Corrigendum - 01 dated 18/02/2026 to CPC Tender No. BHEL/CPC/TLB/C PILING/26/088

Corrigendum - 01 to Tender for the work of "Civil works of pile, pile-caps, pedestals, bolt fixing, back filling and compaction for building/structures in zones of Package-2 and Package-3 at 3 × 800 MW NLC Talabira TPP (NTTPP), Jharsuguda, Odisha State, India "

PACKAGE-2: Pile, pile-caps, pedestals, bolt fixing, back filling and compaction for building/structures of Unit-2 and building/structures in locations identified as Zone-3, 4, 5 and 6.

PACKAGE-3: Pile, pile-caps, pedestals, bolt fixing, back filling and compaction for building/structures of Unit-3 and building/structures in location identified As Zone 7,8

A) Some of the Bidders had asked queries in the published tender specification. The clarifications issued by BHEL are furnished below:

Sl. No.	Reference clause of Tender Document	Existing Clause	Bidder's Query	BHEL's Response
1	Major highlights clause no 9 (a) to (i) -Modility of Award	a) Demarcation of Packages (i.e. Package 1, 2, & 3) is illustrated in Tentative Plot plan with Pilling Packaging Drawing attached with this TCC. Package-1 has already been awarded. b) This tender comprises two packages i.e. Package 2 and Package 3. c) Both packages will be awarded to two separate bidders. d) Bidders has to Quote for Package-3. e) Package 3 shall be awarded to L-1 Bidder, acceptable to BHEL. f) The ratio between prices of Package 3 & Package 2 shall be 1: 0.88154173. The price of Package 2 shall be derived as per this ratio. g) The Price derived for Package - 2 in line with Sl. 5 shall be counter offered to the other bidders in the order of Price Competitiveness (i.e. L-2, L-3 and henceforth). The bidder accepting the "counter offer price" shall be considered for awarding of Package 2.	We understand that the Contract Price of package - 2 to be awarded to the Contractor shall be worked out based on ratio (1:0.88154173) between prices of package 3 : 2 as below : For example if Quoted Price of package 3 is 100 Crs, then the "Counter Offer Price" of package 2 to be offered to next lowest bidder shall be 88.15 Crs. Please confirm. Further , the Unit Prices of BOQ items derived for package 3 shall be applicable to relevant BOQ items of package 2. Please confirm. Kindly also share the BOQ for package 2.	BOQ of Unit 2 shared with this corrigendum

		h) In case, none of the bidders agrees to match the finalized "counter offer price of Package-2" as derived in Sl. No. 5, then BHEL, at its discretion, reserves the right award of Package 2 to L-1 bidder of Package 3 or BHEL reserves the right not to award the Package - 2. i) Package 2 and Package 3 shall be treated as separate contracts		
2	SCC clause no. 3.11	Construction Power : Construction power (three phase, 415V/440V) will be provided to the contractor on chargeable basis at one single point by BHEL. The contractor shall make his own arrangement for further distribution with necessary isolator/LCB etc	Free of Cost Construction Power shall be made avaliable at one point within the plant boundary in line with other BHEL Contracts.	Tender Conditions prevail
3	TCC clause no. 3.11.3	Contractor to note that BHEL shall complete the arrangements for Construction Power Supply after about nine months from the commencement of contract period. However, in the meantime, BHEL will also make alternate temporary arrangements to provide Construction Power Supply to contractor. Till such arrangement is made by BHEL, the contractor should make his own arrangement for alternative source of power supply through deployment of adequate number of DG sets/usage of diesel operated machines, at their cost. No separate payment shall be applicable for this.	BHEL shall make arrangement to provide Power supply for construction purpose to the Contractor on within 1 month of LOA. Please confirm.	Tender Conditions prevail
4	Clause no. 3.12 SCC	Construction Water : Construction Water (Raw water) required for site requirements may be drawn from the Bhedan river at a point jointly identified by Contractor and BHEL Engineer in charge. The	Free of Cost Construction Water shall be made avaliable at one point within the plant boundary in line with other BHEL Contracts.	Tender Conditions prevail

