

**SCH-1 - TOTAL PRICE**

SL NO	DESCRIPTION	AMOUNT (Rs)
1.0	TOTAL PRICE AS PER SCH-2 (MAIN CIVIL)	
2.0	TOTAL PRICE AS PER SCH-3 (CONSTRUCTION OF FIELD HOSTEL)	
<b>3.0</b>	<b>GRAND TOTAL PRICE (SCH-2 &amp; SCH-3 TOGETHR)</b>	
<b>NOTE</b>		
1.0	Bidder's quoted grand total price at SL NO 3.0 above shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope defined in specification and in accordance with all terms & conditions of tender.	
2.0	Price format shall not be changed by bidder in any case, since it may lead to cancellation of offer.	
3.0	Bidder's quoted rates for non-schedule items under sl no 16.0 of SCH-2 shall also be applicable for scope under SCH-3.	

**VOLUME-III A  
PRICE SCHEDULE, REV-2  
(PACKAGE-A)**

**Civil works of bore cast-in-situ piling, below finished ground level concreting (pile cap, pedestals, plinth beams etc) for main power house, mill & bunker building, boilers, ESP, ESP control room, ID ducts and machine foundation (TG raft, mill, PA/ FD/ ID fans) except TG columns, misc civil works of 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.**

**TENDER NO - PSER:SCT:SDG-C1221:11**

**SCH-2 - MAIN CIVIL PRICE**

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.0	100	<b>EARTH WORK</b> (Earthwork in excavation, backfilling and disposal including necessary men/ women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer for the following)			
1.1	101	Earthwork in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/ compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/ levelling of disposed materials etc all complete for following depths below ground level.			
1.1.1	a	Depth from ground level but not exceeding 2 m.	23411	CUM	
1.1.2	b	Depth exceeding 2 m but not exceeding 4 m.	19641	CUM	
1.1.3	c	Depth exceeding 4 m but not exceeding 6 m.	13681	CUM	
1.1.4	d	Depth exceeding 6 m but not exceeding 8 m.	3384	CUM	
1.1.5	e	Depth exceeding 8 m but not exceeding 10 m.	225	CUM	
1.1.6	f	Depth exceeding 10 m but not exceeding 15 m.	225	CUM	
1.2	102	Extra over ST NO 101 for dewatering of ground water by well point method as per IS 9759.	1760	CUM	
1.3	107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/ with selected materials from compulsorily excavated soil available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/ compaction by manual/ mechanical means, dressing etc all complete for the following.			
1.3.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	4275	CUM	
1.3.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	10305	CUM	
1.3.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils.	2925	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.4	108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/ with selected materials directly from excavation and compacted as specified including watering, ramming/ compaction by manual/ mechanical means, dressing etc all complete for the following.			
1.4.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	2700	CUM	
1.4.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	8100	CUM	
1.4.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 Part XIV in case of sandy soils.	3870	CUM	
1.5	109	Extra over ST NO 101, 107 & 108 for carriage of excavated earth/selected materials for every 1 km or part thereof beyond an initial lead of 500m.	24176	CUM	
1.6	110	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/ with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty (if any), watering, ramming/ compaction by manual/ mechanical means, dressing etc all complete for the following.			
1.6.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	900	CUM	
1.6.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	2295	CUM	
1.6.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 Part XIV in case of sandy soils.	776	CUM	
1.7	111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/ compaction by manual/ mechanical means, dressing, royalty (if any) etc all complete.	1463	CUM	
<b>2.0</b>	<b>200</b>	<b>CONCRETE WORKS</b> (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) with mechanised equipments like batching plant, transit mixer, concrete pump etc complete as per drawing, specifications and as per direction of engineer for the following. Cement will be supplied by BHEL free of cost as per TCC.			
2.1	201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course at any depth below finished floor level, under and around foundations/ floors, mass fill etc.	225	CUM	
2.2	202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/ floors at any depth below finished floor level etc.	540	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.3	203	Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors at any depth below finished floor level etc.	235	CUM	
2.4	204	Concrete under floors, paving, plinth protection, pipe encasing etc complete with 20 mm nominal size graded aggregate at any depth below finished floor level for the following grades.			
2.4.1	a	M15 grade.	68	CUM	
2.4.2	b	M20 grade.	113	CUM	
2.5	205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/ substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
2.5.1	a	M25 grade.	11622	CUM	
2.5.2	b	M30 grade.	800	CUM	
2.6	207	Providing and laying Design Mix cement concrete confirming to IS:456 & IS 10262-2009 for reinforced concrete works of grade M-30 Grade in machine foundations for TG, gas turbine, ID/ FD/ PA fans, BFP, coal mills at all elevations below/ above finished floor level except TG deck and top decks supported over vibration isolation system including addition of suitable plasticizer conforming to IS 9103 (latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing.	2500	CUM	
2.7	208	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 of grades mentioned below for reinforced concrete works using graded aggregate in top decks of all machine foundations supported on vibration isolation system (excluding supply and installation of vibration system) at all levels including addition of suitable plasticizers conforming to IS9103 to achieve a slump more than 125 mm in concrete as per manufacturers recommendation, preparation of scheme for concreting, getting it approved by engineer, labour, materials, equipment, handling, batching, transporting, mixing, pumping, placing, leveling, vibrating, compacting, curing, testing, cleaning and rendering the exposed surface with cement sand mortar to give a smooth and even surface, maintaining and submitting records of concreting, petrographic examination and potential reactivity of aggregate etc all complete as per specification, drawing and instructions of engineer, but excluding formwork, staging, reinforcement, embeddments and temperature control of concrete.			
2.7.1	a	M30 grade (with 20mm nominal size graded stone aggregate)	248	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.8	209	Extra over & above concreting items for controlling of temperature of fresh concrete to less than 23 degree centigrade using ice, including all related arrangements for providing, storing and mixing of ice with water, cooling of aggregates etc. All complete as per specification, drawing and instruction of engineer.	275 CUM		
2.9	210	Extra over & above concreting items for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc, all complete, and rectification of the defects in concreting observed by ultra-sonic pulse velocity (UPV) testing by cement/ epoxy grout etc, as directed by engineer and as per specification.	276 CUM		
2.10	214	Providing and laying design mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for concrete in water retaining/ conveying structures including addition of suitable plastisizer cum waterproofing cement additives conforming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades.			
2.10.1	a	M 25 grade.	158 CUM		
2.11	215	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.			
2.11.1	a	Plain cement concrete of all grades.	113 CUM		
2.11.2	b	Reinforced cement concrete of all grades.	135 CUM		
2.11.3	c	Brickwork, plastering and all masonry work.	90 CUM		
2.12	216	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, making good the broken surface etc all complete as per specification, drawing, instructions of engineer but excluding cutting of reinforcement.	1 CUM		
2.13	218	Cutting reinforced concrete including cutting of reinforcement with mechanised tools like core drilling machine etc for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer (Cutting surface area shall be considered for measurement).	50 SQCM		
<b>3.0</b>	<b>300</b>	<b>FORM WORKS</b> (Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc complete as per drawing, specifications and as per direction of engineer for the following)			

SL NO	ST NO	DESCRIPTION	QUANTITY		RATE (Rs)	AMOUNT (Rs)
3.1	301	Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	15237	SQM		
3.2	302	Fairface form work with good quality water proof ply wood of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights.	135	SQM		
3.3	304	Providing, fixing and removing formwork in block-outs/ pockets and openings (below 0.1 sqm plan area) 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.				
3.3.1	a	Upto 150 mm depth.	125	NO		
3.3.2	b	Pockets of depths more than 150mm and upto 300 mm depth.	56	NO		
3.3.3	c	Pockets of depths more than 300mm and upto 600 mm depth.	34	NO		
3.3.4	d	Pockets of depths more than 600mm and upto 1000 mm depth.	27	NO		
3.3.5	e	Pockets of depths more than 1000mm and upto 1500 mm depth.	18	NO		
<b>4.0</b>	<b>400</b>	<b>REINFORCEMENT</b>				
4.1	401	Transporting from BHEL store, straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of binding wire, complete as per specifications & drawings. Reinforcement will be supplied by BHEL free of cost as per TCC.	80	MT		
4.2	402	Transporting from BHEL store, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by engineer. Reinforcement will be supplied by BHEL free of cost as per TCC.	3450	MT		
<b>5.0</b>	<b>500</b>	<b>WATER PROOFING WORKS</b> (Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer)				
5.1	509	Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm)with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil/ ash including surface preparation etc all complete.	2250	SQM		
<b>6.0</b>	<b>600</b>	<b>JOINTS AND FILLERS</b> (Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer)				
6.1	601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc all complete.				