		required pumps & accessories, pipes for drawing water from the given point and for further distribution shall be arranged by the contractor at their cost to ensure supply of water without interruptions. No extra payment shall be made under this account.		
5	Scope Matrix - clause no. 3.1.1 of SCC Land for Construction Purpose (Site office , storage , etc.,)	Land for Office & storage , etc: Free of cost as provided by NLCIL on as is where is basis.	We request you to kindly provide the Land nearby the proposed Site location. Kindly furnish the distance (lead in km) of the aforesaid land from the proposed Site location.	Bidder to visit site for assessing prevailing conditions and acquaintance
7	BOQ A2504 - b & c Pile foundation	Installation of Bored cast-in-situ RCC vertical pile in soil (excluding rock socketing which shall be paid separately as per ST. No. A2507) as per IS 2911 (Part 1 Sec 2) with diameter and length as specified (length to be measured from pile cut-off level) using cement concrete grade M30 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/polymer and/or temporary 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	Kindly specify the pile cutoff length for 600 mm & 760 mm diameter piles payable under this item as the construction drawings referred mentions two different levels.	The drawings provided are for reference purpose only. Measurement at site shall be in line with the description as mentioned in the BOQ item A2504, A2505, A2506 and A2507 as per actual work executed at site.

		all complete as per specification, drawing and as directed by the engineer-in-charge for the following. Note: Pile cut off level shall be as per construction drawings.		
8	CL. 2.1.1 of TCC Piles per structure / buildings	Construction Milestones - M1 & M2 to be completed by 8 months & 12 months respectively.	We request you to kindly provide breakup of number of piles per Structure / buildings as per the scope of work for package 2 (1 to 13) & package 3 (14 to 26) for better planning and understanding.	Shall be provided during execution.
9	NIT	36.0 Modality of Award- The ratio between prices ofPackage3:Package2 shall be 1: 0.88154173. The prices for Package 2 shall be derived as per this ratio.	Kindly clarify whether, as per the ratio Package 3: Package 2 = 3.: 0-88154173, the following will be derived: I-. Whether the item rates of Package 2 will be derived based on this ratio, or 2. Whether the quantities of Package 2 will be derived based on this ratio. Further, please confirm whether the 'individual item rates will be affected due to the application of this ratio"	The total amount of Package3 : The total amount of Package2 shall be 1: 0.88154173

Enclosure: BOQ of Unit 2

Note:

1) **All other terms and conditions against this NIT shall remain unchanged.**
2) **This corrigendum is to be submitted duly signed and stamped along with the Techno-commercial bid (Part- I).**

for BHARAT HEAVY ELECTRICALS LTD
Engineer / SCT- CPC

BOQ CUM RATE SCHEDULE

% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL PACKAGE VALUE

Package 02: - PILE ,PILE-CAPS, PEDESTALS, BOLT FIXING, BACK FILLING AND COMPACTION FOR BUILDING/STRUCTURES OF UNIT-2 AND BUILDING/STRUCTURES IN LOCATION IDENTIFIED AS ZONE 3,4,5,6