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
6.1.1	a	12 mm wide joints.	45	SQM	
6.1.2	b	20 mm wide joints.	45	SQM	
6.1.3	c	25 mm wide joints.	45	SQM	
6.1.4	d	50 mm wide joints.	23	SQM	
6.2	602	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc all complete for following size grooves.			
6.2.1	a	12mm x 25mm.	180	RM	
6.2.2	b	20mm x 25mm.	180	RM	
6.2.3	c	25mm x 25mm.	90	RM	
6.2.4	d	50mm x 25mm.	90	RM	
6.3	604	Supplying and filling in position hot applied bitumin sealing compound (Grade B) confirming to IS 1834 including cleaning, mixing, heating, pouring/ injecting sealing compound in gaps in joints including application of primer etc all complete.			
6.3.1	a	10mm x 40mm.	180	RM	
6.3.2	b	12mm x 25mm.	180	RM	
6.3.3	c	20mm x 25mm.	180	RM	
6.4	606	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following.			
6.4.1	c	150 mm wide and 6 mm thick.	135	RM	
6.4.2	d	230 mm wide and 6 mm thick.	135	RM	
<b>7.0</b>	<b>700</b>	<b>MS EMBEDMENTS</b> (Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer)			
7.1	701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc including welding, bolting, cutting, drilling, scaffolding, setting etc all complete. All materials to be supplied by contractor.	4	MT	
7.2	702	Same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.	4	MT	
7.3	703	Assembly and fixing of fabricated embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc including scaffolding, setting in position, transportation from BHEL site stores to work spot etc all complete. BHEL will supply fabricated materials.	22	MT	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
7.4	704	Supply, fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc including welding, cutting, grinding, threading, drilling etc all complete. All materials to be supplied by contractor.	22 MT		
7.5	705	Supplying, fabricating, erecting and installing following items in concrete/ brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc all complete. All materials to be supplied by contractor.			
7.5.1	a	MS pipes of all diameters.	11 MT		
7.5.2	b	PVC pipes/ conduits of all diameters.	6 MT		
7.5.3	c	UPVC pipes/ conduits of all diameters.	5 MT		
7.5.4	d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide.			
7.5.4.1	i	Upto 250 kg.	45 NO		
7.5.4.2	ii	Beyond 250 Kg and upto 500 kg.	45 NO		
7.5.4.3	iii	Beyond 500 Kg and upto 750 kg.	34 NO		
7.5.5	e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel.			
7.5.5.1	i	Upto 250 kg.	67 NO		
7.5.5.2	ii	Beyond 250 Kg and upto 500 kg.	68 NO		
7.5.5.3	iii	Beyond 500 Kg and upto 750 kg.	34 NO		
<b>8.0</b>	<b>800</b>	<b>GROUTING</b> (Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer)			
8.1	801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc all complete. Cost shall include fixing of nipples at minimum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc all complete wherever specified in the drawing. Cement will be supplied by BHEL free of cost as per TCC.	43 SQM		
8.2	802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc with mix 1:1 (1 cement:1 sand) using non shrink admixture etc all complete. Cement will be supplied by BHEL free of cost as per TCC.	21 CUM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
8.3	803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc all complete with mix 1:1:2 (1 cement:1 coarse sand:2 aggregate of 6 mm down graded stonechips) using non shrink admixture. Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor.	24	CUM	
8.4	804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc all complete with ConbextraGP-1 or equivalent. Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor. All materials to be supplied by contractor.	28	CUM	
8.5	805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc all complete with Conbextra GP-2 or equivalent. Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor. All materials to be supplied by contractor.	14	CUM	
<b>9.0</b>	<b>1000</b>	<b>BRICK WORK</b> (Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer. Cement will be supplied by BHEL free of cost as per TCC)			
9.1	1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
9.1.1	Aa	Using ash lime bricks with crushing strength of 50 kg/cm2.	68	CUM	
9.1.2	Ab	Using ordinary clay bricks with crushing strength of 75 kg/cm2.	50	CUM	
<b>10.0</b>	<b>1800</b>	<b>MISCELLANEOUS WORKS-1</b> (Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer)			
10.1	1801	Providing and filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 230 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc all complete. Payment shall be made for the measurement of the volume of the compacted fill.	23	CUM	
10.2	1804	Supply and installation of approved 25mm thick vibration damping resilient pads on/ around foundation of vibrating equipment and at other locations all complete.	374	SQM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
10.3	1812	Laying of earthing mats/ rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc all complete (Excavation & back filling shall be paid separately under respective item of earth work.BHEL will issue MS rod for earthing mat/ riser free of cost as per TCC.	32 MT		
10.4	1813	Providing earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc all complete.	2 NO		
10.5	1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, providing & fixing GI strips/ pipes, GI wires, covers etc as per drawing & specification including associated earthwork. Cement will be supplied by BHEL free of cost as per TCC.	2 NO		
10.6	1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc all complete.	158 KG		
10.7	1817	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc all complete.			
10.7.1	a	Upto 75 mm dia.	68 RM		
10.7.2	b	100 mm dia.	68 RM		
10.7.3	c	150 mm dia.	68 RM		
10.7.4	d	200 mm dia.	68 RM		
10.8	1828	Dismantling old existing reinforced/non-reinforced brickwork/ blockwork/ stone masonry work in mud/ lime/ cement mortar at any level including clearing/ cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto1km all complete.	68 CUM		
10.9	1831	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust supression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be provided by BHEL free of cost and utilisation of machine will be in terms of tank-hour put in actual use for water sprinkling).	225 TANK-HR		
10.10	1832	Providing & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification.	5 CUM		
<b>11.0</b>	<b>2200</b>	<b>SANITARY WORKS</b>			
11.1	2208	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 all complete for following. Excavation, back-filling shall be paid as per relevant item of this schedule.			
11.1.1	a	200mm dia.	68 RM		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
11.1.2	b	300mm dia.	68 RM		
11.1.3	c	450mm dia.	68 RM		
11.1.4	b	600mm dia.	68 RM		
11.1.5	e	900mm dia.	68 RM		
11.2	2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. Excavation, back-filling shall be paid as per relevant item of this schedule.			
11.2.1	a	150mm dia.	45 RM		
11.2.2	b	250mm dia.	45 RM		
11.2.3	c	300mm dia.	34 RM		
11.2.4	d	500mm dia.	34 RM		
11.3	2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. Excavation, back-filling shall be paid as per relevant item of this schedule.			
11.3.1	a	450mm dia.	45 RM		
11.3.2	b	600mm dia.	45 RM		
11.3.3	c	900mm dia.	45 RM		
<b>12.0</b>	<b>2500</b>	<b>PILING WORK</b>			
12.1	2501	Mobilisation of hydraulic rotary piling rigs including compressed air system as per TCC and accessories including cranes, capable of pile boring/drilling/ installation in all types of strata/ installing various size of bored cast in situ RCC piles to project site.	6 SET		
12.2	2503	Installation of bore cast-in-situ RCC vertical pile as per IS 2911 (Part 1 Sec 2) with diameter and length as specified (length to be measured from pile cut-off level to the bottom of pile) using cement concrete grade M25 conforming to IS:456 with 20 mm nominal size stone aggregates with a minimum cement content of 400Kg per cum of concrete including providing all materials (but excluding reinforcement steel for which measurement/payment shall be made separately), boring/ drilling in all types of soil, providing bentonite slurry and/ or casing for stabilization of pile bore, flushing of pile bore, cleaning, providing plasticizer, wherever required, breaking pile head to cut off level and exposing pile reinforcement for embedment in pile cap etc including empty boring from ground level to pile cutoff level etc all complete as per specification, drawing and as directed by the engineer for the following. Cement will be supplied by BHEL free of cost as per TCC.			
12.2.1	d	Pile with 600 mm diameter and 22 m length below cut off level.	1800 NO		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
12.3	2504	Extra over ST NO 2503 for pile length more than the specified length of 22m below cut off level for the following.			
12.3.1	c	For 600 mm diameter pile.	44	RM	
12.4	2505	Rebate on ST NO 2503 for pile length less than the specified length of 22m below cut off level for the following.			
12.4.1	c	For 600 mm diameter pile.	88	RM	
12.5	2508	Conducting routine load test on single job pile as specified in accordance with IS 2911 (Part-4) including preparation of pile head for testing, necessary excavation, providing all arrangements of loading, unloading, test equipments/accessories, jacks, recording of results, labour, submission of test report etc but excluding the cost of installation of job pile complete as per specification, drawing and as directed by the engineer-in-charge for the following.			
12.5.1	a	For vertical compression test by maintained load method.			
12.5.1.1	iii	600 mm diameter pile.	28	NO	
12.5.2	b	For lateral load test.			
12.5.2.1	iii	600 mm diameter pile.	28	NO	
12.6	2509A	Carrying out low strain pile integrity test on 600mm diameter pile including all arrangements for test, equipments/ accessories, materials, labour, submission of test report etc but excluding the cost of installation of job pile all complete as per specification and as directed by the engineer.	900	NO	
<b>13.0</b>		<b>LEVELLING AND GRADING WORK</b> (Finished ground level is considered RL(+) 34.2 m)			
13.1	1	Earth work in stripping of top soil upto a minimum depth of 0.30 m below ground level so as to exclude all debris, grass, vegetation, bushes, trees having girth upto 300mm including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/ stripped surface by manual/ mechanical means, disposal of stripped materials within a lead upto 1km etc all complete as per specification, drawing and as directed by the engineer.	11250	SQM	
13.2	2	Earth work in excavation upto any depth below ground level in all types of soil including ash which can be excavated by any means for grading including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, levelling to grade, all lifts, ramming/ compacting the excavated bottom/ graded surface, stacking/ disposal of surplus excavated materials within a lead upto 1km, spreading/ levelling of disposed materials etc all complete as per specification, drawing and as directed by the engineer.	60000	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
13.3	7	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm loose thickness using/with selected approved soil directly from excavation and compacted as specified including including sorting, spreading, breaking clods, watering, ramming/ compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.3.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	21150	CUM	
13.4	8	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm loose thickness using/ with selected approved soil from compulsorily excavated soil available within a lead upto 1km and compacted as specified including re-excavation of stacked earth, sorting, spreading, breaking clods, watering, ramming/ compaction by manual/ mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.4.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	13500	CUM	
13.5	9	Extra over ST NO 1, 2, 7 and 8 for carriage of soil for every 1 km or part thereof beyond an initial lead of 1km.	75000	CUM	
13.6	A10	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 250 mm loose thickness using/ with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying boorowed soil, royalty (if any), sorting, spreading, breaking clods, watering, ramming/ compaction by manual/ mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.6.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	100337	CUM	
13.7	B10	Earth work in filling up to any depth below ground level for grading to proper grade and level in layers not exceeding 250 mm loose thickness using/ with approved borrowed clean graded sand (borrowed clean graded sand to be arranged by the bidder) and compacted as specified including supplying borrowed clean graded sand, royalty (if any), sorting, spreading, breaking clods, watering, ramming/ compaction by manual/ mechanical means, dressing, finishing to required lines, grades and slopes, testing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.7.1	b	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 (Part-XIV) in case of sandy soils.	70000	CUM	
13.8	11	Providing and laying 300mm thick stone pitching including caulking with 1 cement: 4 sand mortar on the slopes of earth fill/ cut with approved quality of rock fragments including materials, testing, necessary excavations if any, compaction etc all complete as per specification, drawing and as directed by the engineer.	2025	CUM	
<b>14.0</b>	<b>M</b>	<b>MISCELLANEOUS WORKS-2</b>			

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
14.1	M1	Providing & laying water bound macadam sub base course in layers of 75 mm thick, required thickness with crushed stone aggregates 63 to 45 mm down size, stone screening & binding material including screening, sorting, spreading to template & consolidation with road roller/ vibromax including carriage, spreading & consolidation of blinding material moorum etc all complete.	5400	CUM	
14.2	M2	Supplying of boulder (150 ~ 230 mm size), laying uniformly, interstices to be filled with crusher dust/ stone dust, watering, compaction with roadroller/ vibromax for making roads/ hardsurfacing with all labour, materials, T&P's etc.	9000	CUM	
14.3	M3	Supply & installation of locally best quality executive steel structure table (equivalent look like Godrej Executive table design, both side drawer with lock & keys) with wooden top made of resin bonded wooden particle finished with ash colour sunmica paste, size (Table) - 66 inches x36inches of standard height.	15	NO	
14.4	M4	Supply & installation of locally best quality steel structure table (equivalent look like Godrej table design, one side drawer with lock & key) with wooden top made of resin bonded wooden particle finished with ash colour sunmica paste, size (Table) - 48 inches x24 inches of standard height.	35	NO	
14.5	M5	Supply & installation of locally best quality sr executive steel structure table (equivalent looklike Godrej sr executive table design with both side drawer with lock & keys in addition to central drawer) with teak wood polished top, size (Table) - 84 inches x 24 inches of standard height.	1	NO	
14.6	M6	Supply & installation of locally best quality revolving/ height adjustable executive cushioned arm chair (equivalent look like Godrej Executive revolving chair design).	35	NO	
14.7	M7	Supply & installation of locally best quality revolving/ height adjustable executive cushioned arm chair (equivalent look like Godrej Executive revolving chair design) with high back.	20	NO	
14.8	M8	Supply & installation of locally best quality cushioned visitor armed chair (equivalent look like Godrej visitor chair design of sq/ tubular steel structure).	100	NO	
14.9	M9	Supply & installation of locally best quality steel filing cabinet of reputed make (4 drawers), size 18.5inches(W) x 24.5inches(D) x 52inches(H).	60	NO	
14.10	M10	Supply & installation of locally best quality steel almirah of reputed make, size - 36inches(W) x 18inches(D) x 78inches(H) with four rack and one double door locker.	18	NO	
14.11	M11	Supply & installation of Aqua Guard water cooler cum purifier (50 ltr water capacity).	3	NO	
14.12	M12	Supply & installation of locally best quality wooden cot (single bed size:6.5 feetx3.5 feet) with mattress, pillow, pillow cover, bed sheet, bed cover, buckets(20 ltr) & mugs.	25	SET	
14.13	M13	Supply & installation of double door 240 litre frost free refrigerator of reputed make LG/ Samsung/ Godrej/ Whirlpool or equivalent with voltage stabiliser (3 star).	4	NO	
14.14	M14	Supply & installation of locally best quality wooden writing table size - 42x18 inches (Left hand or right hand drawer).	20	NO	
14.15	M15	Supply & installation of wooden chair for above table under ST NO M14.	20	NO	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
14.16	M16	Supply & installation of locally best quality cushioned sofa set of good quality (One 3 seater + two nos 2 seaters + 1 no one seater + 1 wooden centre table made of teak wood with glass top).	3 SET		
14.17	M17	Supply & installation of locally best quality wooden dinning table for 6 persons along with 6 nos dinning chairs.	5 SET		
14.18	M18	Supply & installation of ceiling fan (48 inches sweep) of reputed make with 3 years warantee, complete with required and regulator.	15 NO		
14.19	M19	Supply & installation of top loading fully automatic washing machine 6 kg (min) of reputed make LG/ Samsung/ Hier/ Godrej/ IFB or equivalent.	4 NO		
14.20	M20	Supply, installation, erection, testing, commissioning, operation & maintenance of electronic road weigh bridge pitless type, 60Tx100kg with platform size of 16 Mx3 M with necessary supporting structures, control room with proper digital indicator, recorder, printer, PC with keyboard, display unit (15"), UPS (500VA), accuracy $\pm 0.25\%$ of actual weight, minimum graduation 10kg, maximum weight 60T, AVERY or equivalent make. Payment terms - a) On receipt of Weigh Bridge materials at site - 50%; b) On successfull installation, commissioning & on submission of certificate from stautaoary authorities regarding callibration etc - 10%; c) Balance 40% will paid on prorata monthly basis throught contract period.	1 SET		
<b>15.0</b>	<b>TOTAL</b>				
<b>16.0</b>	<b>3300</b>	<b>NON-SCHEDULE ITEMS</b> (For items not covered above schedule, quote % below or at par or above with respect to DSR-2007. Bidder's quoted rates under this category shall be applicable for scope under SCH-3 also).			
16.1	a	Rate of complete item.		___ %	
16.2	b	Rate of supply of materials at site only.		___ %	
16.3	c	Rate for execution complete excluding supply of materials.		___ %	

**VOLUME-III A  
PRICE SCHEDULE, REV-2  
(PACKAGE-A)**

**Civil works of bore cast-in-situ piling, below finished ground level concreting (pile cap, pedestals, plinth beams etc) for main power house, mill & bunker building, boilers, ESP, ESP control room, ID ducts and machine foundation (TG raft, mill, PA/ FD/ ID fans) except TG columns, misc civil works of 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.**