ST NO	Item Description	UNIT	QUANTITY	RATES (INR)= VALUE FOR PACKAGE-A * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED= PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
	Piling Works B.O.Q. including Pile, pile cap, pedestal casting with bolt lift, plinth beam above the pile cap, back filling and compaction as per Scope Of Work.					
100	**EARTH WORK: Earth work In excavation, backfilling and disposal including all labour, equipments etc complete as per specification, drawing and as directed by engineer- in-charge for the following.**					
101	Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, removing of surface water accumulated due to rain but excluding dewatering to lower the ground water table, dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1Km, spreading/levelling of disposed materials etc all complete for following depths below ground level.					
a	Depth from ground level but not exceeding 2 m	CUM	9387			0.1640790269%
b	Depth exceeding 2 m but not exceeding 4 m	CUM	42901			0.9391172992%
c	Depth exceeding 4 m but not exceeding 6 m	CUM	11968			0.3269752613%
d	Depth exceeding 6 m but not exceeding 8 m	CUM	1196			0.0408011248%
e	Depth exceeding 8 m but not exceeding 10 m	CUM	77			0.0031310241%
A102	Extra over ST No. 101 for dewatering of ground water by sump pump method/deep well system as per IS 9759. Ground water table shall be lowered up to 1 m below the founding level to make the site workable for foundation construction till backfilling up to ground level. Mode of measurement shall be the quantity of excavation of soil including ash below ground water table to founding level of the footing. Note: Measurement shall be taken of the quantity of earth work excavation below ground water table observed at site just prior to start the dewatering but after installation of dewatering system. Ground water table shall be jointly observed and finalized by BHEL site and contractor. However, payment shall be made only for excavation volume which is below water table	CUM	55529			2.0730623812%
A107	Earthwork in **Back filling** upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300 mm thickness using/with selected materials from compulsorily excavated earth available within a lead upto 1 Km and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.					
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	16928			0.2757668758%
A108	Earthwork in **Back filling** upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300 mm thickness using/with selected earth directly from excavation within a lead upto 1Km and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.					
a	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	16928			0.2344018444%
109	Extra over ST No. 101 and 103 to A108 for **Carriage** of material/earth for every 500m or part thereof beyond an initial lead of 1km.					
a	Carriage for stacking/ backfilling of serviceable material/ earth	CUM	31673			0.0698713703%
b	Carriage for disposal of serviceable/unserviceable material/ earth	CUM	25000			0.0551506709%
A111	Supplying and filling **Sand** upto any depth in **Tank Foundations** in layers not exceeding 200 mm thickness and compacted so as to achieve at least 75% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	430			0.0812014450%
B111	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 75% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	100			0.0188700142%
200	**CONCRETE WORK: Providing and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/contract specification) 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 in charge for the following. (Cement shall be supplied by BHEL free of cost)**					
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 **below finished floor level upto depth of 10m from FFL**.	CUM	2934			1.9007024274%
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 **below finished floor level upto depth of 10m from FFL.**	CUM	58			0.0375778005%
204	Concrete of grade **M20** (1 part cement, 1.5 part sand, 3 parts of 10-20 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete **below finished floor level upto depth of 10m from FFL.**	CUM	73			0.0472961972%
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc for 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 **below finished floor level upto depth of 10m from FFL.**					
c	M 30 Grade	CUM	21085			15.1239915614%
206	Providing and laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at all level above 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.					
c	M 30 Grade	CUM	25			0.0184627477%
207	Providing and laying Design Mix cement concrete confirming to IS:456 & IS 10262-2009 for reinforced concrete works of grade mentioned below in machine foundations for TG, Gas Turbine, ID/FD/PA fans, BFP, Mills, Crusher House, CHP-AHP civil works, FGD,etc at all elevations **below/above finished floor level (except top decks supported over vibration isolation system and TG deck)** but including TG foundation Columns with 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 all complete.					
b	M 35 Grade	CUM	3394			2.7276646208%
209	Extra over St. No. 205 to 208 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 in charge.	CUM	3394			0.6859477541%
210	Extra over ST Nos. 205 to A208 for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc. all complete as directed by engineer in charge and as per specification.	CUM	340			0.0435605453%
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 confirming 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 upto depth of 10m from FFL, for following Grades. Watertightness is to be ensured including structural grouting if required.					
b	M30	CUM	200			0.1565260888%
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 **3 km**, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.					
a	Plain cement concrete of all grades	CUM	3			0.0005864637%
b	Reinforced cement concrete of all grades	CUM	50			0.0150094672%