**TENDER NO - PSER:SCT:SDG-C1221:11**

**SCH-3 - FIELD HOSTEL PRICE**

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
<b>1.0</b>	<b>CIVIL WORK FOR FIELD HOSTEL ACCOMODATION</b> (Bidder's quoted rates for all items shall be inclusive of supply of all items including cement, steel, etc)			
1.1	Excavation with lift up to 2.0 meters including providing coffer dams, shoring, strutting, sheeting, bracing, draining and pumping out water to maintain reasonably dry working condition for all activities, clearing all grass, vegetation etc including trimming of excavation bottom, staking, levelling, grading etc of excavated materials, loading and unloading etc all complete as per specifications, drawings and instructions of the engineer, including a lead upto 300 m.			
1.1.1	In all types of soils including expansive soil, ash, morrum, laterite.	2000	CUM	
1.2	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 1.0 Km and all lifts and including loading from stock pile, carting, unloading, filling, watering and compacting/ ramming each layer, all complete as per specifications, drawings & as directed by engineer to achieve the following densities.			
1.2.1	Ordinary manual compaction.	1500	CUM	
1.3	Sand filling (river sand) in plinth in layers not exceeding 15 cm as directed by BHEL and consolidating same by thorough saturation with water and ramming complete including the cost of supply of sand. (Payment to be made on measurement of finished qty).	350	CUM	
1.4	Single brick flat soling of picked jhama bricks including ramming and dressing bed to the proper level and filling the joints with powder earth or local sand including all materials, labour etc complete.	550	SQM	
1.5	Plain cement concrete 1:3:6 (1 cement:3 sand:6 graded stone aggregate of 20 mm nominal size) as filling course or lean concrete at any level below foundations, drain, septic tank, floors, hume pipes, materials, labour etc complete (Cement - PPC/ OPC/ PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC/ ULTRATECH/ CETURY/ BIRLA/ LAFARGE/ INDIA CEMENT etc).	160	CUM	

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.6	Reinforced/plain cement concrete 1:1.5:3 (1 cement:5 sand:3 graded stone aggregate of 20 mm nominal size) for foundation, columns, beams, chajjas, RCC sleepers, RCC shelf, over head tanks slab, super structure slabs etc excluding cost of shuttering and reinforcement if any but including all materials, labour, curing etc complete all the levels (Cement - PPC/ OPC/ PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC/ ULTRATECH/ CETURY/ BIRLA/ LAFARGE/ INDIA CEMENT etc).	350 CUM		
1.7	Reinforced/ plain cement concrete 1:2:4 for RCC floor etc with approved stone chips 20 mm down for floor, drain etc excluding cost of shuttering and reinforcement if any but including all materials, labour, curing etc complete all the levels (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC/ ULTRATECH/ CETURY/ BIRLA/ LAFARGE/ INDIA CEMENT etc).	20 CUM		
1.8	Damp proof course 40 mm thk 1:1.5:3 concrete (10mm down aggregate) with 2% of approved admixture of water proofing compound. Hot bitumen @ 1.7Kg/sqm shall be applied before & after the DPC as per specification (Cement - PPC/OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC/ ULTRATECH/ CETURY/ BIRLA/ LAFARGE/ INDIA CEMENT etc).	125 SQM		
1.9	Hire and labour charges for 25mm thick shuttering for bldg works for concrete foundations, floor/ roof slabs, beams, lintels, columns, chajja, fins etc including fitting, fixing and striking out carefully after completion of work for below ground and upto 6m height from finished floor level.			
1.9.1	Without vertical props.	725 SQM		
1.9.2	With vertical props up to (+) 6M height.	700 SQM		
1.10	Brick work in cement mortar (1:6) in foundation, plinth, pier, abutment, wing wlls, water tank, septic tank, drains, culvert etc including all materials, labours, scaffolding and other incidental etc complete (Cement - PPC/ OPC/ PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC/ ULTRATECH/ CETURY/ BIRLA/ LAFARGE/ INDIA CEMENT etc).			
1.10.1	Ash lime bricks, Class designation 75 below plinth lvl.	145 CUM		
1.11	12.5 cm thick brick work in cement mortar (1 cement:4 sand) in foundation, plinth, pier, abutment, walls, water tank, septic tank, drains, culvert, super structure etc including cost of scaffolding and other incidental work etc completed (Cement - PPC /OPC /PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC/ ULTRATECH/ CETURY/ BIRLA/ LAFARGE/ INDIA CEMENT etc).			
1.11.1	Ash lime bricks, Class designation 75, below plinth level.	85 SQM		
1.11.2	Ordinary ash lime bricks, Class designation 75, above plinth lvl upto 6.5 M height.	2000 SQM		
1.12	Supply, transporting, straightening, cutting, bending, placing at any level, binding in position mild steel reinforcements in concrete including cost of reinforcement and binding wire, labour etc complete all as per specifications & drawings (Contractor will provide MS round from SAIL/ TISCO/ IISCO/ SRMB/ SHRICON/ SHYAM STEEL/ ELEGANT etc).	3 MT		

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.13	Supply, transporting, 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 (Contractor will provide TMT bar Fe-415/500 quality from SAIL/ TISCO/ IISCO/ SRMB/ SHRICON/ SHYAM STEEL etc). Payment terms - a) On receipt of materials at site - 70%; b) On completion of erection & fixing - 30%.	66 MT		
1.14	Plaster to wall floor, slab soffits, fins, sills etc with sand cement mortar including rounding off or chamfering corners as directed and racking out joints or roughening of concrete surface including chipping & application of cement slurry where necessary etc complete as per drawing and direction of engineer (Cement - PPC/ OPC/PSC to be supplied by the vendor with test certificate from direct manufacturer of ACC/ ULTRATECH/ CETURY/ BIRLA/ LAFARGE/ INDIA CEMENT etc).			
1.14.1	Inside plaster with 1:6 cement mortar average 12 mm thick.	520 SQM		
1.14.2	6 mm thk cement plaster with 1:4 cement mortar.	200 SQM		
1.14.3	Outside plaster with 1:6 cement mortar average 15 mm thick above GL.	1500 SQM		
1.15	Providing & fixing 300 x 300 mm x 7 mm thick coloured ceramic floor tile (Grade IV) of mat finish in floors of kitchens, toilets at all elevations with 20/ 25mm thick bed of cement mortar 1:4 and jointing with matching coloured cement slurry etc complete with all labour and materials. Floor tile to be laid on slope.	750 SQM		
1.16	Providing & fixing 300 x 300/ 200 x 200 mm x 5/6 mm thick coloured ceramic wall tile for dado in kitchens, toilets, entrance, lobby etc at all elevations with 12 mm thick bed of cement mortar 1:3 and jointing with matching coloured cement slurry etc complete with all labour and materials.	350 SQM		
1.17	Providing & fixing 20mm thick Black stone slab of required size over RCC platform for kitchen including all materials and labour complete including 6 mm thick 1:3 cement sand bed mortar 10/12 mm as required.	20 SQM		
1.18	Supplying, fitting and fixing openable steel windows conforming to IS:1036-1975 and IS:7452-1974 with non friction projecting type of hinges fitted with revetts or nut bolt system as directed, glazing cleats, lugs, two nos m s anodised peg stays and fastner for each window of size 900mm x 1200mm, 4mm thick clear glass pane, including fixing in position, fixing lugs in cement concrete 1:2:4 with stone chips 12.5 mm down cutting holes & mending goods damages, 8mm dia ms round guard bar welded horizontally 125 c/c with each window etc complete with one coat of primer and two coats of synthetic enamel finish in all respect.	85 SQM		
1.19	Providing plaster of paris 2 mm thick punning over finished plaster surface and finished with one coat of acrylic emulsion primer followed by two coats of acrylic emulsion paint inside room to give smooth and even surface as per specification at all levels.	450 SQM		
1.20	Applying one coat of cement primer and two finished coats of water proofing cement paint Seacem or equivalent on plastered or concrete surface to receive water proofing cement based paint including scraping, cleaning and preparing the surface throughly complete as per direction of the engineer. After completion of painting rooms/ areas are to be handed over with neat and clean condition, from ground floor to roof outside building.	1650 SQM		

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.21	Supplying & fitting panel shutter of maindoor as per design including fitting and fixing the same in position including the cost of hinges and other fittings viz, 3 x 2 nos MS butt hinges, one no Brass tower bolt (100 mm long), one no brass sliding door bolt of 240 mm long 16/ 15mm dia, one no magnetic door catcher, safety chain inside, with teak wood polish. Lock & fittings shall be done by the contractor & complete with two coats of synthetic enamel paint finish, 35 mm thick shutter with 19 mm thick panel from best indian season hard wood (MAIN DOOR).	10	SQM	
1.22	Supplying & fitting 30mm thick pannelled shutter for toilet and kitchen with 12mm BWR ply pannelled door for internal use as per ISI approved/ design including fitting and fixing the same in position including the cost 3 x 2 nos MS butt hinges, 1 no Brass tower bolt (150 mm long), 1 no Brass sliding door bolt of 300 mm long 15/ 16mm dia, one magnetic door catcher, two nos 100mm brass handle with one coat of wood primer paint of Berger make. Pannelled shutter shall be GAMAR wood 30 x 100mm (For toilet and kitchen).	560	SQM	
1.23	Providing attach toilet with following facilities as directed by BHEL: (a) Inside size of toilet 2.0 M x 2.5 M, (b) 5 mm thick white colour ceramic floor tile & inside walls tile upto 1.35 M height from finish floor, (c) one white vitreous wash basin 550 x 400 mm (Hindustan make or equivalent) with CI bracket, 15 mm CP Brass pillar taps, 32 mm PVC waste water pipe, 32mm CP brass waste, one CP towel rail 550mm long, one best quality 550 x 400mm mirror etc complete, (d) one European type WC pan with seat and lid black colour, low level 10 lts capacity white PVC flushing cistern, etc (e) all inside pipe lines shall be 15mm/ 20mm PVC & concealed pipes, (f) main external supply water pipe line shall be 25 mm dia PVC of 6 M, (g) hot & cold mixer with shower, soil pipe shall be min 75 mm dia CI for below floor if any and outside shall be 100 mm PVC of supreme or equivalent. Masonry, concreting & plastering will be paid as per respective items. Price to be quoted as lumsum for each set of toilet.	30	SET	
1.24	Supplying brass ferrule for connecting mains with PVC/ PPR pipe of 20 mm dia and upto 45 cm long with plumbing joint coupling at both ends with cap and lining etc.	2	NO	
1.25	Providing, laying & jointing glazed stoneware pipes grade A with stiff mixture of cement mortar in the proportion of 1:1 (1 cement:1 fine sand) including testing of joints etc complete (100 mm diameter).	180	RM	
1.26	CI or similar patent vent cowl supplied, fitted and fixed in position.			
1.26.1	100 mm.	10	NO	
1.27	Supplying and fixing full way gun metal valve standard pattern beet, Indian make with fitting (Zebu, JJ Sumon. Pratap, Alto brand) supplied, fitted and fixed.			
1.27.1	20 mm.	40	NO	
1.28	Providing & fixing P or S trap 100 mm dia, CI.	30	NO	

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.29	Construction brick masonry manholes of inside size 90x80 cm and 45-60 cm deep with 75 class designation bricks in cement mortar 1:5 (1 cement:5 find sand), RCC top slabs with 1:2:4 mix (1 cement :2 coarse sand:4 graded stone aggregate of 20 mm size), foundation concrete 1:1:8 (1 cement:4 coarse sand:8 graded stone aggregate of 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement:3 coarse sand) finished with a foating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement:2 coarse sand:4 graded aggregate of 20 mm nominal size) neatly finished complete as per standard design excluding CI manhole cover.	15	NO	
1.30	Construction of 3.6 x 0.90 x 2 M size septic tank in all types of soil with 250 mm thick brick masonry in cement mortar of 1:6 15 cm thick cement concrete 1:4:8 grade in bed, 75 mm thick 1:2:4 grade cement concrete flooring and 100 mm thick over RCC slab of 1:2:4 grade, 75 mm thick partition wall, 15 mm thick plaster on brick wall finished with neat cement providing MS rugs etc, complete as per drawing including excavation, disposal of surplus earth with a load of 50 mtr item includes all material, labour, leads, lifts etc, complete but excluding C.I manhole cover.	3	NO	
1.31	Providing and fixing square mouth stone ware gully trap grade 'A' conforming to IS:651 complete with GI grating, brick masonry chamber with bricks of class designation '50' and water right CI cover with frame of 300 x 300 mm size (inside), the weight of cover to be not less than 4.5 kgs and frame to be not less than 2.70 kg as per specification, 100 x 100 MM P type.	4	NO	
1.32	Construction soak pit of 2.5 mtr dia and 3 mtr depth filled with brick bats including SW drain pipe 100 mm dia and 1.2 meter long complete as per standard design.	3	NO	
1.33	Providing and laying soil, waste and vent pipes, centrifugally cast (spun) iron S&S pipes.			
1.33.1	100 mm.	50	RM	
1.33.2	125 mm.	60	RM	
1.34	Providing and laying of 2 mm thick PVC flooring & 100mm high skirting with all materials and labour etc complete.	1000	SQM	
1.35	Providing PVC pipe and fittings and fixtures of Supreme or equivalent make with all materials, labour etc complete for drinking water.			
1.35.1	For external 32mm dia.	30	MTR	
1.35.2	For external 40mm dia.	25	MTR	
1.35.3	For external 50mm dia.	30	MTR	
1.36	Supply, fitting & fixing/ laying of GI pipe as per IS 1239/IS 3589 with all necessary accessories, ie socket, bends, tees, unions, cross, elbow, nipple, long screw, reducing sockets, reducing tees, short pieces etc complete for making common ring header for construction/ drinking water including cost of all necessary jointing materials labour etc all complete (payment will be made on the center line measurement of total pipeline including all specials).			
1.36.1	25 mm medium quality.	75	RM	

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.36.2	32 mm meduim quality.	50	RM	
1.36.3	40 mm meduim quality.	25	RM	
1.36.4	50 mm meduim quality.	30	RM	
1.37	Providing and fixing Salem stainless steel AISI 304 (18/8) kitchen sink as per IS-13983 with GI brackets and stainless steel plug 40 mm including the walls wherever required).			
1.37.1	610 x 460 mm bowl depth 200 mm.	2	NO	
1.38	Providing & fixing PVC water tank (Syntex or equivalent) in position. The work to including making all necessary inlet & outlet pipes (PPR -PN-16 pipe, 40 mm OD), fixture, ball cocks, valves (two nos) etc all complete as per specification at all heights and levels.			
1.38.1	2000 Litre capacity.	3	NO	
1.39	1.2M high fencing with M S angle post of size 40X40X5 mm 1.8 M long post placed every 3M centre to centre, 450mm length angle embeded in concrete (1:2:4) block size 300mmx300mmx450mm deep, every 15th post, last but one end post corner post shall be strutted on both sides and post on one side only and provided with 8 horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire 9.38 kg per 100 metres (min) between two post fitted and fixed with GI staples turn buckles etccomplete. Contractor to supply all materials including cement and structural steel. Cost of excavation, concrete, backfilling shall be measured and paid separately as per respective items).			
1.39.1	for structural angle with two coata of bitumen based protective coating etc complete.	1500	KG	
1.39.2	for G I barbed with all fixing etc complete.	618	KG	
1.40	Construction of manhole chamber inside size 600 x 900 mm x 450 mm to 900 mm depth with 250 mm thick brick work (1:6) cement mortar, 12 mm plaster(1:6), PCC (1:4:8), including RCC cover with all complete.	15	NO	
<b>2.0</b>	<b>ELECTRICAL WORK FOR FIELD HOSTEL ACCOMODATION</b> (Bidder's quoted rates for all items shall be inclusive of supply of all items)			
2.1	Supply and fixing of 240V, double pole ELCB of rating 20A.	1	NO	
2.2	Supply and fixing 240V single door MCB Distribution board made of sheet steel duly painted enclosure along with interconnetion.	7	NO	
2.3	MCB SP 5A-55 (outgoing).	55	NO	
2.4	MCB SP 32A-1 (outgoing-fridge, AC, room heater, microwave, geyser).	5	NO	
2.5	Supply and fixing of PVC 150x100mm Switch board with matching color cover with switch cut out and interconnection.			
2.5.1	With 1 no piano key type switch for call bell.	1	NO	
2.5.2	With 2 nos piano key type switches and 1 no 240V, 5 pin, 5A socket.	27	NO	
2.5.3	With 1 no 240V, 5 pin, 5A socket.	1	NO	

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.5.4	With 2 nos piano key type switches.	24	NO	
2.5.5	With 3 nos piano key type switches fan regulator.	1	NO	
2.5.6	With 3 nos piano key type switches, fan regulator and 1 no 240V, 5 pin, 5A socket.	1	NO	
2.5.7	With 3 nos piano key type switches and 1 no 240V, 5pin, 5A socket.	1	NO	
2.6	Supply and fixing of 240V, 15A, 6 pin socket with its switch.	40	NO	
2.7	Supply of 48" sweep ceiling fan complete with 100W electronic regulator. Scope includes fixing from roof ceiling providing plate with fasteners (4 nos) and S hook duly fixed, commissioning of 48" sweep ceiling fan alongwith mounting rod and 100W electronic regulator; fixing from roof truss with suitable clamp arrangement, commissioning of 48" sweep ceiling fan alongwith mounting rod and 100W electronic regulator; tubular down rod of suitable size, fabrication & supply of hardwares for above ceiling fans including painting etc.	26	NO	
2.8	Supply of 230 V, 12" exhaust fan alongwith external louvre. Scope includes fixing, wall cutting, finishing, making good of the same, commissioning of 12" exhaust fan alongwith louvre.	26	NO	
2.9	Providing and fixing 2 x 40 decorative type fluorescent tube fitting (Crompton/ Philips/ Bajaj make), fabricated from CRCA sheet steel and finished with stove enamel paint complete with accessories like fluorescent lamp, copper wound polyster choke, starter, seat, rotor holder and terminal block duly pre-wired with copper conductor, including connections, fixing on wall, false ceiling or under roof tusties with clamps as required.	27	NO	
2.10	Supply of luminaries of type fluorescent, decorative, recessed type with mirror optic reflector (2 x 40/36 W), model Bajaj BJMM-236 or equivalent from CROMPTON/ PHILIPS. Scope includes supply of mounting rail type fixture made of painted MS sheet steel suitable for 2 x 40/36 W wall/ ceiling mounted fluorescent lamp with reflector, complete with starter, power factor improvement (HPF), RF capacitor, Copper wound ballast and lamps; including all fixing/ supporting accessories complete; model CROMPTON IGP-1324 or equivalent from BAJAJ/ PHILIPS; fixing from roof truss with suitable clamp arrangement, down rod, ball & socket suspension & commissioning of mounting rail type fixture made of painted MS sheet steel suitable for 2 x 40/36 W wall/ ceiling mounted fluorescent lamp with reflector, complete with starter, power factor improvement (HPF), RF capacitor, Copper wound ballast and lamps, including all fixing/ supporting accessories complete.	55	NO	
2.11	Supplying and fixing of call bell.	1	NO	
2.12	Supplying and fixing of 1 x 250 W HPSV outdoor type fitting with 1 no 10A DP switch for controlling 2 fittings, DP switches to be fixed on outside of the store shed wall.	18	NO	
2.13	Supply, drawing through case, termination, testing & commissioning of 1 core 6 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as lighting & power wiring.	600	RM	
2.14	Supply, drawing through case, termination, testing & commissioning of 1 core 4 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade as power wiring.	130	RM	
2.15	Supply, drawing through PVC case, termination, testing & commissioning of 1 core 2.5 sqmm PVC insulated', stranded Copper wire of 1.1 KV grade as lighting & power wiring.	180	RM	