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A216	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 **3 km** as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	500			0.0074665524%
217	Extra over and above St No 216 for cutting of reinforcement, all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	5000			0.0059393030%
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUDM	200			0.0092653127%
A223	Cutting of existing concrete/ RCC work inside control room/ pump house or anywhere inside boundary using power tools of (DD2E of HILTI/ BOSCH make) with low noise and dust including cutting reinforcements, removing the rubbish within a lead of **3 km**, including making good the broken edges/ surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/ supporting at any level, all complete and as directed by Engineer (measurements shall be taken as per cutting surface area).	SQM	25			0.0126167766%
300	**FORMWORK: Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centereing etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.**					
301	**Fairface form work** with good quality water proof ply wood of minimum 12mm thickness and smooth surface **below finished ground floor leve**l for foundations, footings, base of columns, walls, columns, pilasters, beams & slabs (for which scaffolding work not required for vertical support of bottom face of formwork), mass concrete, trenches, grade slab, paving etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge.					
a	Upto Depth 10m From FGL	SQM	45322			5.4144164444%
302	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing.for all heights as per specification, drawing and instruction of engineer in charge.					
a	For Height Upto 20m from FGL	SQM	500			0.071695872%
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 in charge.					
a	Upto 150 mm depth	Each	25			0.0010775593%
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	50			0.0035381277%
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	50			0.0062192987%
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	50			0.0096556098%
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	25			0.0069235304%
f	Pockets of depths more than 1500mm and upto 2000 mm depth	Each	25			0.0091210725%
305	Extra over item no.301 and 302 for curved form work for foundations, footings, beams, walls, trenches, domes, arches etc as per specification.					
a	Extra for Curve Shuttering for Item No. 301 and 302	SQM	500			0.0119634532%
400	**REINFORCEMENT WORK : Reinforcement work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.**					
401	Providing, 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 reinforcement and binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings.	MT	1			0.0147126717%
A402	Transporting, straightening, cutting, bending, placing in position at all level, binding in position of steel reinforcements of TMT corrosion resistant steel (CRS) of grade Fe-500/500D/550/550D conforming to IS:1786 including cost of reinforcement steel, binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. (BHEL shall supply reinforcement free of cost)	MT	5650			11.0012723893%
A405	Providing & fixing of Rebar in existing concrete surface by inserting reinforcemnet bar with Epoxy based suitable bonding compound of Hilti or equivalent make (HIT-RE-500 of Hilti or equivalent make) for interconnection of new R.C. structure with existing R.C. structure. Depth of drilled hole should be suitable to develop maximum recommended strength as per approved manufacturer's recommendation. This item includes supply of all materials including bonding chemicals, T&P required to execute the work, cost of all labour, transportation of chemical, staging to reach work place etc. all complete as directed by Engineer - in - Charge. Random Pull out non destructive test as directed by engineer shall beconducted to ensure strength of bond and same is included in this item. Reinforcement bar shall be paid separately under item no. 401, A402 as applicable.					
a	12mm Reinforcement bar	Nos.	100			0.0110471036%
b	16mm Reinforcement bar	Nos.	100			0.0179706340%
c	20mm Reinforcement bar	Nos.	100			0.0260480861%
500	**WATER PROOOFING WORKS: Roof treatment works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge.(Material used for rooftreatment shall be CFC free).**					
511	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.	SQM	59162			2.4496226831%
600	**JOINTS AND FILLERS: Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.**					
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.					
a	12 mm wide joints.	SQM	50			0.0055235518%
b	20 mm wide joints.	SQM	50			0.0066350499%
c	25 mm wide joints	SQM	100			0.0192942501%
d	50 mm wide joints	SQM	50			0.0201002984%
603	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 (10 mm thick baker rod to be paid separatly):					
a	25mmX25mm groove size	RM	56			0.0061970688%
b	50mmX25mm groove size	RM	442			0.0931512932%
c	20mmX25mm	RM	123			0.0123606399%
605	Supplying and installation of commercial quality of expanded polystyrene products from reliable manufacturers as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.					
d	50 mm wide joints	SQM	2430			0.1047387603%
609	Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicons or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc. all complete as per manufacturer's recommendation for following size groove: (10 mm thick baker rod to be paid separately)					
a	25mmX25mm	RM	246			0.0239197793%
610	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following: (Bulb or Kicker type)					
d	230 mm wide and 6 mm thick	RM	246			0.0150484969%
700	**MS EMBEDMENTS: Embedments including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.**					