SL NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.16	Supplying, drawing through PVC case, termination, testing & commissioning of 1 core 1 sqmm PVC, stranded Copper wire of 1.1 KV grade as lighting wiring.	120	RM	
2.17	Supply, drawing through case, termination, testing & commissioning of 1 core 1 sqmm PVC insulated, stranded green Copper wire of 1.1 KV grade as earth wiring.	10	RM	
2.18	Supply and fixing of 1" dia flexible PVC case with all bends tees circular box clamps, saddles etc along with the accessories in surface/ recess in beam/ roof slab/ wall including chase cutting the wall/ above false ceiling and making good the same as required.	500	RM	
2.19	Supply and fixing of 1/2" dia flexible PVC case with all bends tees circular box clamps, saddles etc along with the accessories in surface/ recess in beam/ roof slab/ wall including chase cutting the wall/ above false ceiling and making good the same as required.	150	RM	
<b>3.0</b>	<b>TOTAL (SCH-3)</b>			
<b>NOTE</b>				
1.0	Bidder shall take note of following approved manufacturers over & above the approved manufacturers' names specified above against respective item of works. In case of any contradiction, the same shall be brought under notice of BHEL before quoting, else BHEL reserve the right to take decision as deemed fit at their discretion and the same shall be final & binding on bidder.			
1.1	SINGLE CORE STRANDED Cu WIRE PVC INSULATED - FINOLEX/ EVERSHINE KDK/ ANCHOR.			
1.2	MCB/ MCCB WITH BOX - SIEMENS/ STANDARD/ MDS/ HAVEL/ GE.			
1.3	RIGID PVC CONDUIT - PLAZA/ PLICA/ PIONEER MARKED AS PER IS-9537.			
1.4	FLEXIBLE PVC CONDUIT - PLAZA/ PLICA/ PIONEER.			
1.5	IRON CLAD TPN/ DP MAIN SWITCH - SURYA/ FLORA/ STANDARD/ L&T.			
1.6	DISTRIBUTION FUSE BOARD - STANDARD/ HAVEL/ ASIATIC ELECTRIC.			
1.7	ELECTRONIC REGULATOR - RIDER/ ANCHOR OR ISI APPROVED.			
1.8	POWER CABLE- NICCO/ INCAB/ GLOSTER/ CRYSTAL/ FINOLEX.			
1.9	LUGS -DOWEL/ UML.			
1.10	GLAND - COMMET/ SUNIL & CO.			
1.11	CEILING FAN - POLAR/ KHAITAN/ CROMPTON/ ORIENT.			
1.12	5,6 PIN SOCKET WITH SWITCH - ANCHOR/ NORTH-EAST.			

**VOLUME-III  
PRICE SCHEDULE, REV-2  
(PACKAGE-B)**

**Civil works of bore cast-in-situ piling, below finished ground level concreting (pile cap, pedestals, plinth beams etc) for main power house, mill & bunker building, boilers, ESP, ESP control room, ID ducts and machine foundation (TG raft, mill, PA/ FD/ ID fans) except TG columns, misc civil works of 1x500 MW unit # 4 for 2x500 MW units at Sagardighi STPP, WB**

**TENDER NO - PSER:SCT:SDG-C1221:11**

**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 various volumes of tender as per NIT together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
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	Unless otherwise specified & except for tender on lumpsum basis, for all item rate based tenders, the quantities of the various items mentioned in price schedule are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted/ accepted rates shall remain firm and valid as long as variation in total value of work executed under this contract including extra items, but excluding any price escalation, remains within +/- 30% (thirty percent) of the contract price given in the LOI/ WO.
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 be 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.
11.0	Evaluation & awarding will be done separately on PKG-A & PKG-B. PKG-B shall be decided first and who-so-ever is successful in PKG-B shall not be considered for PKG-A (They will not be considered for Reverse Auction/ price bid opening of PKG-A).

**VOLUME-III A  
PRICE SCHEDULE, REV-2  
(PACKAGE-B)**

**Civil works of bore cast-in-situ piling, below finished ground level concreting (pile cap, pedestals, plinth beams etc) for main power house, mill & bunker building, boilers, ESP, ESP control room, ID ducts and machine foundation (TG raft, mill, PA/ FD/ ID fans) except TG columns, misc civil works of 1x500 MW unit # 4 for 2x500 MW units at Sagardighi STPP, WB**