BOQ CUM RATE SCHEDULE

% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL PACKAGE VALUE

Package 02: - PILE ,PILE-CAPS, PEDESTALS, BOLT FIXING, BACK FILLING AND COMPACTION FOR BUILDING/STRUCTURES OF UNIT-2 AND BUILDING/STRUCTURES IN LOCATION IDENTIFIED AS ZONE 3,4,5,6

ST NO	Item Description	UNIT	QUANTITY	RATES (INR)= VALUE FOR PACKAGE-A * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED= PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
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.	MT	2			0.0372764233%
702	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.	MT	49			1.1417005673%
703	Same as above items 701 & 702 with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.					
A	Mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc.	MT	2			0.0088465070%
B	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.	MT	34			0.1593996367%
704	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffoling, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.					
a	MS pipes of all diameters	kg	1152			0.0222856225%
b	PVC pipes / conduits of all diameters	kg	535			0.0350654188%
c	UPVC pipes / conduits of all diameters	kg	535			0.0442405672%
d	Expansion anchor fasteners (galvanised) of HILTI make(HUD-1 Universal Fastners) or equivalent of safe tensile capacity as specified below for brick work with expansion sleeve of A6 polyamide:					
i	8mm Dia	Nos	50			0.0004327206%
ii	10mm Dia	Nos	50			0.0005599914%
iii	12mm Dia	Nos	50			0.0006957469%
iv	14mm Dia	Nos	50			0.0010690745%
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:					
i	HST M8	Nos	50			0.0024011754%
ii	HST M10	Nos	50			0.0033175250%
iii	HST M12	Nos	50			0.0059732419%
iv	HST M16	Nos	50			0.0105125663%
v	HST M20	Nos	50			0.0182591144%
vi	HST M24	Nos	50			0.0365606525%
f	Chemical Expansion fasteners (galvanised)of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with anchoring rod,nuts,washers,chemicals all complete,etc:					
i	HAS-E5.8 M8	Nos	50			0.0046835647%
ii	HAS-E5.8 M10	Nos	50			0.0057187003%
iii	HAS-E5.8 M12	Nos	50			0.0072968580%
iv	HAS-E5.8 M16	Nos	50			0.0123792044%
v	HAS-E5.8 M20	Nos	50			0.0193621278%
vi	HAS-E5.8 M24	Nos	50			0.0266844400%
1000	**BRICKWORK: Brickwork masonry including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. (Cement shall be supplied by BHEL free of cost unless noted otherwise)**					
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.					
b	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 50 kg/cm2(including cost of cement for brick making)	CUM	637			0.5290789958%
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.					
b	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 50 kg/cm2(including cost of cement for brick making)	CUM	5			0.0056856099%
1100	**DAMP PROOF COURSE: Damp proof course including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment, transportation, handling, shuttering, centering, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. (Cement shall be supplied by BHEL free of cost)**					
1101	Providing Damp Proof Course of following thickness with 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC.					
a	40mm thick	SQM	176			0.0109310327%
1200	**PLASTERING: Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge. (Cement shall be supplied by BHEL free of cost)**					
A1202	Providing 12mm thick plaster internal/external surfaces in cement mortar as applicable at all height/depth on walls finished to a smooth finish as per specification all complete.					
a	Cement Mortar 1:6	SQM	750.00			0.0346176519%
b	Cement Mortar 1:4	SQM	750.00			0.0346176519%
2500	**PILING WORK: Piling works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge. (Cement shall be supplied by BHEL free of cost)**					
2501	Mobilisation of hydraulic rotary piling rigs and accessories capable of pile boring/drilling in all types of strata/installing various size of bored cast in situ RCC piles to project site and demobilisation of the same after completion of piling works etc all complete.	NOS	6			0.3663372285%
2503	Mobilisation of conventional DMC/RMC piling rigs and accessories capable of pile boring/drilling in all types of strata/installing various size of bored cast in situ RCC piles to project site and demobilisation of the same after completion of piling works etc all complete.	NOS	3			0.0559436527%
A2504	Installation of Bored cast-in-situ RCC vertical pile in soil (excluding rock socketing which shall be paid separately as per ST. No. A2507) as per IS 2911 (Part 1 Sec 2) with diameter and length as specified (length to be measured from pile cut-off level) using cement concrete grade M30 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/polymer and/or temporary 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-in-charge for the following. **Note: Pile cut off level shall be as per construction drawings.**					
b	Pile with 600 mm diameter and 12.0 m length below cut off level	EACH	2787			21.1263752651%
c	Pile with 760 mm diameter and 12.0 m length below cut off level	EACH	1498			15.1322072579%
A2505	Installation of additional length of pile beyond specified length mentioned in ST. No. A2504 all complete for the following.					
b	For 600 mm diameter pile	RM	5574			3.2502115792%
c	For 760 mm diameter pile	RM	2996			2.3280318858%
A2506	Rebate on ST.No. A2504 for pile length less than the specified length for the following.					
b	For 600 mm diameter pile	RM	8361			-4.8753173689%