**TENDER NO - PSER:SCT:SDG-C1221:11**

**PRICE/RATE SCHEDULE**

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
<b>1.0</b>	<b>100</b>	<b>EARTH WORK</b> (Earthwork in excavation, backfilling and disposal including necessary men/ women, materials, equipment,			
1.1	101	Earthwork in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/ compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/ levelling of disposed materials etc all complete for following depths below ground level.			
1.1.1	a	Depth from ground level but not exceeding 2 m.	28614	CUM	
1.1.2	b	Depth exceeding 2 m but not exceeding 4 m.	24005	CUM	
1.1.3	c	Depth exceeding 4 m but not exceeding 6 m.	16721	CUM	
1.1.4	d	Depth exceeding 6 m but not exceeding 8 m.	4154	CUM	
1.1.5	e	Depth exceeding 8 m but not exceeding 10 m.	275	CUM	
1.1.6	f	Depth exceeding 10 m but not exceeding 15 m.	275	CUM	
1.2	102	Extra over ST NO 101 for dewatering of ground water by well point method as per IS 9759.	2152	CUM	
1.3	107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/ with selected materials from compulsorily excavated soil available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/ compaction by manual/ mechanical means, dressing etc all complete for the following.			
1.3.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	5225	CUM	
1.3.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	12595	CUM	
1.3.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils.	3575	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
1.4	108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/ with selected materials directly from excavation and compacted as specified including watering, ramming/ compaction by manual/ mechanical means, dressing etc all complete for the following.			
1.4.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	3300	CUM	
1.4.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	9900	CUM	
1.4.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils.	4730	CUM	
1.5	109	Extra over ST NO 101, 107 & 108 for carriage of excavated earth/selected materials for every 1 km or part thereof beyond an initial lead of 500m.	29548	CUM	
1.6	110	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/ with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty (if any), watering, ramming/ compaction by manual/ mechanical means, dressing etc all complete for the following.			
1.6.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	1100	CUM	
1.6.2	b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII).	2805	CUM	
1.6.3	d	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 part XIV in case of sandy soils.	949	CUM	
1.7	111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/ compaction by manual / mechanical means, dressing, royalty (if any) etc all complete.	1789	CUM	
<b>2.0</b>	<b>200</b>	<b>CONCRETE WORKS</b> (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) with mechanised equipments like batching plant, transit mixer, concrete pump etc complete as per drawing, specifications and as per direction of engineer for the following. Cement will be supplied by BHEL free of cost as per TCC.			
2.1	201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course at any depth below finished floor level, under and around foundations/ floors, mass fill etc.	275	CUM	
2.2	202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/ floors at any depth below finished floor level etc.	660	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.3	203	Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors at any depth below finished floor level etc.	287	CUM	
2.4	204	Concrete under floors, paving, plinth protection, pipe encasing etc complete with 20 mm nominal size graded aggregate at any depth below finished floor level for the following grades.			
2.4.1	a	M15 grade.	83	CUM	
2.4.2	b	M20 grade.	138	CUM	
2.5	205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/ substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.			
2.5.1	a	M25 grade.	14428	CUM	
2.5.2	b	M30 grade.	1100	CUM	
2.6	207	Providing and laying Design Mix cement concrete confirming to IS:456 & IS 10262-2009 for reinforced concrete works of grade M-30 Grade in machine foundations for TG, gas turbine, ID/ FD/ PA fans, BFP, coal mills at all elevations below/ above finished floor level except TG deck and top decks supported over vibration isolation system including addition of suitable plasticizer conforming to IS 9103 (latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing.	2600	CUM	
2.7	208	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 of grades mentioned below for reinforced concrete works using graded aggregate in top decks of all machine foundations supported on vibration isolation system (excluding supply and installation of vibration system) at all levels including addition of suitable plasticizers conforming to IS9103 to achieve a slump more than 125 mm in concrete as per manufacturers recommendation, preparation of scheme for concreting, getting it approved by engineer, labour, materials, equipment, handling, batching, transporting, mixing, pumping, placing, leveling, vibrating, compacting, curing, testing, cleaning and rendering the exposed surface with cement sand mortar to give a smooth and even surface, maintaining and submitting records of concreting, petrographic examination and potential reactivity of aggregate etc all complete as per specification, drawing and instructions of engineer, but excluding formwork, staging, reinforcement, embeddments and temperature control of concrete.			
2.7.1	a	M30 grade (with 20mm nominal size graded stone aggregate)	303	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
2.8	209	Extra over & above concreting items for controlling of temperature of fresh concrete to less than 23 degree centigrade using ice, including all related arrangements for providing, storing and mixing of ice with water, cooling of aggregates etc. All complete as per specification, drawing and instruction of engineer.	275	CUM	
2.9	210	Extra over & above concreting items for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc, all complete, and rectification of the defects in concreting observed by ultra-sonic pulse velocity (UPV) testing by cement/ epoxy grout etc, as directed by engineer and as per specification.	338	CUM	
2.10	214	Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for concrete in water retaining/ conveying structures including addition of suitable plastisizer cum waterproofing cement additives conforming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades.			
2.10.1	a	M 25 grade.	193	CUM	
2.11	215	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.			
2.11.1	a	Plain cement concrete of all grades.	138	CUM	
2.11.2	b	Reinforced cement concrete of all grades.	165	CUM	
2.11.3	c	Brickwork, plastering and all masonry work.	110	CUM	
2.12	216	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, making good the broken surface etc all complete as per specification, drawing, instructions of engineer but excluding cutting of reinforcement.	1	CUM	
2.13	218	Cutting reinforced concrete including cutting of reinforcement with mechanised tools like core drilling machine etc for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer (Cutting surface area shall be considered for measurement).	61	SQCM	
3.0	300	<b>FORM WORKS</b> (Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc complete as per drawing, specifications and as per direction of engineer for the following)			
3.1	301	Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	18623	SQM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
3.2	302	Fairface form work with good quality water proof ply wood of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights.	165	SQM	
3.3	304	Providing, fixing and removing formwork in block-outs/ pockets and openings (below 0.1 sqm plan area) 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.			
3.3.1	a	Upto 150 mm depth.	138	NO	
3.3.2	b	Pockets of depths more than 150mm and upto 300 mm depth.	69	NO	
3.3.3	c	Pockets of depths more than 300mm and upto 600 mm depth.	41	NO	
3.3.4	d	Pockets of depths more than 600mm and upto 1000 mm depth.	33	NO	
3.3.5	e	Pockets of depths more than 1000mm and upto 1500 mm depth.	22	NO	
<b>4.0</b>	<b>400</b>	<b>REINFORCEMENT</b>			
4.1	401	Transporting from BHEL store, straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of binding wire, complete as per specifications & drawings. Reinforcement will be supplied by BHEL free of cost as per TCC.	90	MT	
4.2	402	Transporting from BHEL store, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by engineer. Reinforcement will be supplied by BHEL free of cost as per TCC.	4240	MT	
<b>5.0</b>	<b>500</b>	<b>WATER PROOFING WORKS</b> (Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer)			
5.1	509	Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm)with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil/ ash including surface preparation etc all complete.	2750	SQM	
<b>6.0</b>	<b>600</b>	<b>JOINTS AND FILLERS</b> (Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer)			
6.1	601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc all complete.			
6.1.1	a	12 mm wide joints.	55	SQM	
6.1.2	b	20 mm wide joints.	55	SQM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
6.1.3	c	25 mm wide joints.	55 SQM		
6.1.4	d	50 mm wide joints.	28 SQM		
6.2	602	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc all complete for following size grooves.			
6.2.1	a	12mm x 25mm.	220 RM		
6.2.2	b	20mm x 25mm.	220 RM		
6.2.3	c	25mm x 25mm.	110 RM		
6.2.4	d	50mm x 25mm.	110 RM		
6.3	604	Supplying and filling in position hot applied bitumin sealing compound (Grade B) conforming to IS 1834 including cleaning, mixing, heating, pouring/ injecting sealing compound in gaps in joints including application of primer etc all complete.			
6.3.1	a	10mm x 40mm.	220 RM		
6.3.2	b	12mm x 25mm.	220 RM		
6.3.3	c	20mm x 25mm.	220 RM		
6.4	606	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following.			
6.4.1	c	150 mm wide and 6 mm thick.	165 RM		
6.4.2	d	230 mm wide and 6 mm thick.	165 RM		
<b>7.0</b>	<b>700</b>	<b>MS EMBEDMENTS</b> (Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer)			
7.1	701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc including welding, bolting, cutting, drilling, scaffolding, setting etc all complete. All materials to be supplied by contractor.	6 MT		
7.2	702	Same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.	6 MT		
7.3	703	Assembly and fixing of fabricated embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc including scaffolding, setting in position, transportation from BHEL site stores to work spot etc all complete. BHEL will supply fabricated materials.	26 MT		