BOQ CUM RATE SCHEDULE

% WEIGHTAGE FOR AMOUNT OF INDIVIDUAL ITEMS W.R.T. THE TOTAL PACKAGE VALUE

Package 02: - PILE ,PILE-CAPS, PEDESTALS, BOLT FIXING, BACK FILLING AND COMPACTION FOR BUILDING/STRUCTURES OF UNIT-2 AND BUILDING/STRUCTURES IN LOCATION IDENTIFIED AS ZONE 3,4,5,6

ST NO	Item Description	UNIT	QUANTITY	RATES (INR)= VALUE FOR PACKAGE-A * WEIGHTAGE /(QUANTITY*100) (ROUNDED OFF TO TWO PLACES AFER DECIMAL)	AMOUNT (INR) TOTAL QUOTED= PRICE * QUANTITY	WEIGHTAGE (IN PERCENTAGE)
c	For 760 mm diameter pile	RM	4494			-3.4920478287%
A2507	Rock socketing of bored cast in situ RCC pile inside rock as per IS 2911 (Part 1 Sec 2) with diameter as specified using cement concrete grade M30 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 rock strata, providing bentonite slurry/polymer, flushing of pile bore, cleaning, providing plasticizer wherever required etc all complete as per specification, drawing and as directed by the engineer-in-charge for the following.					
a	For 600 mm diameter pile	RM	8672			7.7248772359%
b	For 760 mm diameter pile	RM	3415			3.6397103827%
2509	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 excuding the cost of installation of job pile complete as per specification, drawing and as directed by the engineer-in-charge for the following.					
a	For vertical compression test by maintained load method					
ii	600 mm diameter pile	EACH	28			2.8560160136%
iii	760 mm diameter pile	EACH	15			1.9032097748%
b	For lateral load test					
ii	600 mm diameter pile	EACH	56			0.9695793395%
iii	760 mm diameter pile	EACH	30			0.6306725275%
2510	Carrying out pile integrity test on 450mm/ 600mm/760mm 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-in-charge.	Each	4285			0.5531720472%
2512	Carrying out High Strain Dynamic Pile testing on RCC Bored cast-in-situ job piles using pile driving analyzer on RCC Bored cast-in-situ Job 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-in-charge. The equipment shall have ability to record both force and velocity. Both strain and acceleration sensors shall be used to collect data & atleast 2 pairs shall be connected at diametrically opposite sides of the pile. The test and equipment shall conform to ASTM D4945-08 & include CAPWAP analysis for the following:					
a	600 mm diameter pile	EACH	28			0.7055891989%
b	760 mm diameter pile	EACH	15			0.4581748045%
2513	Conducting standard penetration test as per IS:2131 inside pile hole as specified for determining founding level of pile in soil/rock including mobilization of equipments, necessary men, materials etc all complete as required and demobilization of the same after completing of piling, (payment will be made per no. of test conducted in each and every pile hole)	EACH	10			0.0103089331%
	Total					**100.00000000000%**