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
7.4	704	Supply, fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc including welding, cutting, grinding, threading, drilling etc all complete. All materials to be supplied by contractor.	28	MT	
7.5	705	Supplying, fabricating, erecting and installing following items in concrete/ brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc all complete. All materials to be supplied by contractor.			
7.5.1	a	MS pipes of all diameters.	14	MT	
7.5.2	b	PVC pipes/ conduits of all diameters.	8	MT	
7.5.3	c	UPVC pipes/ conduits of all diameters.	6	MT	
7.5.4	d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide.			
7.5.4.1	i	Upto 250 kg.	55	NO	
7.5.4.2	ii	Beyond 250 Kg and upto 500 kg.	55	NO	
7.5.4.3	iii	Beyond 500 Kg and upto 750 kg.	41	NO	
7.5.5	e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel.			
7.5.5.1	i	Upto 250 kg.	83	NO	
7.5.5.2	ii	Beyond 250 Kg and upto 500 kg.	83	NO	
7.5.5.3	iii	Beyond 500 Kg and upto 750 kg.	41	NO	
<b>8.0</b>	<b>800</b>	<b>GROUTING</b> (Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer)			
8.1	801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc all complete. Cost shall include fixing of nipples at minimum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc all complete wherever specified in the drawing. Cement will be supplied by BHEL free of cost as per TCC.	52	SQM	
8.2	802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc with mix 1:1 (1 cement:1 sand) using non shrink admixture etc all complete. Cement will be supplied by BHEL free of cost as per TCC.	26	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
8.3	803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc all complete with mix 1:1:2 (1 cement:1 coarse sand:2 aggregate of 6 mm down graded stonechips) using non shrink admixture. Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor.	29	CUM	
8.4	804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc all complete with ConbextraGP-1 or equivalent. Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor. All materials to be supplied by contractor.	35	CUM	
8.5	805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc all complete with Conbextra GP-2 or equivalent. Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor. All materials to be supplied by contractor.	17	CUM	
<b>9.0</b>	<b>1000</b>	<b>BRICK WORK</b> (Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. Cement will be supplied by BHEL free of cost as per TCC)			
9.1	1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
9.1.1	Aa	Using ash lime bricks with crushing strength of 50 kg/cm <sup>2</sup> .	83	CUM	
9.1.2	Ab	Using ordinary clay bricks with crushing strength of 75 kg/cm <sup>2</sup> .	70	CUM	
<b>10.0</b>	<b>1800</b>	<b>MISCELLANEOUS WORKS-1</b> (Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer)			
10.1	1801	Providing and filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 230 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc all complete. Payment shall be made for the measurement of the volume of the compacted fill.	28	CUM	
10.2	1804	Supply and installation of approved 25mm thick vibration damping resilient pads on/ around foundation of vibrating equipment and at other locations all complete.	457	SQM	
10.3	1812	Laying of earthing mats/ rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc all complete (Excavation & back filling shall be paid separately under respective item of earth work.BHEL will issue MS rod for earthing mat/ riser free of cost as per TCC.	32	MT	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
10.4	1813	Providing earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc all complete.	2	NO	
10.5	1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, providing & fixing GI strips/ pipes, GI wires, covers etc as per drawing & specification including associated earthwork. Cement will be supplied by BHEL free of cost as per TCC.	2	NO	
10.6	1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc all complete.	193	KG	
10.7	1817	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc all complete.			
10.7.1	a	Upto 75 mm dia.	83	RM	
10.7.2	b	100 mm dia.	83	RM	
10.7.3	c	150 mm dia.	83	RM	
10.7.4	d	200 mm dia.	83	RM	
10.8	1828	Dismantling old existing reinforced/non-reinforced brickwork/ blockwork/ stone masonry work in mud/ lime/ cement mortar at any level including clearing/ cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete.	83	CUM	
10.9	1831	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust suppression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be provided by BHEL free of cost and utilisation of machine will be in terms of tank-hour put in actual use for water sprinkling).	275	TANK-HR	
10.10	1832	Providing & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification.	6	CUM	
<b>11.0</b>	<b>2200</b>	<b>SANITARY WORKS</b>			
11.1	2208	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 all complete for following. Excavation, back-filling shall be paid as per relevant item of this schedule.			
11.1.1	a	200mm dia.	83	RM	
11.1.2	b	300mm dia.	83	RM	
11.1.3	c	450mm dia.	83	RM	
11.1.4	b	600mm dia.	83	RM	
11.1.5	e	900mm dia.	83	RM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
11.2	2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. Excavation, back-filling shall be paid as per relevant item of this schedule.			
11.2.1	a	150mm dia.	55	RM	
11.2.2	b	250mm dia.	55	RM	
11.2.3	c	300mm dia.	41	RM	
11.2.4	d	500mm dia.	41	RM	
11.3	2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. Excavation, back-filling shall be paid as per relevant item of this schedule.			
11.3.1	a	450mm dia.	55	RM	
11.3.2	b	600mm dia.	55	RM	
11.3.3	c	900mm dia.	55	RM	
<b>12.0</b>	<b>2500</b>	<b>PILING WORK</b>			
12.1	2501	Mobilisation of hydraulic rotary piling rigs including compressed air system as per TCC and accessories including cranes, capable of pile boring/drilling/ installation in all types of strata/ installing various size of bored cast in situ RCC piles to project site.	6	SET	
12.2	2503	Installation of bore cast-in-situ RCC vertical pile as per IS 2911 (Part 1 Sec 2) with diameter and length as specified (length to be measured from pile cut-off level to the bottom of pile) using cement concrete grade M25 conforming to IS:456 with 20 mm nominal size stone aggregates with a minimum cement content of 400Kg per cum of concrete including providing all materials (but excluding reinforcement steel for which measurement/payment shall be made separately), boring/ drilling in all types of soil, providing bentonite slurry and/ or casing for stabilization of pile bore, flushing of pile bore, cleaning, providing plasticizer, wherever required, breaking pile head to cut off level and exposing pile reinforcement for embedment in pile cap etc including empty boring from ground level to pile cutoff level etc all complete as per specification, drawing and as directed by the engineer for the following. Cement will be supplied by BHEL free of cost as per TCC.			
12.2.1	d	Pile with 600 mm diameter and 22 m length below cut off level.	2050	NO	
12.3	2504	Extra over ST NO 2503 for pile length more than the specified length of 22m below cut off level for the following.			
12.3.1	c	For 600 mm diameter pile.	54	RM	
12.4	2505	Rebate on ST NO 2503 for pile length less than the specified length of 22m below cut off level for the following.			
12.4.1	c	For 600 mm diameter pile.	108	RM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
12.5	2508	Conducting routine load test on single job pile as specified in accordance with IS 2911 (Part-4) including preparation of pile head for testing, necessary excavation, providing all arrangements of loading, unloading, test equipments/accessories, jacks, recording of results, labour, submission of test report etc but excluding the cost of installation of job pile complete as per specification, drawing and as directed by the engineer-in-charge for the following.			
12.5.1	a	For vertical compression test by maintained load method.			
12.5.1.1	iii	600 mm diameter pile.	35	NO	
12.5.2	b	For lateral load test.			
12.5.2.1	iii	600 mm diameter pile.	35	NO	
12.6	2509A	Carrying out low strain pile integrity test on 600mm diameter pile including all arrangements for test, equipments/ accessories, materials, labour, submission of test report etc but excluding the cost of installation of job pile all complete as per specification and as directed by the engineer.	1025	EACH	
<b>13.0</b>		<b>LEVELLING AND GRADING WORK</b> (Finished ground level is considered RL(+) 34.2 m)			
13.1	1	Earth work in stripping of top soil upto a minimum depth of 0.30 m below ground level so as to exclude all debris, grass, vegetation, bushes, trees having girth upto 300mm including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/ stripped surface by manual/ mechanical means, disposal of stripped materials within a lead upto 1km etc all complete as per specification, drawing and as directed by the engineer.	12000	SQM	
13.2	2	Earth work in excavation upto any depth below ground level in all types of soil including ash which can be excavated by any means for grading including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, levelling to grade, all lifts, ramming/ compacting the excavated bottom/ graded surface, stacking/ disposal of surplus excavated materials within a lead upto 1km, spreading/ levelling of disposed materials etc all complete as per specification, drawing and as directed by the engineer.	65000	CUM	
13.3	7	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm loose thickness using/with selected approved soil directly from excavation and compacted as specified including including sorting, spreading, breaking clods, watering, ramming/ compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.3.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	22500	CUM	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
13.4	8	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm loose thickness using/ with selected approved soil from compulsorily excavated soil available within a lead upto 1km and compacted as specified including re-excavation of stacked earth, sorting, spreading, breaking clods, watering, ramming/ compaction by manual/ mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.4.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	14400	CUM	
13.5	9	Extra over ST NO 1, 2, 7 and 8 for carriage of soil for every 1 km or part thereof beyond an initial lead of 1km.	85000	CUM	
13.6	A10	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 250 mm loose thickness using/ with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying boorowed soil, royalty (if any), sorting, spreading, breaking clods, watering, ramming/ compaction by manual/ mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.6.1	a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII).	110000	CUM	
13.7	B10	Earth work in filling up to any depth below ground level for grading to proper grade and level in layers not exceeding 250 mm loose thickness using/ with approved borrowed clean graded sand (borrowed clean graded sand to be arranged by the bidder) and compacted as specified including supplying borrowed clean graded sand, royalty (if any), sorting, spreading, breaking clods, watering, ramming/ compaction by manual/ mechanical means, dressing, finishing to required lines, grades and slopes, testing etc all complete as per specification, drawing and as directed by the engineer for the following.			
13.7.1	b	Each layer compacted so as to achieve at least 75% relative density as per IS-2720 (Part-XIV) in case of sandy soils.	75000	CUM	
13.8	11	Providing and laying 300mm thick stone pitching including caulking with 1 cement: 4 sand mortar on the slopes of earth fill/ cut with approved quality of rock fragments including materials, testing, necessary excavations if any, compaction etc all complete as per specification, drawing and as directed by the engineer.	2150	CUM	
<b>14.0</b>	<b>TOTAL</b>				
<b>15.0</b>	<b>3300</b>	<b>NON-SCHEDULE ITEMS</b> (For items not covered above schedule, quote % below or at par or above with respect to DSR-2007.)			
15.1	a	Rate of complete item.		___ %	
15.2	b	Rate of supply of materials at site only.		___ %	
15.3	c	Rate for execution complete excluding supply of materials.		___ %	

SL NO	ST NO	DESCRIPTION	QUANTITY	RATE (Rs)	AMOUNT (Rs)
<b>NOTE</b>					
1.0		Bidder's quoted total price at SL NO 14.0 above shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope defined in specification and in accordance with all terms & conditions of tender.			
2.0		Price format shall not be changed by bidder in any case, since it may lead to cancellation of offer.			

**FORMAT FOR NO DEVIATION CERTIFICATE**  
**(To be submitted in the bidder's letter head)**

BHARAT HEAVY ELECTRICALS LIMITED,  
Power Sector - Eastern Region,  
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	(i)	PKG-A: Civil works of bore cast-in-situ piling, pile cap, pedestals, etc of 1x500 MW unit # 3 for 2x500 MW units at Sagardighi STPP, WB.
	(ii)	PKG-B: Civil works of bore cast-in-situ piling, pile cap, pedestals, etc of 1x500 MW unit # 4 for 2x500 MW units at Sagardighi STPP, WB.
Ref	1.0	Tender no PSER:SCT:SDG-C1221:11
	2.0	BHEL's NIT, vide reference no PSER:SCT:SDG-C1221:2438, dated 23-06-11.
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:SDG-C1221:TCN-01, dated 05-07-11.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:SDG-C1221:TCN-02, dated 11-07-11.
	5.0	All other pertinent issues till date.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized  
representative of the bidder)